

# Health and Science Schools

## Electronic Undergraduate Handbook 2012

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University of Western Sydney

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Information contained in this electronic handbook is correct at the time of production (August 2012), unless otherwise noted.

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## About the Health and Science Schools Electronic Undergraduate Handbook

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### Sessions and dates

There are two main sessions in 2012: Autumn and Spring. Weeks shown in the dateline refer to the session weeks for these main sessions.

The dateline is available at:

<http://www.uws.edu.au/students/stuadmin/dateline>.

### Unit outlines

Brief outlines of all UWS undergraduate units listed in the course section are given in the second half of this electronic handbook.

The unit outlines give a brief overview of each unit. For some units this information is not available. Please check the UWS website for more recent information. For more information – details of textbooks, assessment methods, tutorial, group work and practical requirements – contact the unit coordinator.

More information on unit offerings can be found at:

[http://handbook.uws.edu.au/hbook/UNIT\\_SEARCH.ASP](http://handbook.uws.edu.au/hbook/UNIT_SEARCH.ASP).

### Unit not listed?

If the unit you are looking for is not in the alphabetical units section, consult your course coordinator for details or check the unit search web page for updated details on all units offered in 2012 at:

[http://handbook.uws.edu.au/hbook/UNIT\\_SEARCH.ASP](http://handbook.uws.edu.au/hbook/UNIT_SEARCH.ASP).

### Prerequisites, co-requisites and assumed knowledge

Students wishing to enrol in a unit for which they do not have the prerequisites or assumed knowledge are advised to discuss their proposed enrolment with an academic adviser.

Where it is necessary to limit the number of students who can enrol in a unit through shortage of space, equipment, library resources, and so on, or to meet safety requirements, preference will be given to students who have completed the unit recommended sequence in the course.

### Academic credit

In most courses, academic credit will be granted for previous studies. For example, UWS has a number of agreements with TAFE to grant credit for successfully completed TAFE studies. Seek advice about credit prior to, or at enrolment.

### Electives and cross-discipline study

Electives are available in many courses. These may be selected from pools of electives listed under various courses.

Also, UWS actively encourages students to take elective units in disciplines other than their major area of study. Students should seek advice from their course coordinator in the first instance.

### How to use this electronic book

The first part of this electronic book contains information about current undergraduate courses offered by the Schools of Computing, Engineering & Mathematics, Medicine, Nursing & Midwifery and Science & Health. The next part contains details of undergraduate unit sets in these courses, and the final part has details of all units within the courses.

The courses are arranged mainly alphabetically. If you know the course code, but not the name, consult the COURSE CODE INDEX.

The units are arranged alphabetically. If you know the code, but not the name, consult the UNIT CODE INDEX at the back of the electronic book.

### Check website for updates

Every effort is taken to ensure that the information contained in this electronic book is correct at time of production. The latest information on course and unit offerings can be found at:

<http://handbook.uws.edu.au/hbook/>

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## SCHOOL OF MEDICINE

### Bachelor of Medical Research

#### 4647.3

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year in this course is 2012 or later.

This course gives students who are enrolled in the UWS Bachelor of Medicine/Bachelor of Surgery (MBBS) the opportunity to take leave of absence from the normal medical course for 12 months full time or 24 months part time, after successfully completing years 1 and 2 of MBBS, in order to gain a more detailed experience in medical research than is provided in the normal medical course. Years 1 and 2 of the Bachelor of Medical Research are identical to years 1 and 2 of MBBS. It is expected that students will return to the medical course on completion of the intercalated year, which will complete the requirements for the Bachelor of Medical Research, but the degree is also available as an exit point for those who do not wish to resume MBBS.

#### Study Mode

Two semesters.

#### Location

Campus	Attendance	Mode
Campbelltown Campus	Full Time	Internal
Campbelltown Campus	Part Time	Internal

#### Accreditation

The Australian Medical Council accredits the Bachelor of Medicine, Bachelor of Surgery (MBBS) program, and the addition of an extra year of research, as proposed here, meets one of their standards concerning provision of opportunities for research during medical courses.

#### Admission

Must be currently enrolled in Bachelor of Medicine/Bachelor of Surgery (MB BS) at UWS, and have successfully completed at least two years of that course, normally with a credit average, before being admitted to year 3 of the intercalated Bachelor of Medical Research.

#### Course Structure

Qualification for this award requires the successful completion of 240 credit points, which include:

A common 160 credit point core, comprising the first two years of the Bachelor of Medicine / Bachelor of Surgery (MBBS) program

An 80 credit point intercalated program, specific to the new degree (Bachelor of Medical Research), which can be taken following the 2nd, 3rd or 4th year of the MBBS program, comprised of

A compulsory 60 credit point new unit, 400813 - Medical Research Project, and a choice of one of two existing

course work combinations, totalling 20 credit points over two semesters, as shown below

#### Year 1

##### 1H session (year long subjects)

**400861.1** Foundations of Medicine 1

##### 2H session

**400861.1** Foundations of Medicine 1

#### Year 2

##### 1H session (year long subjects)

**400862.1** Foundations of Medicine 2

##### 2H session

**400862.1** Foundations of Medicine 2

#### Year 3

##### 1H session

**400813.2** Medical Research Project

##### Autumn session

Choose one of

**300768.2** Methods of Scientific Researching  
**400864.3** Research Methods (Quantitative and Qualitative)

##### 2H session

**400813.2** Medical Research Project

##### Spring session

Choose one of

**300768.2** Methods of Scientific Researching  
**400863.2** Foundations of Research and Evidence-Based Practice

Note: This program is available only to students who are selected into the UWS Bachelor of Medicine (MBBS) and Bachelor of Surgery; years 1 and 2 of the Bachelor of Medical Research are identical to years 1 and 2 of the MBBS program.

Note: Students may apply for leave of absence from MBBS (for 1 year full time or 2 years part time) and admission to the B Med Res once they have completed years 1 and 2 of MBBS, and will normally be required to have a credit average in MBBS at the time they apply.

Note: Year 3 of the Bachelor of Medical Research will most commonly be undertaken between years 2 and 3 or between years 3 and 4 of the MBBS. It will not normally be possible to enrol for the Bachelor of Medical Research once year 5 of MBBS has been completed, because of the need for current clinical skills as the graduates progress into the following Intern year.

## Bachelor of Medicine, Bachelor of Surgery

### 4641.4

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year in this course is 2011 or later.

This course prepares graduates for eligibility for registration as a medical practitioner in Australia or New Zealand. It is an integrated program in which the basic sciences and areas of knowledge underpinning medical practice are learnt in a framework that emphasises active learning, based on clinical and other relevant scenarios. Teaching of clinical skills begins in the first year and continues throughout the program. In the last three years of the course, students undertake clinical placements in a wide range of settings across Greater Western Sydney and beyond. Students who undertake the embedded Honours program during the final two years of the course will also carry out a research project.

### Study Mode

Five years full-time. In the first two years of the course, students will study at the Campbelltown campus of the University. In the later years, students may be required to spend a period of time in one or more clinical rotations outside the Sydney metropolitan area, and will also be rotated to a substantial number of different locations within Sydney.

### Location

Campus	Attendance Mode
Campbelltown Campus	Full Time Internal

### Advanced Standing

The course is extensively integrated horizontally, and as a result it will not be possible to grant credit for units taken in other courses.

### Accreditation

The Bachelor of Medicine, Bachelor of Surgery (MBBS) program is fully accredited by the Australian Medical Council. Graduates will be eligible for registration as a medical practitioner by the Australian Health Practitioner Regulation Agency.

### Inherent requirements

There are inherent requirements for this course that you must meet in order to complete your course and graduate. Make sure you read and understand the requirements for this course online.

### Admission

Potential students should apply through the Universities Admission Centre (UAC) and directly to the School of Medicine. Selection is on the basis of:

- Academic merit (ATAR or its equivalent, for those without a completed degree; grade point average in their most recent degree, for graduate applicants)
- Results of the Undergraduate Medicine and Health Sciences Admission Test (UMAT); and

- Performance at an interview.

Evidence of connection to Greater Western Sydney may also be taken into account.

The requirements for International applicants to be considered for admission to the medical course are:

For more information on entry requirements and how to apply please see the School of Medicine web page.

- For students commencing in 2011 - Achieve a scholastic performance in the final year of secondary school equivalent to a New South Wales ATAR of 95.40 (or 93.55 for applicants from Greater Western Sydney) (International Baccalaureate 37 or 36 for the Greater Western Sydney applicants) or higher.
- For students commencing in 2012 - Achieve a scholastic performance in the final year of secondary school equivalent to a New South Wales ATAR of 95.50 (or 93.50 for applicants from Greater Western Sydney) (International Baccalaureate 37 or 36 for the Greater Western Sydney applicants) or higher.
- for those who have completed a 3 year or longer Bachelors degree, the grade point average in the degree must be at least 5.5 on the 7 point scale, for those who have completed a 3 year or longer Bachelors degree, the grade point average in the degree must be at least 5.5 on the 7 point scale
- Have completed IELTS or equivalent examination (Academic Module) and achieve a minimum score of 6.5 in each of the four components, and an overall score of at least 7.0

For Honours Students:

Completion of Year 3 of UWS MBBS, with a grade-point average in the course to that time of 6.0 or better.

Applications will be directly to the School, from currently enrolled students in Year 3 of MBBS.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

### Special Requirements

To be enrolled in this course students must comply with the current occupational screening and vaccination policy of NSW Health at course commencement. Students must obtain Student Registration by the Medical Board of NSW, and must successfully complete a Work Cover Authority

approved First Aid Certificate prior to the completion of the first semester of the course.

## Course Structure

Qualification for the award requires the successful completion of 400 credit points including the units listed in the sequence below.

### Full-time

#### Year 1

##### 1H Session

**400861.1** Foundations of Medicine 1

##### 2H Session

**400861.1** Foundations of Medicine 1

#### Year 2

##### 1H Session

**400862.1** Foundations of Medicine 2

##### 2H Session

**400862.1** Foundations of Medicine 2

#### Year 3

##### 1H Session

**400810.2** Integrated Clinical Rotations 1

##### 2H Session

**400810.2** Integrated Clinical Rotations 1

#### Year 4 (Non-Honours stream)

##### 1H Session

**400811.1** Integrated Clinical Rotations 2

##### 2H Session

**400811.1** Integrated Clinical Rotations 2

#### Year 4 (Honours stream)

Honours stream students will complete the following units:

##### 1H Session

**400811.1** Integrated Clinical Rotations 2  
**400959.1** Honours Research Project 1

##### 2H Session

**400811.1** Integrated Clinical Rotations 2  
**400959.1** Honours Research Project 1

#### Year 5 (Non-Honours stream)

##### 1H Session

**400977.1** Integrated Clinical Rotations 3

### 2H session

**400978.1** Integrated Clinical Rotations 4

### Year 5 (Honours stream)

Honours stream students will complete the following units:

#### 1H Session

**400977.1** Integrated Clinical Rotations 3  
**400960.1** Honours Research Project 2

#### 2H session

**400978.1** Integrated Clinical Rotations 4  
**400960.1** Honours Research Project 2

Please Note: the curriculum for year 5 is subject to approval, and therefore may be altered.

### Unsatisfactory Completion of Core Units

Students who are unable to satisfy the requirements of the core unit 400977 Integrated Clinical Rotations 3 will be expected to enrol and complete the unit 400979 - Integrated Clinical Rotations (General). Students should seek immediate academic advice regarding their planned progression and pattern of enrolment, which may have to be varied to meet unit and course requirements.

**400979.1** Integrated Clinical Rotations (General)

### Honours Stream

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

## Bachelor of Medicine, Bachelor of Surgery/Bachelor of Arts

### 4671.2

Students should follow the course structure for the course version relevant to the year they commenced. This course version applies to students who commenced study in this course in 2012 or later.

This combined program is offered to a small number of students (quota of three) who have demonstrated extremely high academic achievement during their Year 12 school studies, and who wish to broaden their medical studies by also completing the requirements for a Bachelor of Arts. In addition to completing all components of the medical course, they will also complete 160 credit points of studies for the BA, one year of which will be taken off from the MBBS program to study 80 credit points of units for the BA full-time. Some students will choose to complete the program in seven years rather than six, in which case no overload would be needed. Students accepted into the combined program will need to consult with course advisors for both MBBS and BA to plan how to dovetail the commitments needed for each component course. Students should refer to the separate handbook entries for the component degrees.

## Study Mode

6 years if 80 credit points of Bachelor of Arts units taken in overload. 7 years if no overload.

## Location

Campus	Attendance	Mode
Campbelltown Campus	Full Time	Internal

## Accreditation

The Bachelor of Medicine, Bachelor of Surgery course is accredited by the Australian Medical Council until end 2013.

## Admission

The admissions requirements and processes will be the same as for the MBBS (including the requirements to apply directly to the School of Medicine by the September closing date each year, to have a current UMAT score, and to have taken part in the Schools Multi-mini Interview (MMI), but with the following differences:

- The UAI (or its equivalent) cutoff for consideration for entry to this combined degree is 99.90. (ATAR 99.85)
- There will be a quota of three places for the combined degree in the first instance (it is important to set a quota, since the NSW hospitals and IMET do their planning for Intern places based on a steady pipeline of graduates emerging from the NSW medical courses; the quota could be adjusted slowly in future years if the level of demand supports it).
- Up to ten places will be set aside for the MMI for applicants with the MBBS/BA UAC course code (i.e. The same ratio of interview places to actual course places as for the straight MBBS). If there are more than 10 eligible applicants, they will be ranked by their UMAT score.
- The final ranked selection list, for the UAC admissions process, will be based solely on the interview performance.

For more information on entry requirements and how to apply please see the School of Medicine web page.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

## Course Structure

Qualification for the award requires the successful completion of 560 credit points including the units listed in the sequence below.

Students will take a year off from the MBBS program (ideally between Years 2 and 3 or between Years 3 and 4) to study BA full-time. Some students will prefer to take a

second full-time year off to complete the 160 credit points of Arts units required for the BA, while others will request and be approved to carry a small overload (average of 10 credit points per semester) in Years 1-4 of MBBS to complete 80 credit points of Arts units.

A typical structure is set out below, but the overload (or decision to NOT overload) and the particular year in which a student would intercalate from the MBBS program can be tailored to individual students' needs.

## Recommended Sequence

### Full-time

#### Year 1

1H session

**400861.1** Foundations of Medicine 1

and one 10 credit point Bachelor of Arts unit

#### 2H Session

**400861.1** Foundations of Medicine 1

and one 10 credit point Bachelor of Arts unit

#### Year 2

#### 1H Session

**400862.1** Foundations of Medicine 2

and one 10 credit point Bachelor of Arts core unit

#### 2H Session

**400862.1** Foundations of Medicine 2

and one 10 credit point Bachelor of Arts core unit

#### Year 3

**400810.2** Integrated Clinical Rotations 1

and 20 credit points of Bachelor of Arts core units - 10 credit points per semester

#### Year 4

80 credit points of full-time Bachelor of Arts units

#### Year 5

**400811.1** Integrated Clinical Rotations 2

and 20 credit points of Bachelor of Arts units - 10 credit points per semester

#### Year 6

**400977.1** Integrated Clinical Rotations 3

**400978.1** Integrated Clinical Rotations 4

(Bachelor of Arts requirements complete)

## Bachelor of Arts Majors

**M1026.1**

Arabic

**M1032.1**

Asian Studies and International Relations

**M1027.1**

Chinese

**M1034.1**

Cultural and Social Analysis

<b>M1035.1</b>	English, Text and Writing
<b>M1031.1</b>	Global Studies
<b>M1033.1</b>	History and Political Thought
<b>M1041.1</b>	Indigenous Australian Studies
<b>M1036.1</b>	Islamic Studies
<b>M1029.1</b>	Italian
<b>M1028.1</b>	Japanese
<b>M1037.1</b>	Linguistics
<b>M1025.1</b>	Media and Visual Cultures
<b>M1050.1</b>	Psychological Studies
<b>M1024.1</b>	Religion, Anthropology and Philosophy
<b>M1030.1</b>	Spanish

### Bachelor of Arts Submajors

<b>SM1042.1</b>	Asian Studies and International Relations
<b>SM1035.1</b>	Chinese
<b>SM1043.1</b>	Cultural and Social Analysis
<b>SM1044.1</b>	English, Text and Writing
<b>SM1040.1</b>	Global Studies
<b>SM1041.1</b>	History and Political Thought
<b>SM1051.1</b>	Indigenous Australian Creative Expressions
<b>SM1049.1</b>	Indigenous Australian Studies
<b>SM1050.1</b>	Indigenous Economics
<b>SM1045.1</b>	Islamic Studies
<b>SM1036.1</b>	Italian
<b>SM1037.1</b>	Japanese
<b>SM1046.1</b>	Linguistics
<b>SM1033.1</b>	Media and Visual Cultures
<b>SM1069.1</b>	Psychological Studies
<b>SM1032.1</b>	Religion, Anthropology and Philosophy
<b>SM1038.1</b>	Spanish

## Unit Sets

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### Major - Religion, Anthropology and Philosophy

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#### M1024.1

This multidisciplinary major pursues critical and rational analysis of questions about individuals and societies; about human knowledge, culture and existence. It inquires into issues about human nature; the scope and limits of knowledge and belief; God and ethics; conflict and violence; ritual and myth; and religion, politics and culture. The major provides students with rigorous training in analytic and creative thinking, intellectual independence and cultural and ethical awareness.

#### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal

#### Unit Set Structure

Students must complete the compulsory Level 1 unit

<b>101686.2</b>	Anthropology and Philosophy Look at Religion
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and seven units from the following pools with no less than three units at Level 3

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

#### Level 1 Unit Pool

<b>101462.2</b>	Understanding Islam and Muslim Societies
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#### Level 2 Unit Pool

<b>101882.1</b>	A History of Modern Global Buddhism
<b>100850.2</b>	Buddhism in the Contemporary World
<b>100852.2</b>	Classics of Modern Philosophy
<b>101856.1</b>	Film and Philosophy
<b>101464.3</b>	Great Texts of Islam: Qur'an and Hadith
<b>101843.2</b>	Philosophy and Environment
<b>101881.1</b>	Philosophy and the Good Life
<b>101867.1</b>	The Ethical Life
<b>101294.3</b>	The Western Philosophical Tradition

#### Level 3 Unit Pool

<b>101295.2</b>	Aesthetics
<b>101688.2</b>	Anthropology of Religion
<b>400087.5</b>	Applied Critical Methods
<b>100863.3</b>	Ethical Cultures
<b>100998.4</b>	Evolutionary Thinking
<b>100961.4</b>	Humanities Internship
<b>101463.4</b>	Islam in the Modern World
<b>101467.2</b>	Islam in Southeast Asia
<b>101465.2</b>	Islamic Law in a Changing World

<b>101724.2</b>	Literary Animals
<b>100875.4</b>	Literature and Philosophy
<b>100275.4</b>	Philosophies of Love and Death
<b>101761.2</b>	Philosophy and the Visual
<b>100879.2</b>	Philosophy Today
<b>101665.3</b>	Politics and Religion
<b>101003.2</b>	Religion and Culture
<b>101359.5</b>	Sociology of Religion
<b>100969.2</b>	Theories of Conflict and Violence
<b>101880.1</b>	The Space of Literature
<b>101798.2</b>	Understanding Freedom
<b>101010.3</b>	What is the Human?
<b>101471.2</b>	Women in Arabic and Islamic Literature

### Major - Media and Visual Cultures

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#### M1025.1

The rapid flow of visual images with which we communicate today – on the internet, by web and moblogs – is a contemporary manifestation of the importance of visual cultures in everyday life. The Media and Visual Cultures major area equips students with multidisciplinary knowledge and skills in critical art history and theory, digital media, film and television studies, philosophy, and cultural studies. It aims to create career ready graduates with the skills necessary to interpret the production and dissemination of visual images and their meanings in a variety of media as well as cultural and institutional contexts.

#### Location

Campus	Mode
Bankstown Campus	Internal
Penrith Campus	Internal

#### Unit Set Structure

Students must complete the compulsory Level 1 unit

<b>101734.2</b>	Media and Visual Cultures: Case Studies
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and the Level 3 unit

<b>101295.2</b>	Aesthetics
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Students must also complete six of the Level 2/3 units from the following pools with no less than two at Level 3:

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

#### Level 2 Unit Pool

<b>100245.2</b>	Asian Cinema
<b>101248.3</b>	Australian Art 1
<b>101626.3</b>	Children's Literature: Image and Text
<b>101250.3</b>	Digital Futures
<b>101856.1</b>	Film and Philosophy
<b>10157.2</b>	History and Theory of the Avant-Garde
<b>100964.2</b>	Introduction to Film Studies
<b>101254.3</b>	The Animated Image: Histories and Theories
<b>10371.3</b>	The Art Museum - from the Prince to the Public
<b>100890.2</b>	The Art of Landscape
<b>101795.2</b>	The Musical



**10158.2** Writings on Art

### Level 3 Unit Pool

**400087.5** Applied Critical Methods  
**100959.2** Australian Art II  
**100989.2** Cinema and Realism  
**100990.2** Cinema, Culture, Memory  
**100256.4** Film and Affect  
**100866.3** Film and Drama  
**100961.4** Humanities Internship  
**101468.2** Islam, Media and Conflict  
**101732.2** Media, The Everyday and Uneven Modernities  
**101800.2** Media, Violence, Protest, Terror  
**101001.3** Modernity and Cinema  
**101761.2** Philosophy and the Visual  
**101253.3** Public Memory and Commemoration  
**101006.2** Social Semiotics  
**101738.2** The Art Game: Fraud, Forgery, Theft and Perfidy  
**101266.2** The Art of Modern Life  
**101717.2** The Italian Renaissance Unpacked  
**101668.2** World Cinema

## Major - Arabic

### M1026.1

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

### Location

Campus	Mode
Bankstown Campus	Internal

### Unit Set Structure

A major in Arabic comprises a sequence of 80 credit points with 60 credit points at Level 2 and 3 (with no less than 30 credit points of these at Level 3), however students commencing at beginner's level, that is units 101 and 102, and who follow the recommended course structure, are only required to complete 20 credit points at Level 3.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or
- take a Level 2 unit after passing a Level 3 unit in the same language.

### Level 1 unit pool

**100041.2** Arabic 101

**100042.2** Arabic 102

### Level 2 unit pool

**101699.2** Language and Communication Skills 2A: Arabic  
**101704.2** Language and Communication Skills 2B: Arabic

### Level 3 unit pool

**100048.2** Arabic 302 - Arabic Advanced Language and Grammar  
**100049.2** Arabic 303: Advanced Writing Skills  
**100050.2** Arabic 304: Arabic Advanced Speaking  
**100052.2** Arabic 306: Arabic Novel and Short Story  
**100054.2** Arabic 308: Language Past and Present  
**101709.2** Languages and Grammatical Concepts 3A: Arabic  
**101792.2** Texts in Contemporary Arab Society and Culture  
**101454.2** Intercultural Pragmatics  
**101668.2** World Cinema  
**400087.5** Applied Critical Methods  
**100961.4** Humanities Internship

## Major - Chinese

### M1027.1

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

### Location

Campus	Mode
Bankstown Campus	Internal

### Unit Set Structure

A major in Chinese comprises a sequence of 80 credit points with 60 credit points at Level 2 and 3 (with no less than 30 credit points of these at Level 3), however students commencing at beginner's level, that is units 101 and 102, and who follow the recommended course structure, are only required to complete 20 credit points at Level 3.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or
- take a Level 2 unit after passing a Level 3 unit in the same language.

### Level 1 unit pool

**100056.2** Chinese 101  
**100057.2** Chinese 102

#### Level 2 unit pool

**101700.2** Language and Communication Skills 2A:  
Chinese  
**101705.2** Language and Communication Skills 2B:  
Chinese

#### Level 3 unit pool

**100063.2** Chinese 302  
**100064.2** Chinese 303: Twentieth-Century Chinese  
Literature  
**100065.2** Chinese 304: Chinese Classical Literature  
**100066.2** Chinese 305: Chinese Cinema  
**100067.2** Chinese 307: The Cultural Context of China  
**101710.2** Languages and Grammatical Concepts 3A:  
Chinese  
**101454.2** Intercultural Pragmatics  
**400087.5** Applied Critical Methods  
**100961.4** Humanities Internship  
**101668.2** World Cinema

### Major - Japanese

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#### *M1028.1*

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

#### Location

Campus	Mode
Bankstown Campus	Internal

#### Unit Set Structure

A major in Japanese comprises a sequence of 80 credit points with 60 credit points at Level 2 and 3 (with no less than 30 credit points of these at Level 3), however students commencing at beginner's level, that is units 101 and 102, and who follow the recommended course structure, are only required to complete 20 credit points at Level 3.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or
- take a Level 2 unit after passing a Level 3 unit in the same language.

#### Level 1 unit pool

**100085.2** Japanese 101

**100086.2** Japanese 102

#### Level 2 unit pool

**101702.2** Language and Communication Skills 2A:  
Japanese  
**101707.2** Language and Communication Skills 2B:  
Japanese

#### Level 3 unit pool

**100092.2** Japanese 302  
**100093.2** Japanese 303: Contemporary Culture and Society  
**100094.1** Japanese 304: Discourse in Japanese  
**100096.2** Japanese 306: Japanese for Business  
**100098.1** Japanese 308: Japanese Textual Studies  
**101712.2** Languages and Grammatical Concepts 3A:  
Japanese  
**101454.2** Intercultural Pragmatics  
**101668.2** World Cinema  
**101669.2** World Literature in Translation  
**400087.5** Applied Critical Methods  
**100961.4** Humanities Internship

### Major - Italian

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#### *M1029.1*

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

#### Location

Campus	Mode
Bankstown Campus	Internal

#### Unit Set Structure

A major in Italian comprises a sequence of 80 credit points with 60 credit points at Level 2 and 3 (with no less than 30 credit points of these at Level 3), however students commencing at beginner's level, that is units 101 and 102, and who follow the recommended course structure, are only required to complete 20 credit points at Level 3.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or
- take a Level 2 unit after passing a Level 3 unit in the same language.

#### Level 1 unit pool

**100130.2** Italian 101

**100131.2** Italian 102

### Level 2 unit pool

**101701.2** Language and Communication Skills 2A:  
Italian  
**101706.2** Language and Communication Skills 2B:  
Italian

### Level 3 unit pool

**100138.2** Italian 303: Contemporary Italy in European  
and International Contexts  
**100140.1** Italian 305: Modern Literature  
**100141.2** Italian 306: Classical Literature  
**100143.2** Italian 308: Italian Cinema  
**101711.2** Languages and Grammatical Concepts 3A:  
Italian  
**101454.2** Intercultural Pragmatics  
**101668.2** World Cinema  
**101669.2** World Literature in Translation  
**400087.5** Applied Critical Methods  
**100961.4** Humanities Internship

## Major - Spanish

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### M1030.1

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

### Location

Campus	Mode
Bankstown Campus	Internal

### Unit Set Structure

A major in Spanish comprises a sequence of 80 credit points with 60 credit points at Level 2 and 3 (with no less than 30 credit points of these at Level 3), however students commencing at beginner's level, that is units 101 and 102, and who follow the recommended course structure, are only required to complete 20 credit points at Level 3.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or
- take a Level 2 unit after passing a Level 3 unit in the same language.

### Level 1 unit pool

**100145.2** Spanish 101  
**100146.2** Spanish 102

### Level 2 unit pool

**101703.2** Language and Communication Skills 2A:  
Spanish  
**101708.2** Language and Communication Skills 2B:  
Spanish

### Level 3 unit pool

**100153.2** Spanish 303: Advanced Writing Skills  
**100154.2** Spanish 304: Advanced Speaking Skills  
**100155.2** Spanish 305: Contemporary Literature  
**100156.2** Spanish 306: Contemporary History  
**100157.2** Spanish 307: Classical Literature  
**100158.2** Spanish 308: Spanish Sociolinguistics  
**101454.2** Intercultural Pragmatics  
**101669.2** World Literature in Translation  
**101668.2** World Cinema  
**101713.2** Languages and Grammatical Concepts 3A:  
Spanish  
**400087.5** Applied Critical Methods  
**100961.4** Humanities Internship  
**101791.2** Short Fiction in the Americas

## Major - Global Studies

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### M1031.1

What does it mean to live in an increasingly globalised world? Global Studies offers students the opportunity to acquire key competencies in cross-cultural communication and global issues to act as socially aware global citizens in international settings. Global Studies addresses issues such as consumer and popular culture, global histories of food and technology, the interconnection of race, identity and transnational migration and intercultural pragmatics. Students have the opportunity to complete a semester of study abroad.

### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal

### Unit Set Structure

Students must complete the Level 1 unit

**101673.2** The First Globalisation

And seven units from the following pools with no less than three Level 3 units in order to complete the major.

**Note: Not all units will be offered each year. Units will be offered on a rotational basis.**

### Level 1 unit pool

**101737.2** World Politics: An Introduction

### Level 2 unit pool

**101857.1** Doing Business in China

- 101543.2 India: Global Contexts  
 100871.3 International Texts and Contexts  
 101797.2 Political Terror

### Level 3 unit pool

- 400087.5 Applied Critical Methods  
 101870.1 Climate Change and Culture  
 100992.3 Communication: Power and Practice  
 100994.2 Consumer Culture  
 100858.3 Culture and Globalisation  
 101674.2 Global Histories of Food  
 101735.2 Global Politics  
 101736.2 Governing the Globe  
 100961.4 Humanities Internship  
 101454.2 Intercultural Pragmatics  
 101468.2 Islam, Media and Conflict  
 101733.2 Looking at Global Politics Through Film  
 101732.2 Media, The Everyday and Uneven Modernities  
 101666.2 Race, Identity and Globalisation  
 101717.2 The Italian Renaissance Unpacked  
 101848.1 Transnationalism and Migration  
 101831.2 Transport and the Making of the Modern World  
 101668.2 World Cinema  
 101669.2 World Literature in Translation  
 101830.2 WWII in Asia and the Pacific

## Major - Asian Studies and International Relations

### M1032.1

This major has been designed to meet the needs of Australian government, business and society to engage the states and peoples of Asia at all levels in pursuit of national interests and as part of the globalisation process. It provides students with the opportunity to study modern and contemporary Asia, the rich and diverse histories, politics, cultures and languages of Asian countries and the international issues affecting Australia's interests and role in the region and in the world at large. The major area includes a range of units concerned with the United States, Europe and Australia as well as with Asia itself, and units in international relations. It seeks to produce graduates with a broad, liberal education with the skills to mediate between Australia and the world in general and Asia in particular through political, economic, commercial, cultural, diplomatic and strategic links. Students are encouraged to undertake a submajor in an Asian language in conjunction with the major. Employment opportunities may be found in the State and Commonwealth public service, overseas organisations, trade and tourist organisations, business and industry, education and research.

### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal

## Unit Set Structure

Students must complete the compulsory Level 1 unit

- 101442.2 Asia in the World

and seven units from the following pools with no less than three Level 3 units in order to pass the major:

### Level 1 Unit Pool

- 101737.2 World Politics: An Introduction

### Level 2 Unit Pool

- 101882.1 A History of Modern Global Buddhism  
 100245.2 Asian Cinema  
 100847.2 Asia and the West: The Imperial Encounter  
 100850.2 Buddhism in the Contemporary World  
 100855.2 Contemporary Japan: Culture and Society  
 101857.1 Doing Business in China  
 100861.3 Empire: European Colonial Rule and its Subjects, 1750-1920  
 101543.2 India: Global Contexts  
 100872.2 International Politics of North Asia  
 100904.2 Politics and Business in Asia  
 100277.3 Politics of Australia and Asia Relations  
 63111.3 Special Topics in Asian and International Studies  
 101404.3 The History of Modern Indonesia  
 101871.1 War

### Level 3 Unit Pool

- 100985.2 American Foreign Policy Since 1945  
 400087.5 Applied Critical Methods  
 101249.2 Culture and Thought in Twentieth-Century China  
 100903.2 Democracy in Asia  
 100507.4 History of Modern China to 1949  
 100961.4 Humanities Internship  
 100962.2 International Politics of the Southeast Asian Region  
 101467.2 Islam in Southeast Asia  
 101733.2 Looking at Global Politics Through Film  
 100271.3 Modern Japanese History  
 100278.2 Politics of Post-War Japan  
 63178.2 Social and Political Developments in Contemporary China  
 101667.3 The External Relations of the European Union  
 101782.2 The History and Politics of Contemporary Central Asia  
 101783.2 The International Relations of the Middle East Since 1945  
 101405.2 The Politics of Contemporary Indonesia  
 101866.1 United States Government and Politics  
 101375.3 War and Peace  
 100294.3 Warlords, Artists and Emperors: Power and Authority in Premodern Japan  
 100971.2 Which New World Order?  
 101830.2 WWII in Asia and the Pacific

## Major - History and Political Thought

### M1033.1

Since the revival of humanist studies in Renaissance Europe in the 15th century, universities have placed history and political thought at the heart of studies in the humanities. Through study of the political thought and social, political and cultural history of Australian, Asian and European societies, students gain knowledge and critical skills relevant to a variety of careers in education, government and non-governmental organizations. Study of the writings of political thinkers from ancient Greece and Rome, such as Plato and Cicero, and the early modern period, such as Hobbes and Machiavelli, to noted 19th century figures, such as Hegel and Marx, prepare students to engage with contemporary issues of governance, such as sovereignty, power, opportunity, property, civic freedom and social justice.

### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

### Unit Set Structure

Students would be eligible for this major having successfully completed 80 credit points with no less than three Level 3 units.

Students must complete the compulsory Level 1 unit

**100873.3** Inventing Modernity

**Note: Not all units will be offered each year. Units will be offered on a rotational basis.**

### Level 1 unit pool

<b>100848.2</b>	Australian Politics
<b>100868.2</b>	Foundations of Modern Australia
<b>101737.2</b>	World Politics: An Introduction

### Level 2 unit pool

<b>101882.1</b>	A History of Modern Global Buddhism
<b>100244.2</b>	Ancient Western Culture: Periclean Athens
<b>100861.3</b>	Empire: European Colonial Rule and its Subjects, 1750-1920
<b>100254.3</b>	Exploring Local History
<b>100869.2</b>	Foundations of Modern Europe 1500-1800
<b>101543.2</b>	India: Global Contexts
<b>100001.3</b>	Keeping the Past
<b>101843.2</b>	Philosophy and Environment
<b>101797.2</b>	Political Terror
<b>100904.2</b>	Politics and Business in Asia
<b>100277.3</b>	Politics of Australia and Asia Relations
<b>100882.2</b>	Politics of Sex and Gender
<b>63111.3</b>	Special Topics in Asian and International Studies
<b>101867.1</b>	The Ethical Life

<b>101404.3</b>	The History of Modern Indonesia
<b>101294.3</b>	The Western Philosophical Tradition
<b>101871.1</b>	War
<b>100293.3</b>	War and Society: 20th Century Australia

### Level 3 unit pool

<b>400087.5</b>	Applied Critical Methods
<b>100966.3</b>	American History, 1898-1945
<b>100986.2</b>	Australian History 1860-1920
<b>100987.3</b>	Australian History Since 1920
<b>101685.3</b>	Australian Indigenous History
<b>101872.1</b>	Australian Indigenous History from Federation to Reconciliation
<b>100991.2</b>	Citizenship Ancient and Modern
<b>100852.2</b>	Classics of Modern Philosophy
<b>101799.2</b>	Convicts and Settlers - Australian History 1788 - 1840
<b>101249.2</b>	Culture and Thought in Twentieth-Century China
<b>100903.2</b>	Democracy in Asia
<b>100863.3</b>	Ethical Cultures
<b>100864.2</b>	Europe in the Twentieth Century
<b>101844.2</b>	Feminist Theories
<b>101674.2</b>	Global Histories of Food
<b>101735.2</b>	Global Politics
<b>100507.4</b>	History of Modern China to 1949
<b>100961.4</b>	Humanities Internship
<b>100963.3</b>	Interpreting Australia: Australian Historians and Historiography
<b>101801.2</b>	Interpreting Fascism
<b>101823.2</b>	Lay Participation in Justice Processes
<b>100875.4</b>	Literature and Philosophy
<b>101733.2</b>	Looking at Global Politics Through Film
<b>100271.3</b>	Modern Japanese History
<b>101665.3</b>	Politics and Religion
<b>100278.2</b>	Politics of Post-War Japan
<b>100908.2</b>	Race Politics
<b>63178.2</b>	Social and Political Developments in Contemporary China
<b>101667.3</b>	The External Relations of the European Union
<b>101782.2</b>	The History and Politics of Contemporary Central Asia
<b>101783.2</b>	The International Relations of the Middle East Since 1945
<b>101405.2</b>	The Politics of Contemporary Indonesia
<b>100969.2</b>	Theories of Conflict and Violence
<b>101831.2</b>	Transport and the Making of the Modern World
<b>101798.2</b>	Understanding Freedom
<b>101731.2</b>	Understanding Power
<b>101866.1</b>	United States Government and Politics
<b>101375.3</b>	War and Peace
<b>100294.3</b>	Warlords, Artists and Emperors: Power and Authority in Premodern Japan
<b>100971.2</b>	Which New World Order?
<b>101830.2</b>	WWII in Asia and the Pacific

## Major - Cultural and Social Analysis

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### M1034.1

Cultural and Social Analysis is an interdisciplinary major developing knowledge, research skills and analytic capacities relevant to understanding and interpreting landscapes of cultural diversity and social difference in our contemporary world, both in terms of the broad contours, as well as specific micro-social environments. This major provides grounding in contemporary debates and methodologies in cultural studies and social theory, and draws on various disciplines including history, sociology, communications, and linguistics. Topics include popular culture, everyday urban life, cultural and social impacts of scientific theories and new technologies, multiculturalism, and contemporary spirituality. Study in this area is relevant for work involving commentary and analysis of contemporary social issues and cultural practices (e.g. journalism, teaching, activism) and fields concerned with designing, delivering and evaluating cultural and artistic productions, and education, communication, welfare or health services, in culturally diverse communities.

### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

### Unit Set Structure

Students must complete the compulsory Level 1 unit

**100897.2** Everyday Life

and seven units from the following pools with no less than three Level 3 units in order to complete the major.

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

#### Level 2 Unit Pool

<b>101409.2</b>	Aboriginal Cultural Texts
<b>100854.3</b>	Contemporary Popular Cultures
<b>100871.3</b>	International Texts and Contexts
<b>101251.2</b>	Introduction to Psychoanalysis
<b>100273.3</b>	New Ethnicities, Old Racisms
<b>100882.2</b>	Politics of Sex and Gender
<b>100281.3</b>	Sexual Culture/s
<b>100884.2</b>	Social Inequalities
<b>100886.2</b>	Special Topics in Cultural and Social Analysis
<b>100889.2</b>	Technocultures
<b>101867.1</b>	The Ethical Life
<b>100291.4</b>	Urban Life/Urban Culture
<b>100298.2</b>	Youth Cultures and Moral Panics
<b>101879.1</b>	Women with Muslim Identity

#### Level 3 Unit Pool

<b>400087.5</b>	Applied Critical Methods
<b>101265.2</b>	Children's Culture

<b>100990.2</b>	Cinema, Culture, Memory
<b>101870.1</b>	Climate Change and Culture
<b>100992.3</b>	Communication: Power and Practice
<b>100858.3</b>	Culture and Globalisation
<b>100996.3</b>	Death and Culture
<b>100860.3</b>	Emotions, Culture and Community
<b>100998.4</b>	Evolutionary Thinking
<b>101844.2</b>	Feminist Theories
<b>101716.3</b>	Healing and Culture
<b>100961.4</b>	Humanities Internship
<b>101468.2</b>	Islam, Media and Conflict
<b>101739.3</b>	Literature and Trauma
<b>101732.2</b>	Media, The Everyday and Uneven Modernities
<b>101800.2</b>	Media, Violence, Protest, Terror
<b>100877.3</b>	Multicultural Studies
<b>101252.2</b>	Psychoanalytic Criticism
<b>101253.3</b>	Public Memory and Commemoration
<b>101003.2</b>	Religion and Culture
<b>101005.4</b>	Representing Crime
<b>101006.2</b>	Social Semiotics
<b>101832.2</b>	Talking Normal: Sociolinguistics and Modern Literature
<b>101008.2</b>	Technologies of Racism
<b>101009.3</b>	The Body in Culture
<b>101848.1</b>	Transnationalism and Migration
<b>101798.2</b>	Understanding Freedom
<b>101731.2</b>	Understanding Power
<b>101010.3</b>	What is the Human?

## Major - English, Text and Writing

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### M1035.1

The English, Text and Writing major invites students to explore contemporary approaches to language, literary study and writing, including literary criticism and theory, linguistic analysis, genre and textual study, and creative writing. English, Text and Writing focuses on the imaginative workings of language, and students can study a wide selection of modern and classic literature, as well as the relationships between written texts and other media such as film and information technology. Students also have the opportunity to produce their own creative writing and to edit and publish their work. Career prospects include publishing, editing, teaching, writing and advertising.

### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

### Unit Set Structure

Students must complete 80 credit points with no less than three Level 3 units.

Students must complete the compulsory Level 1 unit

**100862.2** English, Text & Writing

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

### Level 1 unit pool

**100641.3** Approaches to Text

### Level 2 unit pool

**101626.3** Children's Literature: Image and Text  
**100900.3** Comedy and Tragedy  
**101408.2** Critical Discourse Analysis  
**101452.2** History of the English Language  
**100870.2** Hypertext Fictions  
**100871.3** International Texts and Contexts  
**100964.2** Introduction to Film Studies  
**100505.2** Special Topics in English, Text and Writing  
**101795.2** The Musical  
**100893.3** The Novel  
**101455.3** The Structure of English  
**100896.3** Writing Fiction  
**101869.1** Studies in Postcolonial Literature  
**101873.1** The Sound of Language

### Level 3 unit pool

**400087.5** Applied Critical Methods  
**100845.3** American Literature  
**100849.4** Australian Textual Studies  
**101242.3** Children's Literature  
**100856.4** Creative Non-Fiction  
**100859.3** Creative Writing Project  
**100256.4** Film and Affect  
**100866.3** Film and Drama  
**100961.4** Humanities Internship  
**101724.2** Literary Animals  
**100875.4** Literature and Philosophy  
**101739.3** Literature and Trauma  
**100874.4** Literature, History and Culture  
**101033.4** Modernism  
**101001.3** Modernity and Cinema  
**101406.2** Queering Text  
**101650.3** Race in Literature  
**101005.4** Representing Crime  
**101791.2** Short Fiction in the Americas  
**101832.2** Talking Normal: Sociolinguistics and Modern Literature  
**101453.2** Text and Discourse in English  
**101471.2** Women in Arabic and Islamic Literature  
**101668.2** World Cinema  
**101669.2** World Literature in Translation  
**101670.3** Writing and Society  
**100895.4** Writing For Performance  
**101011.3** Writing Poetry  
**100582.2** Writing Portfolio  
**101796.1** 19th Century American Literature  
**101880.1** The Space of Literature

## Major - Islamic Studies

### **M1036.1**

Students engage in interdisciplinary study essential to an understanding of Islam, past and present. The area of

study balances historical and modern Islamic studies and research methods. One of the keys to Islamic Studies is 'relevance' to contemporary Australian society but relevance can only come from a sound comprehension of past traditions in Islamic scholarship and their socio-historical contexts. Preparation for graduate study is also a key objective of this program, with its focus on developing critical and interdisciplinary research skills through a combination of approaches. Students are encouraged to undertake a sub-major in Arabic to complement the Islamic Studies major.

### Location

Campus	Mode
Bankstown Campus	Internal

### Unit Set Structure

Students must complete 80 credit points as follows

An Islamic Studies major must include the following Level 1 unit

**101462.2** Understanding Islam and Muslim Societies

The remaining seven units must include at least three Level 3 units drawn from the following pools:

### Level 2 unit pool

**101464.3** Great Texts of Islam: Qur'an and Hadith  
**100273.3** New Ethnicities, Old Racisms

### Level 3 unit pool

**101688.2** Anthropology of Religion  
**400087.5** Applied Critical Methods  
**101466.2** Ethical Traditions in Islam  
**100961.4** Humanities Internship  
**101822.2** Islam in the West  
**101463.4** Islam in the Modern World  
**101467.2** Islam in Southeast Asia  
**101468.2** Islam, Media and Conflict  
**101465.2** Islamic Law in a Changing World  
**100877.3** Multicultural Studies  
**101359.5** Sociology of Religion  
**101792.2** Texts in Contemporary Arab Society and Culture  
**101783.2** The International Relations of the Middle East Since 1945  
**101471.2** Women in Arabic and Islamic Literature

## Major - Linguistics

### **M1037.1**

Through study of what language is and how it works, students gain conceptual tools and knowledge relevant to the relationship of language and society as well linguistics-related disciplines, such as Sociolinguistics, Psycholinguistics, Developmental Linguistics, Bilingualism, and other applied linguistics areas. Understanding of the relationship between language learning, communicative competence and cultural practices, both in the Australian context and in a global context, provides a foundation for

many careers including primary and secondary teaching, policy analysis, communication, social and welfare services in culturally diverse communities.

### Location

Campus	Mode
Bankstown Campus	Internal

### Unit Set Structure

Students must complete eight units from the following pools, with no less than three units at Level 3.

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

#### Level 1 unit pool

<b>100194.2</b>	Introduction to Interpreting
<b>100195.2</b>	Introduction to Translation

#### Level 2 unit pool

<b>101452.2</b>	History of the English Language
<b>100928.3</b>	Linguistics
<b>101873.1</b>	The Sound of Language
<b>101302.2</b>	Translation Technologies

#### Level 3 unit pool

<b>400087.5</b>	Applied Critical Methods
<b>101449.2</b>	Bilingualism and Biculturalism
<b>101441.2</b>	English Semantics and Pragmatics
<b>101454.2</b>	Intercultural Pragmatics
<b>101709.2</b>	Languages and Grammatical Concepts 3A: Arabic
<b>101710.2</b>	Languages and Grammatical Concepts 3A: Chinese
<b>101711.2</b>	Languages and Grammatical Concepts 3A: Italian
<b>101712.2</b>	Languages and Grammatical Concepts 3A: Japanese
<b>101713.2</b>	Languages and Grammatical Concepts 3A: Spanish
<b>101451.2</b>	Second Language Acquisition
<b>101721.2</b>	Second Language Learning and Teaching
<b>101450.2</b>	Sociolinguistics
<b>100201.2</b>	Special Study in Languages and Linguistics
<b>101832.2</b>	Talking Normal: Sociolinguistics and Modern Literature
<b>101453.2</b>	Text and Discourse in English

## Major - Indigenous Australian Studies

### M1041.1

What does it mean to live in Indigenous Australia? The Indigenous Australian Studies Major offers students the exciting opportunity to acquire key cultural competencies that will enable them to understand and work more effectively with Indigenous Australians in professions such as the arts, communications, media industries; education; government and non-government; policy; health; sciences; and community services. The Indigenous Australian

Studies Major addresses the cultural, historical, social and economic issues affecting Indigenous and Non-Indigenous Australians and relationships.

### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

### Unit Set Structure

Students must complete 80 credit points as follows

Students must complete the following level one unit:

<b>101751.2</b>	Contextualising Indigenous Australia (Day Mode)
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Choose seven of the following units including three Level 3 units

#### Level 1 units:

<b>101762.1</b>	Who do you think you are? (Day Mode)
<b>101878.1</b>	Indigenous Landscapes

#### Level 2 units:

<b>101752.1</b>	Pigments of the Imagination
<b>101753.2</b>	Revaluing Indigenous Economics (Day Mode)
<b>101754.2</b>	From Corroborees to Curtain Raisers (Day Mode)
<b>101755.1</b>	From Ochre to Acrylics to New Technologies

#### Level 3 units:

<b>101756.1</b>	Bridging the Gap: Re-engaging Indigenous Learners
<b>101757.1</b>	The Making of the 'Aborigines'
<b>101758.1</b>	Learning through Indigenous Australian Community Service (Day Mode)

or

<b>101759.1</b>	Rethinking Research with Indigenous Australians: Independent Study Project (Day Mode)
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## Major - Psychological Studies

### M1050.1

The Psychological Studies major comprises units in the discipline of psychology that focus on the field of inquiry that uses scientific techniques and methods to understand and explain behaviour and experience. Units in the program are drawn from the following core areas of psychology: brain and behaviour, learning, motivation and emotion, social psychology, lifespan development, perception, and cognitive processes. A Psychological Studies major does not meet APAC requirements for an accredited sequence in Psychology. Students wishing to enrol in an accredited



Psychology sequence need to complete the Psychology key program of 200 credit points.

**101867.1** The Ethical Life  
**101294.3** The Western Philosophical Tradition

### Location

Campus	Mode
Bankstown Campus	Internal
Penrith Campus	Internal

### Unit Set Structure

Students must complete the following eight units:

<b>101184.2</b>	Psychology: Human Behaviour
<b>101183.2</b>	Psychology: Behavioural Science
<b>100013.3</b>	Experimental Design and Analysis
<b>101680.3</b>	Perception
<b>101684.3</b>	Brain and Behaviour
<b>101676.2</b>	Human Learning
<b>101677.3</b>	Cognitive Processes
<b>101682.4</b>	Developmental Psychology

### Sub-major - Religion, Anthropology and Philosophy

#### SM1032.1

This multidisciplinary sub-major pursues critical and rational analysis of questions about individuals and societies; about human knowledge, culture and existence. It inquires into issues about human nature; the scope and limits of knowledge and belief; God and ethics; conflict and violence; ritual and myth; and religion, politics and culture. The sub-major provides students with rigorous training in analytic and creative thinking, intellectual independence and cultural and ethical awareness.

### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal

### Unit Set Structure

Students must complete 40 credit points from the following pool with no more than one unit at Level 1

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

#### Level 1 Unit Pool

<b>101462.2</b>	Understanding Islam and Muslim Societies
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#### Level 2 Unit Pool

<b>101882.1</b>	A History of Modern Global Buddhism
<b>100850.2</b>	Buddhism in the Contemporary World
<b>100852.2</b>	Classics of Modern Philosophy
<b>101856.1</b>	Film and Philosophy
<b>101464.3</b>	Great Texts of Islam: Qur'an and Hadith
<b>101843.2</b>	Philosophy and Environment
<b>101881.1</b>	Philosophy and the Good Life

### Level 3 Unit Pool

<b>101295.2</b>	Aesthetics
<b>101688.2</b>	Anthropology of Religion
<b>400087.5</b>	Applied Critical Methods
<b>100863.3</b>	Ethical Cultures
<b>100998.4</b>	Evolutionary Thinking
<b>100961.4</b>	Humanities Internship
<b>101463.4</b>	Islam in the Modern World
<b>101467.2</b>	Islam in Southeast Asia
<b>101465.2</b>	Islamic Law in a Changing World
<b>101724.2</b>	Literary Animals
<b>100875.4</b>	Literature and Philosophy
<b>100275.4</b>	Philosophies of Love and Death
<b>101761.2</b>	Philosophy and the Visual
<b>100879.2</b>	Philosophy Today
<b>101665.3</b>	Politics and Religion
<b>101003.2</b>	Religion and Culture
<b>101359.5</b>	Sociology of Religion
<b>100969.2</b>	Theories of Conflict and Violence
<b>101880.1</b>	The Space of Literature
<b>101798.2</b>	Understanding Freedom
<b>101010.3</b>	What is the Human?
<b>101471.2</b>	Women in Arabic and Islamic Literature

### Sub-major - Media and Visual Cultures

#### SM1033.1

The rapid flow of visual images with which we communicate today – on the internet, by web and moblogs – is a contemporary manifestation of the importance of visual cultures in everyday life. The Media and Visual Cultures sub-major area equips students with multidisciplinary knowledge and skills in critical art history and theory, digital media, film and television studies, philosophy, and cultural studies. It aims to create career ready graduates with the skills necessary to interpret the production and dissemination of visual images and their meanings in a variety of media as well as cultural and institutional contexts.

### Location

Campus	Mode
Bankstown Campus	Internal
Penrith Campus	Internal

### Unit Set Structure

Students must complete 40 credit points from the following pools

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

#### Level 2 Unit Pool

<b>100245.2</b>	Asian Cinema
<b>101248.3</b>	Australian Art 1
<b>101626.3</b>	Children's Literature: Image and Text
<b>101250.3</b>	Digital Futures

<b>101856.1</b>	Film and Philosophy
<b>10157.2</b>	History and Theory of the Avant-Garde
<b>100964.2</b>	Introduction to Film Studies
<b>101254.3</b>	The Animated Image: Histories and Theories
<b>10371.3</b>	The Art Museum - from the Prince to the Public
<b>100890.2</b>	The Art of Landscape
<b>101795.2</b>	The Musical
<b>10158.2</b>	Writings on Art

**Level 3 Unit Pool**

<b>400087.5</b>	Applied Critical Methods
<b>100959.2</b>	Australian Art II
<b>100989.2</b>	Cinema and Realism
<b>100990.2</b>	Cinema, Culture, Memory
<b>100256.4</b>	Film and Affect
<b>100866.3</b>	Film and Drama
<b>100961.4</b>	Humanities Internship
<b>101468.2</b>	Islam, Media and Conflict
<b>101732.2</b>	Media, The Everyday and Uneven Modernities
<b>101800.2</b>	Media, Violence, Protest, Terror
<b>101001.3</b>	Modernity and Cinema
<b>101761.2</b>	Philosophy and the Visual
<b>101253.3</b>	Public Memory and Commemoration
<b>101006.2</b>	Social Semiotics
<b>101738.2</b>	The Art Game: Fraud, Forgery, Theft and Perfidy
<b>101266.2</b>	The Art of Modern Life
<b>101717.2</b>	The Italian Renaissance Unpacked
<b>101668.2</b>	World Cinema

**Sub-major - Chinese****SM1035.1**

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

**Location**

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal

**Unit Set Structure**

A sub-major in Chinese is any sequence of 40 credit points with no more than 20 credit points at Level 1.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or

- take a Level 2 unit after passing a Level 3 unit in the same language.

**Level 1 unit pool**

<b>100056.2</b>	Chinese 101
<b>100057.2</b>	Chinese 102

**Level 2 unit pool**

<b>101700.2</b>	Language and Communication Skills 2A: Chinese
<b>101705.2</b>	Language and Communication Skills 2B: Chinese

**Level 3 unit pool**

<b>100063.2</b>	Chinese 302
<b>100064.2</b>	Chinese 303: Twentieth-Century Chinese Literature
<b>100065.2</b>	Chinese 304: Chinese Classical Literature
<b>100066.2</b>	Chinese 305: Chinese Cinema
<b>100067.2</b>	Chinese 307: The Cultural Context of China
<b>101710.2</b>	Languages and Grammatical Concepts 3A: Chinese
<b>101454.2</b>	Intercultural Pragmatics
<b>101668.2</b>	World Cinema

**Sub-major - Italian****SM1036.1**

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

**Location**

Campus	Mode
Bankstown Campus	Internal

**Unit Set Structure**

A sub-major in Italian is any sequence of 40 credit points with no more than 20 credit points at Level 1.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or

- take a Level 2 unit after passing a Level 3 unit in the same language.

**Level 1 unit pool**

<b>100130.2</b>	Italian 101
<b>100131.2</b>	Italian 102

**Level 2 unit pool**

- 101701.2** Language and Communication Skills 2A:  
Italian
- 101706.2** Language and Communication Skills 2B:  
Italian

**Level 3 unit pool**

- 100138.2** Italian 303: Contemporary Italy in European  
and International Contexts
- 100140.1** Italian 305: Modern Literature
- 100141.2** Italian 306: Classical Literature
- 100143.2** Italian 308: Italian Cinema
- 101711.2** Languages and Grammatical Concepts 3A:  
Italian
- 101454.2** Intercultural Pragmatics
- 101668.2** World Cinema
- 101669.2** World Literature in Translation

**Sub-major - Japanese****SM1037.1**

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

**Location**

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal

**Unit Set Structure**

A sub-major in Japanese is any sequence of 40 credit points with no more than 20 credit points at Level 1. Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or
- take a Level 2 unit after passing a Level 3 unit in the same language.

**Level 1 unit pool**

- 100085.2** Japanese 101
- 100086.2** Japanese 102

**Level 2 unit pool**

- 101702.2** Language and Communication Skills 2A:  
Japanese

- 101707.2** Language and Communication Skills 2B:  
Japanese

**Level 3 unit pool**

- 100093.2** Japanese 303: Contemporary Culture and  
Society
- 100094.1** Japanese 304: Discourse in Japanese
- 100096.2** Japanese 306: Japanese for Business
- 100098.1** Japanese 308: Japanese Textual Studies
- 101712.2** Languages and Grammatical Concepts 3A:  
Japanese
- 101454.2** Intercultural Pragmatics
- 101668.2** World Cinema
- 101669.2** World Literature in Translation

**Sub-major - Spanish****SM1038.1**

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

**Location**

Campus	Mode
Bankstown Campus	Internal

**Unit Set Structure**

A sub-major in Spanish is any sequence of 40 credit points with no more than 20 credit points at Level 1.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or
- take a Level 2 unit after passing a Level 3 unit in the same language.

**Level 1 unit pool**

- 100145.2** Spanish 101
- 100146.2** Spanish 102

**Level 2 unit pool**

- 101703.2** Language and Communication Skills 2A:  
Spanish
- 101708.2** Language and Communication Skills 2B:  
Spanish

**Level 3 unit pool**

- 100153.2** Spanish 303: Advanced Writing Skills
- 100154.2** Spanish 304: Advanced Speaking Skills

<b>100155.2</b>	Spanish 305: Contemporary Literature
<b>100156.2</b>	Spanish 306: Contemporary History
<b>100157.2</b>	Spanish 307: Classical Literature
<b>100158.2</b>	Spanish 308: Spanish Sociolinguistics
<b>101713.2</b>	Languages and Grammatical Concepts 3A: Spanish
<b>101454.2</b>	Intercultural Pragmatics
<b>101668.2</b>	World Cinema
<b>101669.2</b>	World Literature in Translation
<b>400087.5</b>	Applied Critical Methods
<b>100961.4</b>	Humanities Internship
<b>101791.2</b>	Short Fiction in the Americas

<b>101468.2</b>	Islam, Media and Conflict
<b>101733.2</b>	Looking at Global Politics Through Film
<b>101732.2</b>	Media, The Everyday and Uneven Modernities
<b>101666.2</b>	Race, Identity and Globalisation
<b>101717.2</b>	The Italian Renaissance Unpacked
<b>101848.1</b>	Transnationalism and Migration
<b>101831.2</b>	Transport and the Making of the Modern World
<b>101668.2</b>	World Cinema
<b>101669.2</b>	World Literature in Translation
<b>101830.2</b>	WWII in Asia and the Pacific

## Sub-major - Global Studies

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### SM1040.1

What does it mean to live in an increasingly globalised world? Global Studies offers students the opportunity to acquire key competencies in cross-cultural communication and global issues to act as socially aware global citizens in international settings. Global Studies addresses issues such as consumer and popular culture, global histories of food and technology, the interconnection of race, identity and transnational migration and intercultural pragmatics. Students have the opportunity to complete a semester of study abroad.

#### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal

#### Unit Set Structure

Students must complete 40 credit points from the following pools with no more than one unit at Level 1.

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

##### Level 1 unit pool

<b>101737.2</b>	World Politics: An Introduction
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##### Level 2 unit pool

<b>101857.1</b>	Doing Business in China
<b>101543.2</b>	India: Global Contexts
<b>100871.3</b>	International Texts and Contexts
<b>101797.2</b>	Political Terror

##### Level 3 unit pool

<b>400087.5</b>	Applied Critical Methods
<b>100992.3</b>	Communication: Power and Practice
<b>101870.1</b>	Climate Change and Culture
<b>100994.2</b>	Consumer Culture
<b>100858.3</b>	Culture and Globalisation
<b>101674.2</b>	Global Histories of Food
<b>101735.2</b>	Global Politics
<b>101736.2</b>	Governing the Globe
<b>100961.4</b>	Humanities Internship
<b>101454.2</b>	Intercultural Pragmatics

## Sub-major - History and Political Thought

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### SM1041.1

Since the revival of humanist studies in Renaissance Europe in the 15th century, universities have placed history and political thought at the heart of studies in the humanities. Through study of the political thought and social, political and cultural history of Australian, Asian and European societies, students gain knowledge and critical skills relevant to a variety of careers in education, government and non-governmental organizations. Study of the writings of political thinkers from ancient Greece and Rome, such as Plato and Cicero, and the early modern period, such as Hobbes and Machiavelli, to noted 19th century figures, such as Hegel and Marx, prepare students to engage with contemporary issues of governance, such as sovereignty, power, opportunity, property, civic freedom and social justice.

#### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

#### Unit Set Structure

Students must complete 40 credit points from the following pools:

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

##### Level 1 unit pool

<b>100848.2</b>	Australian Politics
<b>100868.2</b>	Foundations of Modern Australia
<b>100873.3</b>	Inventing Modernity
<b>101737.2</b>	World Politics: An Introduction

##### Level 2 unit pool

<b>101882.1</b>	A History of Modern Global Buddhism
<b>100244.2</b>	Ancient Western Culture: Periclean Athens
<b>100861.3</b>	Empire: European Colonial Rule and its Subjects, 1750-1920
<b>100254.3</b>	Exploring Local History
<b>100869.2</b>	Foundations of Modern Europe 1500-1800
<b>101543.2</b>	India: Global Contexts

100001.3	Keeping the Past
101843.2	Philosophy and Environment
101797.2	Political Terror
100904.2	Politics and Business in Asia
100277.3	Politics of Australia and Asia Relations
100882.2	Politics of Sex and Gender
63111.3	Special Topics in Asian and International Studies
101867.1	The Ethical Life
101404.3	The History of Modern Indonesia
101294.3	The Western Philosophical Tradition
101871.1	War
100293.3	War and Society: 20th Century Australia

**Level 3 unit pool**

400087.5	Applied Critical Methods
100966.3	American History, 1898-1945
100986.2	Australian History 1860-1920
100987.3	Australian History Since 1920
101685.3	Australian Indigenous History
101872.1	Australian Indigenous History from Federation to Reconciliation
100991.2	Citizenship Ancient and Modern
100852.2	Classics of Modern Philosophy
101799.2	Convicts and Settlers - Australian History 1788 - 1840
101249.2	Culture and Thought in Twentieth-Century China
100903.2	Democracy in Asia
100863.3	Ethical Cultures
100864.2	Europe in the Twentieth Century
101844.2	Feminist Theories
101674.2	Global Histories of Food
101735.2	Global Politics
100507.4	History of Modern China to 1949
100961.4	Humanities Internship
100963.3	Interpreting Australia: Australian Historians and Historiography
101801.2	Interpreting Fascism
101823.2	Lay Participation in Justice Processes
100875.4	Literature and Philosophy
101733.2	Looking at Global Politics Through Film
100271.3	Modern Japanese History
101665.3	Politics and Religion
100278.2	Politics of Post-War Japan
100908.2	Race Politics
63178.2	Social and Political Developments in Contemporary China
101667.3	The External Relations of the European Union
101782.2	The History and Politics of Contemporary Central Asia
101783.2	The International Relations of the Middle East Since 1945
101405.2	The Politics of Contemporary Indonesia
100969.2	Theories of Conflict and Violence
101831.2	Transport and the Making of the Modern World
101798.2	Understanding Freedom
101731.2	Understanding Power
101866.1	United States Government and Politics
101375.3	War and Peace
100294.3	Warlords, Artists and Emperors: Power and Authority in Premodern Japan
100971.2	Which New World Order?
101830.2	WWII in Asia and the Pacific

**Sub-major - Asian Studies and International Relations****SM1042.1**

This sub-major has been designed to meet the needs of Australian government, business and society to engage the states and peoples of Asia at all levels in pursuit of national interests and as part of the globalisation process. It provides students with the opportunity to study modern and contemporary Asia, the rich and diverse histories, politics, cultures and languages of Asian countries and the international issues affecting Australia's interests and role in the region and in the world at large. The sub-major area includes a range of units concerned with the United States, Europe and Australia as well as with Asia itself, and units in international relations. It seeks to produce graduates with a broad, liberal education with the skills to mediate between Australia and the world in general and Asia in particular through political, economic, commercial, cultural, diplomatic and strategic links. Students are encouraged to undertake a sub-major in an Asian language in conjunction with the major. Employment opportunities may be found in the State and Commonwealth public service, overseas organisations, trade and tourist organisations, business and industry, education and research

**Location**

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal

**Unit Set Structure**

Students must complete 40 credit points from the following pools:

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

**Level 1 Unit Pool**

101737.2	World Politics: An Introduction
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**Level 2 Unit Pool**

101882.1	A History of Modern Global Buddhism
100245.2	Asian Cinema
100847.2	Asia and the West: The Imperial Encounter
100850.2	Buddhism in the Contemporary World
100855.2	Contemporary Japan: Culture and Society
101857.1	Doing Business in China
100861.3	Empire: European Colonial Rule and its Subjects, 1750-1920
101543.2	India: Global Contexts
100872.2	International Politics of North Asia
100904.2	Politics and Business in Asia
100277.3	Politics of Australia and Asia Relations
63111.3	Special Topics in Asian and International Studies
101404.3	The History of Modern Indonesia
101871.1	War

**Level 3 Unit Pool**

<b>100985.2</b>	American Foreign Policy Since 1945
<b>400087.5</b>	Applied Critical Methods
<b>101249.2</b>	Culture and Thought in Twentieth-Century China
<b>100903.2</b>	Democracy in Asia
<b>100507.4</b>	History of Modern China to 1949
<b>100961.4</b>	Humanities Internship
<b>100962.2</b>	International Politics of the Southeast Asian Region
<b>101467.2</b>	Islam in Southeast Asia
<b>101733.2</b>	Looking at Global Politics Through Film
<b>100271.3</b>	Modern Japanese History
<b>100278.2</b>	Politics of Post-War Japan
<b>63178.2</b>	Social and Political Developments in Contemporary China
<b>101667.3</b>	The External Relations of the European Union
<b>101782.2</b>	The History and Politics of Contemporary Central Asia
<b>101783.2</b>	The International Relations of the Middle East Since 1945
<b>101405.2</b>	The Politics of Contemporary Indonesia
<b>101866.1</b>	United States Government and Politics
<b>101375.3</b>	War and Peace
<b>100294.3</b>	Warlords, Artists and Emperors: Power and Authority in Premodern Japan
<b>100971.2</b>	Which New World Order?
<b>101830.2</b>	WWII in Asia and the Pacific

**Sub-major - Cultural and Social Analysis****SM1043.1**

Cultural and Social Analysis is an interdisciplinary sub-major developing knowledge, research skills and analytic capacities relevant to understanding and interpreting landscapes of cultural diversity and social difference in our contemporary world, both in terms of the broad contours, as well as specific micro-social environments. This sub-major provides grounding in contemporary debates and methodologies in cultural studies and social theory, and draws on various disciplines including history, sociology, communications, and linguistics. Topics include popular culture, everyday urban life, cultural and social impacts of scientific theories and new technologies, multiculturalism, and contemporary spirituality. Study in this area is relevant for work involving commentary and analysis of contemporary social issues and cultural practices (e.g. journalism, teaching, activism) and fields concerned with designing, delivering and evaluating cultural and artistic productions, and education, communication, welfare or health services, in culturally diverse communities.

**Location**

<b>Campus</b>	<b>Mode</b>
Bankstown Campus	Internal
Penrith Campus	Internal

**Unit Set Structure**

Students must complete 40 credit points from the Level 2/3 units from the following pools

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

**Level 2 Unit Pool**

<b>101409.2</b>	Aboriginal Cultural Texts
<b>100854.3</b>	Contemporary Popular Cultures
<b>100871.3</b>	International Texts and Contexts
<b>101251.2</b>	Introduction to Psychoanalysis
<b>100273.3</b>	New Ethnicities, Old Racisms
<b>100882.2</b>	Politics of Sex and Gender
<b>100281.3</b>	Sexual Culture/s
<b>100884.2</b>	Social Inequalities
<b>100886.2</b>	Special Topics in Cultural and Social Analysis
<b>100889.2</b>	Technocultures
<b>101867.1</b>	The Ethical Life
<b>100291.4</b>	Urban Life/Urban Culture
<b>101879.1</b>	Women with Muslim Identity
<b>100298.2</b>	Youth Cultures and Moral Panics

**Level 3 Unit Pool**

<b>400087.5</b>	Applied Critical Methods
<b>101265.2</b>	Children's Culture
<b>100990.2</b>	Cinema, Culture, Memory
<b>101870.1</b>	Climate Change and Culture
<b>100992.3</b>	Communication: Power and Practice
<b>100858.3</b>	Culture and Globalisation
<b>100996.3</b>	Death and Culture
<b>100860.3</b>	Emotions, Culture and Community
<b>100998.4</b>	Evolutionary Thinking
<b>101844.2</b>	Feminist Theories
<b>101716.3</b>	Healing and Culture
<b>100961.4</b>	Humanities Internship
<b>101468.2</b>	Islam, Media and Conflict
<b>101739.3</b>	Literature and Trauma
<b>101732.2</b>	Media, The Everyday and Uneven Modernities
<b>101800.2</b>	Media, Violence, Protest, Terror
<b>100877.3</b>	Multicultural Studies
<b>101252.2</b>	Psychoanalytic Criticism
<b>101253.3</b>	Public Memory and Commemoration
<b>101003.2</b>	Religion and Culture
<b>101005.4</b>	Representing Crime
<b>101006.2</b>	Social Semiotics
<b>101832.2</b>	Talking Normal: Sociolinguistics and Modern Literature
<b>101008.2</b>	Technologies of Racism
<b>101009.3</b>	The Body in Culture
<b>101848.1</b>	Transnationalism and Migration
<b>101798.2</b>	Understanding Freedom
<b>101731.2</b>	Understanding Power
<b>101010.3</b>	What is the Human?

**Sub-major - English, Text and Writing****SM1044.1**

The English, Text and Writing sub-major invites students to explore contemporary approaches to language, literary

study and writing, including literary criticism and theory, linguistic analysis, genre and textual study, and creative writing. English, Text and Writing focuses on the imaginative workings of language, and students can study a wide selection of modern and classic literature, as well as the relationships between written texts and other media such as film and information technology. Students also have the opportunity to produce their own creative writing and to edit and publish their work. Career prospects include publishing, editing, teaching, writing and advertising.

## Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

## Unit Set Structure

Students would be eligible for this sub-major having successfully completed 40 credit points.

Students must complete 40 credit points from the following pools with no more than one unit at Level 1.

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

### Level 1 unit pool

**100641.3** Approaches to Text

### Level 2 unit pool

**101626.3** Children's Literature: Image and Text  
**100900.3** Comedy and Tragedy  
**101408.2** Critical Discourse Analysis  
**101452.2** History of the English Language  
**100870.2** Hypertext Fictions  
**100871.3** International Texts and Contexts  
**100964.2** Introduction to Film Studies  
**100505.2** Special Topics in English, Text and Writing  
**101795.2** The Musical  
**100893.3** The Novel  
**101455.3** The Structure of English  
**100896.3** Writing Fiction  
**101869.1** Studies in Postcolonial Literature  
**101873.1** The Sound of Language

### Level 3 unit pool

**400087.5** Applied Critical Methods  
**100845.3** American Literature  
**100849.4** Australian Textual Studies  
**101242.3** Children's Literature  
**100856.4** Creative Non-Fiction  
**100859.3** Creative Writing Project  
**100256.4** Film and Affect  
**100866.3** Film and Drama  
**100961.4** Humanities Internship  
**101724.2** Literary Animals  
**100875.4** Literature and Philosophy  
**101739.3** Literature and Trauma  
**100874.4** Literature, History and Culture  
**101033.4** Modernism  
**101001.3** Modernity and Cinema

**101406.2** Queering Text  
**101650.3** Race in Literature  
**101005.4** Representing Crime  
**101791.2** Short Fiction in the Americas  
**101832.2** Talking Normal: Sociolinguistics and Modern Literature  
**101453.2** Text and Discourse in English  
**101471.2** Women in Arabic and Islamic Literature  
**101668.2** World Cinema  
**101669.2** World Literature in Translation  
**101670.3** Writing and Society  
**100895.4** Writing For Performance  
**101011.3** Writing Poetry  
**100582.2** Writing Portfolio  
**101796.1** 19th Century American Literature  
**101880.1** The Space of Literature

## Sub-major - Islamic Studies

### SM1045.1

Students engage in interdisciplinary study essential to an understanding of Islam, past and present. The area of study balances historical and modern Islamic studies and research methods. One of the keys to Islamic Studies is 'relevance' to contemporary Australian society but relevance can only come from a sound comprehension of past traditions in Islamic scholarship and their socio-historical contexts. Preparation for graduate study is also a key objective of this program, with its focus on developing critical and interdisciplinary research skills through a combination of approaches.

## Location

Campus	Mode
Bankstown Campus	Internal

## Unit Set Structure

Students must complete 40 credit points from the following pools with no more than one unit at level 1

### Level 2 unit pool

**101464.3** Great Texts of Islam: Qur'an and Hadith  
**100273.3** New Ethnicities, Old Racisms

### Level 3 unit pool

**101688.2** Anthropology of Religion  
**400087.5** Applied Critical Methods  
**101466.2** Ethical Traditions in Islam  
**100961.4** Humanities Internship  
**101822.2** Islam in the West  
**101463.4** Islam in the Modern World  
**101467.2** Islam in Southeast Asia  
**101468.2** Islam, Media and Conflict  
**101465.2** Islamic Law in a Changing World  
**100877.3** Multicultural Studies  
**101359.5** Sociology of Religion  
**101792.2** Texts in Contemporary Arab Society and Culture  
**101783.2** The International Relations of the Middle East Since 1945

**101471.2** Women in Arabic and Islamic Literature

## Sub-major - Linguistics

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### SM1046.1

Through study of what language is and how it works, students gain conceptual tools and knowledge relevant to the relationship of language and society as well linguistics-related disciplines, such as Sociolinguistics, Psycholinguistics, Developmental Linguistics, Bilingualism, and other applied linguistics areas. Understanding of the relationship between language learning, communicative competence and cultural practices, both in the Australian context and in a global context, provides a foundation for many careers including primary and secondary teaching, policy analysis, communication, social and welfare services in culturally diverse communities.

#### Location

Campus	Mode
Bankstown Campus	External

#### Unit Set Structure

Students must complete 40 credit points from the following pools with no more than one unit at level 1.

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

##### Level 1 unit pool

<b>100194.2</b>	Introduction to Interpreting
<b>100195.2</b>	Introduction to Translation

##### Level 2 unit pool

<b>101452.2</b>	History of the English Language
<b>100928.3</b>	Linguistics
<b>101873.1</b>	The Sound of Language
<b>101302.2</b>	Translation Technologies

##### Level 3 unit pool

<b>400087.5</b>	Applied Critical Methods
<b>101449.2</b>	Bilingualism and Biculturalism
<b>101441.2</b>	English Semantics and Pragmatics
<b>101454.2</b>	Intercultural Pragmatics
<b>101709.2</b>	Languages and Grammatical Concepts 3A: Arabic
<b>101710.2</b>	Languages and Grammatical Concepts 3A: Chinese
<b>101711.2</b>	Languages and Grammatical Concepts 3A: Italian
<b>101712.2</b>	Languages and Grammatical Concepts 3A: Japanese
<b>101713.2</b>	Languages and Grammatical Concepts 3A: Spanish
<b>101451.2</b>	Second Language Acquisition
<b>101721.2</b>	Second Language Learning and Teaching
<b>101450.2</b>	Sociolinguistics
<b>100201.2</b>	Special Study in Languages and Linguistics

**101832.2** Talking Normal: Sociolinguistics and Modern Literature

**101453.2** Text and Discourse in English

## Sub-major - Indigenous Australian Studies

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### SM1049.1

What does it mean to live in Indigenous Australia? The Indigenous Australian Studies Major and sub-majors offers students the exciting opportunity to acquire key cultural competencies that will enable them to understand and work more effectively with Indigenous Australians in professions such as the arts, communications, media industries; education; government and non-government; policy; health; sciences; and community services. The Indigenous Australian Studies Major and sub-majors addresses the cultural, historical, social and economic issues affecting Indigenous and Non-Indigenous Australians and relationships.

#### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

#### Unit Set Structure

Students must complete 40 credit points as follows

<b>101751.2</b>	Contextualising Indigenous Australia (Day Mode)
<b>101752.1</b>	Pigments of the Imagination
<b>101756.1</b>	Bridging the Gap: Re-engaging Indigenous Learners

Choose one of

<b>101757.1</b>	The Making of the 'Aborigines'
<b>101758.1</b>	Learning through Indigenous Australian Community Service (Day Mode)
<b>101759.1</b>	Rethinking Research with Indigenous Australians: Independent Study Project (Day Mode)

## Sub-major - Indigenous Economics

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### SM1050.1

What does it mean to live in Indigenous Australia? The Indigenous Australian Studies Major and sub-majors offers students the exciting opportunity to acquire key cultural competencies that will enable them to understand and work more effectively with Indigenous Australians in professions such as the arts, communications, media industries; education; government and non-government; policy; health; sciences; and community services. The Indigenous Australian Studies Major and sub-majors addresses the cultural, historical, social and economic issues affecting



Indigenous and Non-Indigenous Australians and relationships.

### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

### Unit Set Structure

Students must complete 40 credit points as follows

<b>101751.2</b>	Contextualising Indigenous Australia (Day Mode)
<b>101753.2</b>	Revaluing Indigenous Economics (Day Mode)
<b>101757.1</b>	The Making of the 'Aborigines'

Choose one of

<b>101758.1</b>	Learning through Indigenous Australian Community Service (Day Mode)
<b>101759.1</b>	Rethinking Research with Indigenous Australians: Independent Study Project (Day Mode)

### Sub-major - Indigenous Australian Creative Expressions

#### SM1051.1

What does it mean to live in Indigenous Australia? The Indigenous Australian Studies Major and sub-majors offers students the exciting opportunity to acquire key cultural competencies that will enable them to understand and work more effectively with Indigenous Australians in professions such as the arts, communications, media industries; education; government and non-government; policy; health; sciences; and community services. The Indigenous Australian Studies Major and sub-majors addresses the cultural, historical, social and economic issues affecting Indigenous and Non-Indigenous Australians and relationships.

### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

### Unit Set Structure

Students must complete 40 credit points as follows

<b>101751.2</b>	Contextualising Indigenous Australia (Day Mode)
<b>101754.2</b>	From Corroborees to Curtain Raisers (Day Mode)
<b>101755.1</b>	From Ochre to Acrylics to New Technologies

Choose one of

<b>101758.1</b>	Learning through Indigenous Australian Community Service (Day Mode)
<b>101759.1</b>	Rethinking Research with Indigenous Australians: Independent Study Project (Day Mode)

### Sub-major - Psychological Studies

#### SM1069.1

The Psychological Studies sub-major comprises units in the discipline of psychology that focus on the field of inquiry that uses scientific techniques and methods to understand and explain behaviour and experience. Units in the program are drawn from the following core areas of psychology: brain and behaviour, learning, motivation and emotion, social psychology, lifespan development, perception, and cognitive processes. A Psychological Studies sub-major does not meet APAC requirements for an accredited sequence in Psychology. Students wishing to enrol in an accredited Psychology sequence need to complete the Psychology key program of 200 credit points.

### Location

Campus	Mode
Bankstown Campus	Internal
Penrith Campus	Internal

### Unit Set Structure

This sub-major is restricted to students enrolled in 1604 - Bachelor of Arts, 1652 - Bachelor of Arts (Pathway to Teaching Secondary) or 1655 - Bachelor of Arts (Dean's Scholars).

Students must complete 40 credit points as follows

<b>101184.2</b>	Psychology: Human Behaviour
<b>101183.2</b>	Psychology: Behavioural Science
<b>100013.3</b>	Experimental Design and Analysis

Choose one of

<b>101680.3</b>	Perception
<b>101684.3</b>	Brain and Behaviour
<b>101676.2</b>	Human Learning
<b>101677.3</b>	Cognitive Processes
<b>101682.4</b>	Developmental Psychology

## SCHOOL OF NURSING AND MIDWIFERY

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### Bachelor of Nursing

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#### 4642.2

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year in this course was 2009 or later.

This course prepares graduates for eligibility to apply for registration throughout Australia as beginning professional generalist registered nurses. The focus of the course is on inquiry-based learning, critical thinking and reflective practice in relation to the theory and practice of nursing in health and health breakdown across the lifespan. Students study application of physical and behavioural sciences to nursing; inquiry and evidence-based practice principles and utilisation within nursing; nursing care of individuals, families and groups from diverse backgrounds across the lifespan. The acquisition of nursing knowledge and skills occurs initially in campus-based simulated clinical practice settings and consolidation occurs as students undertake clinical placements in a variety of health care settings. Prospective students should be aware that full disclosure of any issues of impairment or misconduct is a declaration requirement when applying for registration as a registered nurse.

#### Study Mode

Three years full-time. A reduced load is possible in consultation with Director of Academic Program.

#### Location

Campus	Attendance	Mode
Campbelltown Campus	Full Time	Internal
Hawkesbury Campus	Full Time	Internal
Parramatta Campus	Full Time	Internal

#### Advanced Standing

Prospective students holding the Enrolled Nurses Certificate Level IV or Advanced Certificate with Medication Administration Module will be granted automatic entry to the B Nursing. In recognition of their TAFE studies and professional experience, this group will be granted advanced standing in the following units:

- Elective (unspecified 10 credit points)
- Nursing for Health and Wellbeing
- Understanding Good Health
- Behavioural Foundations for Nursing Practice

#### Accreditation

The Bachelor of Nursing has accreditation and approval from the Nurses and Midwives Board NSW. From 1st July 2010 the approval, recognition and accreditation of courses has been transferred to the Australian Nursing and Midwifery Council (ANMC). Course accreditation can be checked on their website. <http://www.>

[nursingmidwiferyboard.gov.au/Accreditation.aspx](http://nursingmidwiferyboard.gov.au/Accreditation.aspx). Please note: from 1 July 2010 practitioners applying for registration as a nurse or midwife for the first time in Australia are required to demonstrate English language proficiency as specified by the Nursing and Midwifery Board of Australia (NMBA). These requirements include: a) the IELTS examination (academic module) with a minimum score of 7 in each of the four components (listening, reading, writing and speaking); or b) completion and an overall pass in the Occupational English Test (OET) with grades A or B only in each of the four components. For further details, refer to the NMBA website. [Http://www.nursingmidwiferyboard.gov.au/Registration-Standards.aspx](http://www.nursingmidwiferyboard.gov.au/Registration-Standards.aspx)

#### Inherent requirements

There are inherent requirements for this course that you must meet in order to complete your course and graduate. Make sure you read and understand the requirements for this course online.

#### Admission

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

#### Special Requirements

Students will need to have completed the NSW Health Special Requirements for clinical practicum attendance. At present these include: Prohibited Persons Employment Declaration (PPED) prior to 1 June 2010 OR a Working with Children Check Student Declaration after 1 June 2010; Criminal Record Check (CRC) prior to 1 June 2010 OR a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate; Adult Health Immunisation Schedule and Workcover accredited Senior First Aid Certificate.

#### Course Structure

##### Director of Academic Programs

Dr Amanda Johnson is the Director of Academic Programs for students with surnames beginning with A-K.

Dr Deborah Hatcher is Director of Academic Programs for students with surnames beginning with L-Z.

Qualification for this award requires the successful completion of 240 credit points including the units listed in the recommended sequence below.

## Full-time

### Year 1

#### Autumn session

<b>400745.2</b>	Nursing for Health and Wellbeing
<b>400746.2</b>	Understanding Good Health
<b>400747.2</b>	Behavioural Foundations of Nursing Practice
<b>400748.2</b>	Becoming a Nurse

#### Spring session

<b>400749.3</b>	Nursing and Health Breakdown
<b>400750.2</b>	Introduction to Health Breakdown
<b>400751.2</b>	Nursing and Healthy Communities
<b>400752.2</b>	Knowing Nursing

### Year 2

#### Autumn session

<b>400753.3</b>	Medical-Surgical Nursing 1
<b>400814.2</b>	Alterations in Nutrition, Elimination and Sexuality
<b>400755.2</b>	Evidence-Based Nursing 1
<b>400756.2</b>	Family Health Care: Health Issues and Australian Indigenous People

#### Spring session

<b>400757.3</b>	Medical-Surgical Nursing 2
<b>400815.2</b>	Alterations in Breathing, Work/Leisure and Mobility
<b>400759.4</b>	Mental Health Nursing 1
<b>400760.2</b>	Family Health Care: Child and Adolescent Nursing

### Year 3

#### Autumn session

<b>400761.3</b>	Family Health Care: High Acuity Nursing
<b>400762.2</b>	Mental Health Nursing 2
<b>400763.2</b>	Family Health Care: Chronicity and Palliative Care Nursing

And one elective

#### Spring session

<b>400764.3</b>	Transition to Graduate Practice
<b>400765.2</b>	Evidence-Based Nursing 2
<b>400766.3</b>	Leadership in Graduate Practice
<b>400767.3</b>	Family Health Care: Older Adult Nursing

### Additional Core Unit for Students with an Exceptional Study Sequence

It is a professional accreditation requirement that students satisfactorily complete a minimum 4 week clinical practicum in the final session of any pre-registration Bachelor of Nursing program. Bachelor of Nursing students who vary their study sequence significantly from the normal progression may be required to study the additional unit

listed below to ensure the currency of their clinical skills prior to graduate practice:

**400768.3** Maintaining Clinical Currency

### Elective Units

Elective units in the Bachelor of Nursing may be chosen from across UWS, provided that unit pre-requisites are met and space is available.

The following are elective units in the Nursing discipline area which are not listed elsewhere in the Handbook. These electives are open to students from across UWS provided that pre-requisites are met and space is available:

<b>400621.2</b>	Bugs and Drugs
<b>400961.1</b>	Drugs on Line
<b>400958.1</b>	A Field Study: Comparative Studies of Health Care Delivery

## Bachelor of Nursing (Advanced)

### 4648.1

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year in this course was 2009 or later.

This course prepares graduates for eligibility to apply for registration throughout Australia as beginning professional generalist registered nurses. The focus of the course is on inquiry-based learning, critical thinking and reflective practice in relation to the theory and practice of nursing in health and health breakdown across the lifespan. Students study application of physical and behavioural sciences to nursing; inquiry and evidence-based practice principles and utilisation within nursing; nursing care of individuals, families and groups from diverse backgrounds across the lifespan. The acquisition of nursing knowledge and skills occurs initially in campus-based simulated clinical practice settings and consolidation occurs as students undertake clinical placements in a variety of health care settings. Prospective students should be aware that full disclosure of any issues of impairment or misconduct is a declaration requirement when applying for registration as a registered nurse.

Students in the Bachelor of Nursing (Advanced) will follow the study program set out for the 4642 - Bachelor of Nursing. Each student will have an Academic Mentor and will participate in additional compulsory activities related to nursing research and professional practice. To maintain their enrolment in the Bachelor of Nursing (Advanced) students must maintain a Grade Point Average (GPA) of 5.5 or above, otherwise they will be transferred to the standard 4642 – Bachelor of Nursing course. At enrolment students will be required to sign a declaration acknowledging the requirement to maintain a GPA greater than or equal to 5.5.

### Study Mode

Three years full-time. This program will only be offered in full-time mode and is not available for students wishing to undertake a reduced load.

## Location

Campus	Attendance	Mode
Campbelltown Campus	Full Time	Internal
Hawkesbury Campus	Full Time	Internal
Parramatta Campus	Full Time	Internal

## Accreditation

On completion of this course graduates will be eligible to apply for registration by the Nursing and Midwifery Board of Australia (NMBA) for Australian Health Practitioners Regulation Agency (AHPRA). Please note: from 1 July 2010 practitioners applying for registration as a nurse or midwife for the first time in Australia are required to demonstrate English language proficiency as specified by the Nursing and Midwifery Board of Australia (NMBA). These requirements include: a) the IELTS examination (academic module) with a minimum score of 7 in each of the four components (listening, reading, writing and speaking); or b) completion and an overall pass in the Occupational English Test (OET) with grades A or B only in each of the four components. For further details, refer to the NMBA website. [Http://www.nursingmidwiferyboard.gov.au/Registration-Standards.aspx](http://www.nursingmidwiferyboard.gov.au/Registration-Standards.aspx)

## Admission

Students may apply for admission to the course through the Universities Admission Centre (UAC) or as a Year 1 Bachelor of Nursing student with GPA greater than 5.5. However, this should only be done following discussion with and the approval of the Head of Program.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

## Course Structure

Qualification for this award requires the successful completion of 240 credit points including the units listed in the recommended sequence below.

## Recommended Sequence

### Year 1

#### Autumn session

<b>400745.2</b>	Nursing for Health and Wellbeing
<b>400746.2</b>	Understanding Good Health
<b>400747.2</b>	Behavioural Foundations of Nursing Practice
<b>400748.2</b>	Becoming a Nurse

#### Spring session

<b>400749.3</b>	Nursing and Health Breakdown
<b>400750.2</b>	Introduction to Health Breakdown
<b>400751.2</b>	Nursing and Healthy Communities
<b>400752.2</b>	Knowing Nursing

### Year 2

#### Autumn session

<b>400753.3</b>	Medical-Surgical Nursing 1
<b>400814.2</b>	Alterations in Nutrition, Elimination and Sexuality
<b>400824.2</b>	Evidence-Based Nursing 1 (Advanced)
<b>400854.2</b>	Family Health Care: Health Issues and Australian Indigenous People (Advanced)

#### Spring session

<b>400825.2</b>	Medical Surgical Nursing 2 (Advanced)
<b>400815.2</b>	Alterations in Breathing, Work/Leisure and Mobility
<b>400759.4</b>	Mental Health Nursing 1
<b>400760.2</b>	Family Health Care: Child and Adolescent Nursing

### Year 3

#### Autumn session

<b>400761.3</b>	Family Health Care: High Acuity Nursing
<b>400762.2</b>	Mental Health Nursing 2
<b>400855.1</b>	Family Health Care: Chronicity and Palliative Care Nursing (Advanced)

One elective

#### Spring session

<b>400764.3</b>	Transition to Graduate Practice
<b>400827.2</b>	Evidence-Based Nursing 2 (Advanced)
<b>400767.3</b>	Family Health Care: Older Adult Nursing
<b>400849.1</b>	Leadership in Graduate Practice (Advanced)

## Bachelor of Nursing (Honours)

### 4529.2

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year in this course was 2008 or later.

This program is designed for graduates of the Bachelor of Nursing degree and other similar degrees. Successful completion of the program will provide students with a sound basis for subsequent research within their own work environments as well as enabling them to progress to higher researcher-related programs.

This program provides an opportunity for students, under guidance, to plan and implement a research project in the area of nursing practice. Knowledge and experience gained by students through completing this program will contribute to the knowledge base for nursing practice.

The program of study combines a research project with course work. The course work, undertaken during the first semester of enrolment, comprises two units of study. The remainder of the program is devoted to completion of a research project and the preparation of a thesis.

This program can be undertaken concurrently with any new graduate transitional program offered by various hospitals.

### Study Mode

One year full-time or two years part-time.

### Location

Campus	Attendance	Mode
Parramatta Campus	Full Time	External
Parramatta Campus	Full Time	Multi Modal
Parramatta Campus	Part Time	Multi Modal

### Advanced Standing

Advanced Standing will be assessed in accordance with UWS policy.

### Admission

The Bachelor of Nursing (Honours) degree is a second award as nursing students must satisfy the requirements for State registration as a Registered Nurse with a Bachelor's pass before proceeding into an Honours program.

Applicants must have obtained a Grade Point Average (GPA) of 5 (Credit level) or better throughout their Bachelor of Nursing course or a GPA of 5.75 or better in the final year of their Bachelor of Nursing (pass) degree. This criterion ensures that candidates are capable of achieving the high standards required for Bachelor of Nursing (Honours) studies. In addition, applicants must have completed at least 20 credit points of research or equivalent at an undergraduate level.

International applicants should contact UWS International for details on admission. Contact information for the International Office is available via the UWS website.

### Special Requirements

To be enrolled in this course you must comply with the Occupational Screening and Vaccination Policy of NSW Health at course commencement.

### Course Structure

Qualification for this award requires the successful completion of 80 credit points including the units listed in the recommended sequence below.

## Recommended Sequence

### Full-time

#### Year 1

#### Autumn session

<b>400803.2</b>	Research in Nursing Practice
<b>400202.2</b>	Nursing Honours Thesis A (Full-time)
<b>400201.3</b>	Readings and Methodology

#### Spring session

<b>400203.2</b>	Nursing Honours Thesis B (Full-time)
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### Part-time

#### Year 1

#### Autumn session

<b>400803.2</b>	Research in Nursing Practice
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#### Spring session

<b>400201.3</b>	Readings and Methodology
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#### 2H session

<b>400204.2</b>	Nursing Honours Thesis (Part-time)
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#### Year 2

#### 1H session

<b>400204.2</b>	Nursing Honours Thesis (Part-time)
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#### 2H session

<b>400204.2</b>	Nursing Honours Thesis (Part-time)
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## Bachelor of Nursing - Graduate Entry

### 4643.3

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year in this course was 2011 or later.

This course prepares graduates for eligibility to apply for registration throughout Australia as beginning professional registered nurses. The focus of the course is on inquiry-based learning, critical thinking and reflective practice in relation to the theory and practice of nursing in health and health breakdown across the lifespan. Students study application of physical and behavioural sciences to nursing; inquiry and evidence-based practice principles; and utilisation within nursing; and the nursing care of individuals, families and groups from diverse backgrounds across the lifespan. The acquisition of nursing knowledge and skills will occur in campus-based simulated clinical practice settings and consolidation occurs as students undertake clinical placements in a variety of health care settings. Prospective students should be aware that full

disclosure of any issues of impairment or misconduct is a requirement when applying for registration as a registered nurse.

### Study Mode

Two years full-time.

### Location

Campus	Attendance	Mode
Hawkesbury Campus	Full Time	Internal

### Accreditation

The Bachelor of Nursing - Graduate Entry is accredited with the Nurses and Midwives Board of NSW (NMB). From 1st July 2010 the approval, recognition and accreditation of courses has been transferred to the Australian Nursing and Midwifery Council (ANMC). Course accreditation can be checked on their website. <http://www.nursingmidwiferyboard.gov.au/Accreditation.aspx>. Please note: from 1 July 2010 practitioners applying for registration as a nurse or midwife for the first time in Australia are required to demonstrate English language proficiency as specified by the Nursing and Midwifery Board of Australia (NMBA). These requirements include: a) the IELTS examination (academic module) with a minimum score of 7 in each of the four components (listening, reading, writing and speaking); or b) completion and an overall pass in the Occupational English Test (OET) with grades A or B only in each of the four components. For further details, refer to the NMBA website. <http://www.nursingmidwiferyboard.gov.au/Registration-Standards.aspx>

Applicants must have successfully completed an undergraduate degree in biological sciences: human biological sciences, anatomy and physiology, chemistry, physics, biology, natural science, microbiology, medicine, dentistry, pharmacy, human science, naturopathy, complementary medicine.

### Admission

or  
An undergraduate degree in arts/behavioural sciences: human behavioural and social sciences, psychology, sociology, human communications, human behaviour

or

An overseas 3 year post secondary qualification as a registered nurse

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

### Special Requirements

To be enrolled in this course students must comply with the current occupational screening and vaccination policy of NSW Health at course commencement. The Bachelor of Nursing (Graduate Entry) program incorporates the teaching of nursing practical techniques/ skills and clinical training through physical contact between supervising clinicians, lecturers, students and patients of both genders and all backgrounds. This contact is guided by protocols and codes of conduct and is a compulsory requirement of the course as currently accredited. Students entering the program must do so with an understanding that accommodations cannot be made in this area for any reason.

### Course Structure

Qualification for this award requires the successful completion of 170 credit points including the units listed in the recommended sequence below.

### Recommended Sequence

#### Full-time

##### Year 1

##### Quarter 1 session

**400776.2** Introduction to Nursing Practice

##### Autumn session

**400753.3** Medical-Surgical Nursing 1  
**400814.2** Alterations in Nutrition, Elimination and Sexuality

**400755.2** Evidence-Based Nursing 1  
**400756.2** Family Health Care: Health Issues and Australian Indigenous People

##### Spring session

**400757.3** Medical-Surgical Nursing 2  
**400815.2** Alterations in Breathing, Work/Leisure and Mobility

**400759.4** Mental Health Nursing 1  
**400760.2** Family Health Care: Child and Adolescent Nursing

##### Year 2

##### Autumn session

**400761.3** Family Health Care: High Acuity Nursing  
**400762.2** Mental Health Nursing 2  
**400763.2** Family Health Care: Chronicity and Palliative Care Nursing

##### Spring session

**400764.3** Transition to Graduate Practice  
**400765.2** Evidence-Based Nursing 2  
**400766.3** Leadership in Graduate Practice

**400767.3** Family Health Care: Older Adult Nursing

## Unit Sets

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### Major - Religion, Anthropology and Philosophy

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#### M1024.1

This multidisciplinary major pursues critical and rational analysis of questions about individuals and societies; about human knowledge, culture and existence. It inquires into issues about human nature; the scope and limits of knowledge and belief; God and ethics; conflict and violence; ritual and myth; and religion, politics and culture. The major provides students with rigorous training in analytic and creative thinking, intellectual independence and cultural and ethical awareness.

#### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal

#### Unit Set Structure

Students must complete the compulsory Level 1 unit

<b>101686.2</b>	Anthropology and Philosophy Look at Religion
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and seven units from the following pools with no less than three units at Level 3

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

#### Level 1 Unit Pool

<b>101462.2</b>	Understanding Islam and Muslim Societies
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#### Level 2 Unit Pool

<b>101882.1</b>	A History of Modern Global Buddhism
<b>100850.2</b>	Buddhism in the Contemporary World
<b>100852.2</b>	Classics of Modern Philosophy
<b>101856.1</b>	Film and Philosophy
<b>101464.3</b>	Great Texts of Islam: Qur'an and Hadith
<b>101843.2</b>	Philosophy and Environment
<b>101881.1</b>	Philosophy and the Good Life
<b>101867.1</b>	The Ethical Life
<b>101294.3</b>	The Western Philosophical Tradition

#### Level 3 Unit Pool

<b>101295.2</b>	Aesthetics
<b>101688.2</b>	Anthropology of Religion
<b>400087.5</b>	Applied Critical Methods
<b>100863.3</b>	Ethical Cultures
<b>100998.4</b>	Evolutionary Thinking
<b>100961.4</b>	Humanities Internship
<b>101463.4</b>	Islam in the Modern World
<b>101467.2</b>	Islam in Southeast Asia
<b>101465.2</b>	Islamic Law in a Changing World

<b>101724.2</b>	Literary Animals
<b>100875.4</b>	Literature and Philosophy
<b>100275.4</b>	Philosophies of Love and Death
<b>101761.2</b>	Philosophy and the Visual
<b>100879.2</b>	Philosophy Today
<b>101665.3</b>	Politics and Religion
<b>101003.2</b>	Religion and Culture
<b>101359.5</b>	Sociology of Religion
<b>100969.2</b>	Theories of Conflict and Violence
<b>101880.1</b>	The Space of Literature
<b>101798.2</b>	Understanding Freedom
<b>101010.3</b>	What is the Human?
<b>101471.2</b>	Women in Arabic and Islamic Literature

### Major - Media and Visual Cultures

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#### M1025.1

The rapid flow of visual images with which we communicate today – on the internet, by web and moblogs – is a contemporary manifestation of the importance of visual cultures in everyday life. The Media and Visual Cultures major area equips students with multidisciplinary knowledge and skills in critical art history and theory, digital media, film and television studies, philosophy, and cultural studies. It aims to create career ready graduates with the skills necessary to interpret the production and dissemination of visual images and their meanings in a variety of media as well as cultural and institutional contexts.

#### Location

Campus	Mode
Bankstown Campus	Internal
Penrith Campus	Internal

#### Unit Set Structure

Students must complete the compulsory Level 1 unit

<b>101734.2</b>	Media and Visual Cultures: Case Studies
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and the Level 3 unit

<b>101295.2</b>	Aesthetics
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Students must also complete six of the Level 2/3 units from the following pools with no less than two at Level 3:

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

#### Level 2 Unit Pool

<b>100245.2</b>	Asian Cinema
<b>101248.3</b>	Australian Art 1
<b>101626.3</b>	Children's Literature: Image and Text
<b>101250.3</b>	Digital Futures
<b>101856.1</b>	Film and Philosophy
<b>10157.2</b>	History and Theory of the Avant-Garde
<b>100964.2</b>	Introduction to Film Studies
<b>101254.3</b>	The Animated Image: Histories and Theories
<b>10371.3</b>	The Art Museum - from the Prince to the Public
<b>100890.2</b>	The Art of Landscape
<b>101795.2</b>	The Musical



**10158.2** Writings on Art

### Level 3 Unit Pool

**400087.5** Applied Critical Methods  
**100959.2** Australian Art II  
**100989.2** Cinema and Realism  
**100990.2** Cinema, Culture, Memory  
**100256.4** Film and Affect  
**100866.3** Film and Drama  
**100961.4** Humanities Internship  
**101468.2** Islam, Media and Conflict  
**101732.2** Media, The Everyday and Uneven Modernities  
**101800.2** Media, Violence, Protest, Terror  
**101001.3** Modernity and Cinema  
**101761.2** Philosophy and the Visual  
**101253.3** Public Memory and Commemoration  
**101006.2** Social Semiotics  
**101738.2** The Art Game: Fraud, Forgery, Theft and Perfidy  
**101266.2** The Art of Modern Life  
**101717.2** The Italian Renaissance Unpacked  
**101668.2** World Cinema

## Major - Arabic

### M1026.1

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

### Location

Campus	Mode
Bankstown Campus	Internal

### Unit Set Structure

A major in Arabic comprises a sequence of 80 credit points with 60 credit points at Level 2 and 3 (with no less than 30 credit points of these at Level 3), however students commencing at beginner's level, that is units 101 and 102, and who follow the recommended course structure, are only required to complete 20 credit points at Level 3.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or
- take a Level 2 unit after passing a Level 3 unit in the same language.

### Level 1 unit pool

**100041.2** Arabic 101

**100042.2** Arabic 102

### Level 2 unit pool

**101699.2** Language and Communication Skills 2A: Arabic  
**101704.2** Language and Communication Skills 2B: Arabic

### Level 3 unit pool

**100048.2** Arabic 302 - Arabic Advanced Language and Grammar  
**100049.2** Arabic 303: Advanced Writing Skills  
**100050.2** Arabic 304: Arabic Advanced Speaking  
**100052.2** Arabic 306: Arabic Novel and Short Story  
**100054.2** Arabic 308: Language Past and Present  
**101709.2** Languages and Grammatical Concepts 3A: Arabic  
**101792.2** Texts in Contemporary Arab Society and Culture  
**101454.2** Intercultural Pragmatics  
**101668.2** World Cinema  
**400087.5** Applied Critical Methods  
**100961.4** Humanities Internship

## Major - Chinese

### M1027.1

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

### Location

Campus	Mode
Bankstown Campus	Internal

### Unit Set Structure

A major in Chinese comprises a sequence of 80 credit points with 60 credit points at Level 2 and 3 (with no less than 30 credit points of these at Level 3), however students commencing at beginner's level, that is units 101 and 102, and who follow the recommended course structure, are only required to complete 20 credit points at Level 3.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or
- take a Level 2 unit after passing a Level 3 unit in the same language.

### Level 1 unit pool

**100056.2** Chinese 101  
**100057.2** Chinese 102

**Level 2 unit pool**

**101700.2** Language and Communication Skills 2A:  
Chinese  
**101705.2** Language and Communication Skills 2B:  
Chinese

**Level 3 unit pool**

**100063.2** Chinese 302  
**100064.2** Chinese 303: Twentieth-Century Chinese  
Literature  
**100065.2** Chinese 304: Chinese Classical Literature  
**100066.2** Chinese 305: Chinese Cinema  
**100067.2** Chinese 307: The Cultural Context of China  
**101710.2** Languages and Grammatical Concepts 3A:  
Chinese  
**101454.2** Intercultural Pragmatics  
**400087.5** Applied Critical Methods  
**100961.4** Humanities Internship  
**101668.2** World Cinema

**Major - Japanese****M1028.1**

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

**Location**

Campus	Mode
Bankstown Campus	Internal

**Unit Set Structure**

A major in Japanese comprises a sequence of 80 credit points with 60 credit points at Level 2 and 3 (with no less than 30 credit points of these at Level 3), however students commencing at beginner's level, that is units 101 and 102, and who follow the recommended course structure, are only required to complete 20 credit points at Level 3.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or
- take a Level 2 unit after passing a Level 3 unit in the same language.

**Level 1 unit pool**

**100085.2** Japanese 101

**100086.2** Japanese 102

**Level 2 unit pool**

**101702.2** Language and Communication Skills 2A:  
Japanese  
**101707.2** Language and Communication Skills 2B:  
Japanese

**Level 3 unit pool**

**100092.2** Japanese 302  
**100093.2** Japanese 303: Contemporary Culture and Society  
**100094.1** Japanese 304: Discourse in Japanese  
**100096.2** Japanese 306: Japanese for Business  
**100098.1** Japanese 308: Japanese Textual Studies  
**101712.2** Languages and Grammatical Concepts 3A:  
Japanese  
**101454.2** Intercultural Pragmatics  
**101668.2** World Cinema  
**101669.2** World Literature in Translation  
**400087.5** Applied Critical Methods  
**100961.4** Humanities Internship

**Major - Italian****M1029.1**

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

**Location**

Campus	Mode
Bankstown Campus	Internal

**Unit Set Structure**

A major in Italian comprises a sequence of 80 credit points with 60 credit points at Level 2 and 3 (with no less than 30 credit points of these at Level 3), however students commencing at beginner's level, that is units 101 and 102, and who follow the recommended course structure, are only required to complete 20 credit points at Level 3.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or
- take a Level 2 unit after passing a Level 3 unit in the same language.

**Level 1 unit pool**

**100130.2** Italian 101

**100131.2** Italian 102

### Level 2 unit pool

**101701.2** Language and Communication Skills 2A:  
Italian  
**101706.2** Language and Communication Skills 2B:  
Italian

### Level 3 unit pool

**100138.2** Italian 303: Contemporary Italy in European  
and International Contexts  
**100140.1** Italian 305: Modern Literature  
**100141.2** Italian 306: Classical Literature  
**100143.2** Italian 308: Italian Cinema  
**101711.2** Languages and Grammatical Concepts 3A:  
Italian  
**101454.2** Intercultural Pragmatics  
**101668.2** World Cinema  
**101669.2** World Literature in Translation  
**400087.5** Applied Critical Methods  
**100961.4** Humanities Internship

## Major - Spanish

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### M1030.1

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

### Location

Campus	Mode
Bankstown Campus	Internal

### Unit Set Structure

A major in Spanish comprises a sequence of 80 credit points with 60 credit points at Level 2 and 3 (with no less than 30 credit points of these at Level 3), however students commencing at beginner's level, that is units 101 and 102, and who follow the recommended course structure, are only required to complete 20 credit points at Level 3.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or
- take a Level 2 unit after passing a Level 3 unit in the same language.

### Level 1 unit pool

**100145.2** Spanish 101  
**100146.2** Spanish 102

### Level 2 unit pool

**101703.2** Language and Communication Skills 2A:  
Spanish  
**101708.2** Language and Communication Skills 2B:  
Spanish

### Level 3 unit pool

**100153.2** Spanish 303: Advanced Writing Skills  
**100154.2** Spanish 304: Advanced Speaking Skills  
**100155.2** Spanish 305: Contemporary Literature  
**100156.2** Spanish 306: Contemporary History  
**100157.2** Spanish 307: Classical Literature  
**100158.2** Spanish 308: Spanish Sociolinguistics  
**101454.2** Intercultural Pragmatics  
**101669.2** World Literature in Translation  
**101668.2** World Cinema  
**101713.2** Languages and Grammatical Concepts 3A:  
Spanish  
**400087.5** Applied Critical Methods  
**100961.4** Humanities Internship  
**101791.2** Short Fiction in the Americas

## Major - Global Studies

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### M1031.1

What does it mean to live in an increasingly globalised world? Global Studies offers students the opportunity to acquire key competencies in cross-cultural communication and global issues to act as socially aware global citizens in international settings. Global Studies addresses issues such as consumer and popular culture, global histories of food and technology, the interconnection of race, identity and transnational migration and intercultural pragmatics. Students have the opportunity to complete a semester of study abroad.

### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal

### Unit Set Structure

Students must complete the Level 1 unit

**101673.2** The First Globalisation

And seven units from the following pools with no less than three Level 3 units in order to complete the major.

**Note: Not all units will be offered each year. Units will be offered on a rotational basis.**

### Level 1 unit pool

**101737.2** World Politics: An Introduction

### Level 2 unit pool

**101857.1** Doing Business in China

<b>101543.2</b>	India: Global Contexts
<b>100871.3</b>	International Texts and Contexts
<b>101797.2</b>	Political Terror

**Level 3 unit pool**

<b>400087.5</b>	Applied Critical Methods
<b>101870.1</b>	Climate Change and Culture
<b>100992.3</b>	Communication: Power and Practice
<b>100994.2</b>	Consumer Culture
<b>100858.3</b>	Culture and Globalisation
<b>101674.2</b>	Global Histories of Food
<b>101735.2</b>	Global Politics
<b>101736.2</b>	Governing the Globe
<b>100961.4</b>	Humanities Internship
<b>101454.2</b>	Intercultural Pragmatics
<b>101468.2</b>	Islam, Media and Conflict
<b>101733.2</b>	Looking at Global Politics Through Film
<b>101732.2</b>	Media, The Everyday and Uneven Modernities
<b>101666.2</b>	Race, Identity and Globalisation
<b>101717.2</b>	The Italian Renaissance Unpacked
<b>101848.1</b>	Transnationalism and Migration
<b>101831.2</b>	Transport and the Making of the Modern World
<b>101668.2</b>	World Cinema
<b>101669.2</b>	World Literature in Translation
<b>101830.2</b>	WWII in Asia and the Pacific

**Major - Asian Studies and International Relations****M1032.1**

This major has been designed to meet the needs of Australian government, business and society to engage the states and peoples of Asia at all levels in pursuit of national interests and as part of the globalisation process. It provides students with the opportunity to study modern and contemporary Asia, the rich and diverse histories, politics, cultures and languages of Asian countries and the international issues affecting Australia's interests and role in the region and in the world at large. The major area includes a range of units concerned with the United States, Europe and Australia as well as with Asia itself, and units in international relations. It seeks to produce graduates with a broad, liberal education with the skills to mediate between Australia and the world in general and Asia in particular through political, economic, commercial, cultural, diplomatic and strategic links. Students are encouraged to undertake a submajor in an Asian language in conjunction with the major. Employment opportunities may be found in the State and Commonwealth public service, overseas organisations, trade and tourist organisations, business and industry, education and research.

**Location**

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal

**Unit Set Structure**

Students must complete the compulsory Level 1 unit

**101442.2** Asia in the World

and seven units from the following pools with no less than three Level 3 units in order to pass the major:

**Level 1 Unit Pool**

**101737.2** World Politics: An Introduction

**Level 2 Unit Pool**

<b>101882.1</b>	A History of Modern Global Buddhism
<b>100245.2</b>	Asian Cinema
<b>100847.2</b>	Asia and the West: The Imperial Encounter
<b>100850.2</b>	Buddhism in the Contemporary World
<b>100855.2</b>	Contemporary Japan: Culture and Society
<b>101857.1</b>	Doing Business in China
<b>100861.3</b>	Empire: European Colonial Rule and its Subjects, 1750-1920
<b>101543.2</b>	India: Global Contexts
<b>100872.2</b>	International Politics of North Asia
<b>100904.2</b>	Politics and Business in Asia
<b>100277.3</b>	Politics of Australia and Asia Relations
<b>63111.3</b>	Special Topics in Asian and International Studies
<b>101404.3</b>	The History of Modern Indonesia
<b>101871.1</b>	War

**Level 3 Unit Pool**

<b>100985.2</b>	American Foreign Policy Since 1945
<b>400087.5</b>	Applied Critical Methods
<b>101249.2</b>	Culture and Thought in Twentieth-Century China
<b>100903.2</b>	Democracy in Asia
<b>100507.4</b>	History of Modern China to 1949
<b>100961.4</b>	Humanities Internship
<b>100962.2</b>	International Politics of the Southeast Asian Region
<b>101467.2</b>	Islam in Southeast Asia
<b>101733.2</b>	Looking at Global Politics Through Film
<b>100271.3</b>	Modern Japanese History
<b>100278.2</b>	Politics of Post-War Japan
<b>63178.2</b>	Social and Political Developments in Contemporary China
<b>101667.3</b>	The External Relations of the European Union
<b>101782.2</b>	The History and Politics of Contemporary Central Asia
<b>101783.2</b>	The International Relations of the Middle East Since 1945
<b>101405.2</b>	The Politics of Contemporary Indonesia
<b>101866.1</b>	United States Government and Politics
<b>101375.3</b>	War and Peace
<b>100294.3</b>	Warlords, Artists and Emperors: Power and Authority in Premodern Japan
<b>100971.2</b>	Which New World Order?
<b>101830.2</b>	WWII in Asia and the Pacific

## Major - History and Political Thought

### M1033.1

Since the revival of humanist studies in Renaissance Europe in the 15th century, universities have placed history and political thought at the heart of studies in the humanities. Through study of the political thought and social, political and cultural history of Australian, Asian and European societies, students gain knowledge and critical skills relevant to a variety of careers in education, government and non-governmental organizations. Study of the writings of political thinkers from ancient Greece and Rome, such as Plato and Cicero, and the early modern period, such as Hobbes and Machiavelli, to noted 19th century figures, such as Hegel and Marx, prepare students to engage with contemporary issues of governance, such as sovereignty, power, opportunity, property, civic freedom and social justice.

### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

### Unit Set Structure

Students would be eligible for this major having successfully completed 80 credit points with no less than three Level 3 units.

Students must complete the compulsory Level 1 unit

**100873.3** Inventing Modernity

**Note: Not all units will be offered each year. Units will be offered on a rotational basis.**

#### Level 1 unit pool

<b>100848.2</b>	Australian Politics
<b>100868.2</b>	Foundations of Modern Australia
<b>101737.2</b>	World Politics: An Introduction

#### Level 2 unit pool

<b>101882.1</b>	A History of Modern Global Buddhism
<b>100244.2</b>	Ancient Western Culture: Periclean Athens
<b>100861.3</b>	Empire: European Colonial Rule and its Subjects, 1750-1920
<b>100254.3</b>	Exploring Local History
<b>100869.2</b>	Foundations of Modern Europe 1500-1800
<b>101543.2</b>	India: Global Contexts
<b>100001.3</b>	Keeping the Past
<b>101843.2</b>	Philosophy and Environment
<b>101797.2</b>	Political Terror
<b>100904.2</b>	Politics and Business in Asia
<b>100277.3</b>	Politics of Australia and Asia Relations
<b>100882.2</b>	Politics of Sex and Gender
<b>63111.3</b>	Special Topics in Asian and International Studies
<b>101867.1</b>	The Ethical Life

<b>101404.3</b>	The History of Modern Indonesia
<b>101294.3</b>	The Western Philosophical Tradition
<b>101871.1</b>	War
<b>100293.3</b>	War and Society: 20th Century Australia

#### Level 3 unit pool

<b>400087.5</b>	Applied Critical Methods
<b>100966.3</b>	American History, 1898-1945
<b>100986.2</b>	Australian History 1860-1920
<b>100987.3</b>	Australian History Since 1920
<b>101685.3</b>	Australian Indigenous History
<b>101872.1</b>	Australian Indigenous History from Federation to Reconciliation
<b>100991.2</b>	Citizenship Ancient and Modern
<b>100852.2</b>	Classics of Modern Philosophy
<b>101799.2</b>	Convicts and Settlers - Australian History 1788 - 1840
<b>101249.2</b>	Culture and Thought in Twentieth-Century China
<b>100903.2</b>	Democracy in Asia
<b>100863.3</b>	Ethical Cultures
<b>100864.2</b>	Europe in the Twentieth Century
<b>101844.2</b>	Feminist Theories
<b>101674.2</b>	Global Histories of Food
<b>101735.2</b>	Global Politics
<b>100507.4</b>	History of Modern China to 1949
<b>100961.4</b>	Humanities Internship
<b>100963.3</b>	Interpreting Australia: Australian Historians and Historiography
<b>101801.2</b>	Interpreting Fascism
<b>101823.2</b>	Lay Participation in Justice Processes
<b>100875.4</b>	Literature and Philosophy
<b>101733.2</b>	Looking at Global Politics Through Film
<b>100271.3</b>	Modern Japanese History
<b>101665.3</b>	Politics and Religion
<b>100278.2</b>	Politics of Post-War Japan
<b>100908.2</b>	Race Politics
<b>63178.2</b>	Social and Political Developments in Contemporary China
<b>101667.3</b>	The External Relations of the European Union
<b>101782.2</b>	The History and Politics of Contemporary Central Asia
<b>101783.2</b>	The International Relations of the Middle East Since 1945
<b>101405.2</b>	The Politics of Contemporary Indonesia
<b>100969.2</b>	Theories of Conflict and Violence
<b>101831.2</b>	Transport and the Making of the Modern World
<b>101798.2</b>	Understanding Freedom
<b>101731.2</b>	Understanding Power
<b>101866.1</b>	United States Government and Politics
<b>101375.3</b>	War and Peace
<b>100294.3</b>	Warlords, Artists and Emperors: Power and Authority in Premodern Japan
<b>100971.2</b>	Which New World Order?
<b>101830.2</b>	WWII in Asia and the Pacific

## Major - Cultural and Social Analysis

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### M1034.1

Cultural and Social Analysis is an interdisciplinary major developing knowledge, research skills and analytic capacities relevant to understanding and interpreting landscapes of cultural diversity and social difference in our contemporary world, both in terms of the broad contours, as well as specific micro-social environments. This major provides grounding in contemporary debates and methodologies in cultural studies and social theory, and draws on various disciplines including history, sociology, communications, and linguistics. Topics include popular culture, everyday urban life, cultural and social impacts of scientific theories and new technologies, multiculturalism, and contemporary spirituality. Study in this area is relevant for work involving commentary and analysis of contemporary social issues and cultural practices (e.g. journalism, teaching, activism) and fields concerned with designing, delivering and evaluating cultural and artistic productions, and education, communication, welfare or health services, in culturally diverse communities.

### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

### Unit Set Structure

Students must complete the compulsory Level 1 unit

**100897.2** Everyday Life

and seven units from the following pools with no less than three Level 3 units in order to complete the major.

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

#### Level 2 Unit Pool

<b>101409.2</b>	Aboriginal Cultural Texts
<b>100854.3</b>	Contemporary Popular Cultures
<b>100871.3</b>	International Texts and Contexts
<b>101251.2</b>	Introduction to Psychoanalysis
<b>100273.3</b>	New Ethnicities, Old Racisms
<b>100882.2</b>	Politics of Sex and Gender
<b>100281.3</b>	Sexual Culture/s
<b>100884.2</b>	Social Inequalities
<b>100886.2</b>	Special Topics in Cultural and Social Analysis
<b>100889.2</b>	Technocultures
<b>101867.1</b>	The Ethical Life
<b>100291.4</b>	Urban Life/Urban Culture
<b>100298.2</b>	Youth Cultures and Moral Panics
<b>101879.1</b>	Women with Muslim Identity

#### Level 3 Unit Pool

<b>400087.5</b>	Applied Critical Methods
<b>101265.2</b>	Children's Culture

<b>100990.2</b>	Cinema, Culture, Memory
<b>101870.1</b>	Climate Change and Culture
<b>100992.3</b>	Communication: Power and Practice
<b>100858.3</b>	Culture and Globalisation
<b>100996.3</b>	Death and Culture
<b>100860.3</b>	Emotions, Culture and Community
<b>100998.4</b>	Evolutionary Thinking
<b>101844.2</b>	Feminist Theories
<b>101716.3</b>	Healing and Culture
<b>100961.4</b>	Humanities Internship
<b>101468.2</b>	Islam, Media and Conflict
<b>101739.3</b>	Literature and Trauma
<b>101732.2</b>	Media, The Everyday and Uneven Modernities
<b>101800.2</b>	Media, Violence, Protest, Terror
<b>100877.3</b>	Multicultural Studies
<b>101252.2</b>	Psychoanalytic Criticism
<b>101253.3</b>	Public Memory and Commemoration
<b>101003.2</b>	Religion and Culture
<b>101005.4</b>	Representing Crime
<b>101006.2</b>	Social Semiotics
<b>101832.2</b>	Talking Normal: Sociolinguistics and Modern Literature
<b>101008.2</b>	Technologies of Racism
<b>101009.3</b>	The Body in Culture
<b>101848.1</b>	Transnationalism and Migration
<b>101798.2</b>	Understanding Freedom
<b>101731.2</b>	Understanding Power
<b>101010.3</b>	What is the Human?

## Major - English, Text and Writing

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### M1035.1

The English, Text and Writing major invites students to explore contemporary approaches to language, literary study and writing, including literary criticism and theory, linguistic analysis, genre and textual study, and creative writing. English, Text and Writing focuses on the imaginative workings of language, and students can study a wide selection of modern and classic literature, as well as the relationships between written texts and other media such as film and information technology. Students also have the opportunity to produce their own creative writing and to edit and publish their work. Career prospects include publishing, editing, teaching, writing and advertising.

### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

### Unit Set Structure

Students must complete 80 credit points with no less than three Level 3 units.

Students must complete the compulsory Level 1 unit

**100862.2** English, Text & Writing

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

### Level 1 unit pool

**100641.3** Approaches to Text

### Level 2 unit pool

**101626.3** Children's Literature: Image and Text  
**100900.3** Comedy and Tragedy  
**101408.2** Critical Discourse Analysis  
**101452.2** History of the English Language  
**100870.2** Hypertext Fictions  
**100871.3** International Texts and Contexts  
**100964.2** Introduction to Film Studies  
**100505.2** Special Topics in English, Text and Writing  
**101795.2** The Musical  
**100893.3** The Novel  
**101455.3** The Structure of English  
**100896.3** Writing Fiction  
**101869.1** Studies in Postcolonial Literature  
**101873.1** The Sound of Language

### Level 3 unit pool

**400087.5** Applied Critical Methods  
**100845.3** American Literature  
**100849.4** Australian Textual Studies  
**101242.3** Children's Literature  
**100856.4** Creative Non-Fiction  
**100859.3** Creative Writing Project  
**100256.4** Film and Affect  
**100866.3** Film and Drama  
**100961.4** Humanities Internship  
**101724.2** Literary Animals  
**100875.4** Literature and Philosophy  
**101739.3** Literature and Trauma  
**100874.4** Literature, History and Culture  
**101033.4** Modernism  
**101001.3** Modernity and Cinema  
**101406.2** Queering Text  
**101650.3** Race in Literature  
**101005.4** Representing Crime  
**101791.2** Short Fiction in the Americas  
**101832.2** Talking Normal: Sociolinguistics and Modern Literature  
**101453.2** Text and Discourse in English  
**101471.2** Women in Arabic and Islamic Literature  
**101668.2** World Cinema  
**101669.2** World Literature in Translation  
**101670.3** Writing and Society  
**100895.4** Writing For Performance  
**101011.3** Writing Poetry  
**100582.2** Writing Portfolio  
**101796.1** 19th Century American Literature  
**101880.1** The Space of Literature

## Major - Islamic Studies

### **M1036.1**

Students engage in interdisciplinary study essential to an understanding of Islam, past and present. The area of

study balances historical and modern Islamic studies and research methods. One of the keys to Islamic Studies is 'relevance' to contemporary Australian society but relevance can only come from a sound comprehension of past traditions in Islamic scholarship and their socio-historical contexts. Preparation for graduate study is also a key objective of this program, with its focus on developing critical and interdisciplinary research skills through a combination of approaches. Students are encouraged to undertake a sub-major in Arabic to complement the Islamic Studies major.

### Location

Campus	Mode
Bankstown Campus	Internal

### Unit Set Structure

Students must complete 80 credit points as follows  
 An Islamic Studies major must include the following Level 1 unit

**101462.2** Understanding Islam and Muslim Societies

The remaining seven units must include at least three Level 3 units drawn from the following pools:

### Level 2 unit pool

**101464.3** Great Texts of Islam: Qur'an and Hadith  
**100273.3** New Ethnicities, Old Racisms

### Level 3 unit pool

**101688.2** Anthropology of Religion  
**400087.5** Applied Critical Methods  
**101466.2** Ethical Traditions in Islam  
**100961.4** Humanities Internship  
**101822.2** Islam in the West  
**101463.4** Islam in the Modern World  
**101467.2** Islam in Southeast Asia  
**101468.2** Islam, Media and Conflict  
**101465.2** Islamic Law in a Changing World  
**100877.3** Multicultural Studies  
**101359.5** Sociology of Religion  
**101792.2** Texts in Contemporary Arab Society and Culture  
**101783.2** The International Relations of the Middle East Since 1945  
**101471.2** Women in Arabic and Islamic Literature

## Major - Linguistics

### **M1037.1**

Through study of what language is and how it works, students gain conceptual tools and knowledge relevant to the relationship of language and society as well linguistics-related disciplines, such as Sociolinguistics, Psycholinguistics, Developmental Linguistics, Bilingualism, and other applied linguistics areas. Understanding of the relationship between language learning, communicative competence and cultural practices, both in the Australian context and in a global context, provides a foundation for

many careers including primary and secondary teaching, policy analysis, communication, social and welfare services in culturally diverse communities.

### Location

Campus	Mode
Bankstown Campus	Internal

### Unit Set Structure

Students must complete eight units from the following pools, with no less than three units at Level 3.

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

#### Level 1 unit pool

<b>100194.2</b>	Introduction to Interpreting
<b>100195.2</b>	Introduction to Translation

#### Level 2 unit pool

<b>101452.2</b>	History of the English Language
<b>100928.3</b>	Linguistics
<b>101873.1</b>	The Sound of Language
<b>101302.2</b>	Translation Technologies

#### Level 3 unit pool

<b>400087.5</b>	Applied Critical Methods
<b>101449.2</b>	Bilingualism and Biculturalism
<b>101441.2</b>	English Semantics and Pragmatics
<b>101454.2</b>	Intercultural Pragmatics
<b>101709.2</b>	Languages and Grammatical Concepts 3A: Arabic
<b>101710.2</b>	Languages and Grammatical Concepts 3A: Chinese
<b>101711.2</b>	Languages and Grammatical Concepts 3A: Italian
<b>101712.2</b>	Languages and Grammatical Concepts 3A: Japanese
<b>101713.2</b>	Languages and Grammatical Concepts 3A: Spanish
<b>101451.2</b>	Second Language Acquisition
<b>101721.2</b>	Second Language Learning and Teaching
<b>101450.2</b>	Sociolinguistics
<b>100201.2</b>	Special Study in Languages and Linguistics
<b>101832.2</b>	Talking Normal: Sociolinguistics and Modern Literature
<b>101453.2</b>	Text and Discourse in English

## Major - Indigenous Australian Studies

### M1041.1

What does it mean to live in Indigenous Australia? The Indigenous Australian Studies Major offers students the exciting opportunity to acquire key cultural competencies that will enable them to understand and work more effectively with Indigenous Australians in professions such as the arts, communications, media industries; education; government and non-government; policy; health; sciences; and community services. The Indigenous Australian

Studies Major addresses the cultural, historical, social and economic issues affecting Indigenous and Non-Indigenous Australians and relationships.

### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

### Unit Set Structure

Students must complete 80 credit points as follows

Students must complete the following level one unit:

<b>101751.2</b>	Contextualising Indigenous Australia (Day Mode)
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Choose seven of the following units including three Level 3 units

#### Level 1 units:

<b>101762.1</b>	Who do you think you are? (Day Mode)
<b>101878.1</b>	Indigenous Landscapes

#### Level 2 units:

<b>101752.1</b>	Pigments of the Imagination
<b>101753.2</b>	Revaluing Indigenous Economics (Day Mode)
<b>101754.2</b>	From Corroborees to Curtain Raisers (Day Mode)
<b>101755.1</b>	From Ochre to Acrylics to New Technologies

#### Level 3 units:

<b>101756.1</b>	Bridging the Gap: Re-engaging Indigenous Learners
<b>101757.1</b>	The Making of the 'Aborigines'
<b>101758.1</b>	Learning through Indigenous Australian Community Service (Day Mode)

or

<b>101759.1</b>	Rethinking Research with Indigenous Australians: Independent Study Project (Day Mode)
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## Major - Psychological Studies

### M1050.1

The Psychological Studies major comprises units in the discipline of psychology that focus on the field of inquiry that uses scientific techniques and methods to understand and explain behaviour and experience. Units in the program are drawn from the following core areas of psychology: brain and behaviour, learning, motivation and emotion, social psychology, lifespan development, perception, and cognitive processes. A Psychological Studies major does not meet APAC requirements for an accredited sequence in Psychology. Students wishing to enrol in an accredited



Psychology sequence need to complete the Psychology key program of 200 credit points.

**101867.1** The Ethical Life  
**101294.3** The Western Philosophical Tradition

### Location

Campus	Mode
Bankstown Campus	Internal
Penrith Campus	Internal

### Unit Set Structure

Students must complete the following eight units:

<b>101184.2</b>	Psychology: Human Behaviour
<b>101183.2</b>	Psychology: Behavioural Science
<b>100013.3</b>	Experimental Design and Analysis
<b>101680.3</b>	Perception
<b>101684.3</b>	Brain and Behaviour
<b>101676.2</b>	Human Learning
<b>101677.3</b>	Cognitive Processes
<b>101682.4</b>	Developmental Psychology

### Sub-major - Religion, Anthropology and Philosophy

#### SM1032.1

This multidisciplinary sub-major pursues critical and rational analysis of questions about individuals and societies; about human knowledge, culture and existence. It inquires into issues about human nature; the scope and limits of knowledge and belief; God and ethics; conflict and violence; ritual and myth; and religion, politics and culture. The sub-major provides students with rigorous training in analytic and creative thinking, intellectual independence and cultural and ethical awareness.

### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal

### Unit Set Structure

Students must complete 40 credit points from the following pool with no more than one unit at Level 1

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

#### Level 1 Unit Pool

<b>101462.2</b>	Understanding Islam and Muslim Societies
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#### Level 2 Unit Pool

<b>101882.1</b>	A History of Modern Global Buddhism
<b>100850.2</b>	Buddhism in the Contemporary World
<b>100852.2</b>	Classics of Modern Philosophy
<b>101856.1</b>	Film and Philosophy
<b>101464.3</b>	Great Texts of Islam: Qur'an and Hadith
<b>101843.2</b>	Philosophy and Environment
<b>101881.1</b>	Philosophy and the Good Life

### Level 3 Unit Pool

<b>101295.2</b>	Aesthetics
<b>101688.2</b>	Anthropology of Religion
<b>400087.5</b>	Applied Critical Methods
<b>100863.3</b>	Ethical Cultures
<b>100998.4</b>	Evolutionary Thinking
<b>100961.4</b>	Humanities Internship
<b>101463.4</b>	Islam in the Modern World
<b>101467.2</b>	Islam in Southeast Asia
<b>101465.2</b>	Islamic Law in a Changing World
<b>101724.2</b>	Literary Animals
<b>100875.4</b>	Literature and Philosophy
<b>100275.4</b>	Philosophies of Love and Death
<b>101761.2</b>	Philosophy and the Visual
<b>100879.2</b>	Philosophy Today
<b>101665.3</b>	Politics and Religion
<b>101003.2</b>	Religion and Culture
<b>101359.5</b>	Sociology of Religion
<b>100969.2</b>	Theories of Conflict and Violence
<b>101880.1</b>	The Space of Literature
<b>101798.2</b>	Understanding Freedom
<b>101010.3</b>	What is the Human?
<b>101471.2</b>	Women in Arabic and Islamic Literature

### Sub-major - Media and Visual Cultures

#### SM1033.1

The rapid flow of visual images with which we communicate today – on the internet, by web and moblogs – is a contemporary manifestation of the importance of visual cultures in everyday life. The Media and Visual Cultures sub-major area equips students with multidisciplinary knowledge and skills in critical art history and theory, digital media, film and television studies, philosophy, and cultural studies. It aims to create career ready graduates with the skills necessary to interpret the production and dissemination of visual images and their meanings in a variety of media as well as cultural and institutional contexts.

### Location

Campus	Mode
Bankstown Campus	Internal
Penrith Campus	Internal

### Unit Set Structure

Students must complete 40 credit points from the following pools

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

#### Level 2 Unit Pool

<b>100245.2</b>	Asian Cinema
<b>101248.3</b>	Australian Art 1
<b>101626.3</b>	Children's Literature: Image and Text
<b>101250.3</b>	Digital Futures

<b>101856.1</b>	Film and Philosophy
<b>10157.2</b>	History and Theory of the Avant-Garde
<b>100964.2</b>	Introduction to Film Studies
<b>101254.3</b>	The Animated Image: Histories and Theories
<b>10371.3</b>	The Art Museum - from the Prince to the Public
<b>100890.2</b>	The Art of Landscape
<b>101795.2</b>	The Musical
<b>10158.2</b>	Writings on Art

**Level 3 Unit Pool**

<b>400087.5</b>	Applied Critical Methods
<b>100959.2</b>	Australian Art II
<b>100989.2</b>	Cinema and Realism
<b>100990.2</b>	Cinema, Culture, Memory
<b>100256.4</b>	Film and Affect
<b>100866.3</b>	Film and Drama
<b>100961.4</b>	Humanities Internship
<b>101468.2</b>	Islam, Media and Conflict
<b>101732.2</b>	Media, The Everyday and Uneven Modernities
<b>101800.2</b>	Media, Violence, Protest, Terror
<b>101001.3</b>	Modernity and Cinema
<b>101761.2</b>	Philosophy and the Visual
<b>101253.3</b>	Public Memory and Commemoration
<b>101006.2</b>	Social Semiotics
<b>101738.2</b>	The Art Game: Fraud, Forgery, Theft and Perfidy
<b>101266.2</b>	The Art of Modern Life
<b>101717.2</b>	The Italian Renaissance Unpacked
<b>101668.2</b>	World Cinema

**Sub-major - Chinese****SM1035.1**

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

**Location**

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal

**Unit Set Structure**

A sub-major in Chinese is any sequence of 40 credit points with no more than 20 credit points at Level 1.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or

- take a Level 2 unit after passing a Level 3 unit in the same language.

**Level 1 unit pool**

<b>100056.2</b>	Chinese 101
<b>100057.2</b>	Chinese 102

**Level 2 unit pool**

<b>101700.2</b>	Language and Communication Skills 2A: Chinese
<b>101705.2</b>	Language and Communication Skills 2B: Chinese

**Level 3 unit pool**

<b>100063.2</b>	Chinese 302
<b>100064.2</b>	Chinese 303: Twentieth-Century Chinese Literature
<b>100065.2</b>	Chinese 304: Chinese Classical Literature
<b>100066.2</b>	Chinese 305: Chinese Cinema
<b>100067.2</b>	Chinese 307: The Cultural Context of China
<b>101710.2</b>	Languages and Grammatical Concepts 3A: Chinese
<b>101454.2</b>	Intercultural Pragmatics
<b>101668.2</b>	World Cinema

**Sub-major - Italian****SM1036.1**

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

**Location**

Campus	Mode
Bankstown Campus	Internal

**Unit Set Structure**

A sub-major in Italian is any sequence of 40 credit points with no more than 20 credit points at Level 1.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or

- take a Level 2 unit after passing a Level 3 unit in the same language.

**Level 1 unit pool**

<b>100130.2</b>	Italian 101
<b>100131.2</b>	Italian 102

**Level 2 unit pool**

- 101701.2** Language and Communication Skills 2A:  
Italian
- 101706.2** Language and Communication Skills 2B:  
Italian

**Level 3 unit pool**

- 100138.2** Italian 303: Contemporary Italy in European  
and International Contexts
- 100140.1** Italian 305: Modern Literature
- 100141.2** Italian 306: Classical Literature
- 100143.2** Italian 308: Italian Cinema
- 101711.2** Languages and Grammatical Concepts 3A:  
Italian
- 101454.2** Intercultural Pragmatics
- 101668.2** World Cinema
- 101669.2** World Literature in Translation

**Sub-major - Japanese****SM1037.1**

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

**Location**

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal

**Unit Set Structure**

A sub-major in Japanese is any sequence of 40 credit points with no more than 20 credit points at Level 1. Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or
- take a Level 2 unit after passing a Level 3 unit in the same language.

**Level 1 unit pool**

- 100085.2** Japanese 101
- 100086.2** Japanese 102

**Level 2 unit pool**

- 101702.2** Language and Communication Skills 2A:  
Japanese

- 101707.2** Language and Communication Skills 2B:  
Japanese

**Level 3 unit pool**

- 100093.2** Japanese 303: Contemporary Culture and  
Society
- 100094.1** Japanese 304: Discourse in Japanese
- 100096.2** Japanese 306: Japanese for Business
- 100098.1** Japanese 308: Japanese Textual Studies
- 101712.2** Languages and Grammatical Concepts 3A:  
Japanese
- 101454.2** Intercultural Pragmatics
- 101668.2** World Cinema
- 101669.2** World Literature in Translation

**Sub-major - Spanish****SM1038.1**

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

**Location**

Campus	Mode
Bankstown Campus	Internal

**Unit Set Structure**

A sub-major in Spanish is any sequence of 40 credit points with no more than 20 credit points at Level 1.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or
- take a Level 2 unit after passing a Level 3 unit in the same language.

**Level 1 unit pool**

- 100145.2** Spanish 101
- 100146.2** Spanish 102

**Level 2 unit pool**

- 101703.2** Language and Communication Skills 2A:  
Spanish
- 101708.2** Language and Communication Skills 2B:  
Spanish

**Level 3 unit pool**

- 100153.2** Spanish 303: Advanced Writing Skills
- 100154.2** Spanish 304: Advanced Speaking Skills

<b>100155.2</b>	Spanish 305: Contemporary Literature
<b>100156.2</b>	Spanish 306: Contemporary History
<b>100157.2</b>	Spanish 307: Classical Literature
<b>100158.2</b>	Spanish 308: Spanish Sociolinguistics
<b>101713.2</b>	Languages and Grammatical Concepts 3A: Spanish
<b>101454.2</b>	Intercultural Pragmatics
<b>101668.2</b>	World Cinema
<b>101669.2</b>	World Literature in Translation
<b>400087.5</b>	Applied Critical Methods
<b>100961.4</b>	Humanities Internship
<b>101791.2</b>	Short Fiction in the Americas

## Sub-major - Global Studies

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### SM1040.1

What does it mean to live in an increasingly globalised world? Global Studies offers students the opportunity to acquire key competencies in cross-cultural communication and global issues to act as socially aware global citizens in international settings. Global Studies addresses issues such as consumer and popular culture, global histories of food and technology, the interconnection of race, identity and transnational migration and intercultural pragmatics. Students have the opportunity to complete a semester of study abroad.

### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal

### Unit Set Structure

Students must complete 40 credit points from the following pools with no more than one unit at Level 1.

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

#### Level 1 unit pool

<b>101737.2</b>	World Politics: An Introduction
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#### Level 2 unit pool

<b>101857.1</b>	Doing Business in China
<b>101543.2</b>	India: Global Contexts
<b>100871.3</b>	International Texts and Contexts
<b>101797.2</b>	Political Terror

#### Level 3 unit pool

<b>400087.5</b>	Applied Critical Methods
<b>100992.3</b>	Communication: Power and Practice
<b>101870.1</b>	Climate Change and Culture
<b>100994.2</b>	Consumer Culture
<b>100858.3</b>	Culture and Globalisation
<b>101674.2</b>	Global Histories of Food
<b>101735.2</b>	Global Politics
<b>101736.2</b>	Governing the Globe
<b>100961.4</b>	Humanities Internship
<b>101454.2</b>	Intercultural Pragmatics

<b>101468.2</b>	Islam, Media and Conflict
<b>101733.2</b>	Looking at Global Politics Through Film
<b>101732.2</b>	Media, The Everyday and Uneven Modernities
<b>101666.2</b>	Race, Identity and Globalisation
<b>101717.2</b>	The Italian Renaissance Unpacked
<b>101848.1</b>	Transnationalism and Migration
<b>101831.2</b>	Transport and the Making of the Modern World
<b>101668.2</b>	World Cinema
<b>101669.2</b>	World Literature in Translation
<b>101830.2</b>	WWII in Asia and the Pacific

## Sub-major - History and Political Thought

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### SM1041.1

Since the revival of humanist studies in Renaissance Europe in the 15th century, universities have placed history and political thought at the heart of studies in the humanities. Through study of the political thought and social, political and cultural history of Australian, Asian and European societies, students gain knowledge and critical skills relevant to a variety of careers in education, government and non-governmental organizations. Study of the writings of political thinkers from ancient Greece and Rome, such as Plato and Cicero, and the early modern period, such as Hobbes and Machiavelli, to noted 19th century figures, such as Hegel and Marx, prepare students to engage with contemporary issues of governance, such as sovereignty, power, opportunity, property, civic freedom and social justice.

### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

### Unit Set Structure

Students must complete 40 credit points from the following pools:

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

#### Level 1 unit pool

<b>100848.2</b>	Australian Politics
<b>100868.2</b>	Foundations of Modern Australia
<b>100873.3</b>	Inventing Modernity
<b>101737.2</b>	World Politics: An Introduction

#### Level 2 unit pool

<b>101882.1</b>	A History of Modern Global Buddhism
<b>100244.2</b>	Ancient Western Culture: Periclean Athens
<b>100861.3</b>	Empire: European Colonial Rule and its Subjects, 1750-1920
<b>100254.3</b>	Exploring Local History
<b>100869.2</b>	Foundations of Modern Europe 1500-1800
<b>101543.2</b>	India: Global Contexts

100001.3	Keeping the Past
101843.2	Philosophy and Environment
101797.2	Political Terror
100904.2	Politics and Business in Asia
100277.3	Politics of Australia and Asia Relations
100882.2	Politics of Sex and Gender
63111.3	Special Topics in Asian and International Studies
101867.1	The Ethical Life
101404.3	The History of Modern Indonesia
101294.3	The Western Philosophical Tradition
101871.1	War
100293.3	War and Society: 20th Century Australia

**Level 3 unit pool**

400087.5	Applied Critical Methods
100966.3	American History, 1898-1945
100986.2	Australian History 1860-1920
100987.3	Australian History Since 1920
101685.3	Australian Indigenous History
101872.1	Australian Indigenous History from Federation to Reconciliation
100991.2	Citizenship Ancient and Modern
100852.2	Classics of Modern Philosophy
101799.2	Convicts and Settlers - Australian History 1788 - 1840
101249.2	Culture and Thought in Twentieth-Century China
100903.2	Democracy in Asia
100863.3	Ethical Cultures
100864.2	Europe in the Twentieth Century
101844.2	Feminist Theories
101674.2	Global Histories of Food
101735.2	Global Politics
100507.4	History of Modern China to 1949
100961.4	Humanities Internship
100963.3	Interpreting Australia: Australian Historians and Historiography
101801.2	Interpreting Fascism
101823.2	Lay Participation in Justice Processes
100875.4	Literature and Philosophy
101733.2	Looking at Global Politics Through Film
100271.3	Modern Japanese History
101665.3	Politics and Religion
100278.2	Politics of Post-War Japan
100908.2	Race Politics
63178.2	Social and Political Developments in Contemporary China
101667.3	The External Relations of the European Union
101782.2	The History and Politics of Contemporary Central Asia
101783.2	The International Relations of the Middle East Since 1945
101405.2	The Politics of Contemporary Indonesia
100969.2	Theories of Conflict and Violence
101831.2	Transport and the Making of the Modern World
101798.2	Understanding Freedom
101731.2	Understanding Power
101866.1	United States Government and Politics
101375.3	War and Peace
100294.3	Warlords, Artists and Emperors: Power and Authority in Premodern Japan
100971.2	Which New World Order?
101830.2	WWII in Asia and the Pacific

**Sub-major - Asian Studies and International Relations****SM1042.1**

This sub-major has been designed to meet the needs of Australian government, business and society to engage the states and peoples of Asia at all levels in pursuit of national interests and as part of the globalisation process. It provides students with the opportunity to study modern and contemporary Asia, the rich and diverse histories, politics, cultures and languages of Asian countries and the international issues affecting Australia's interests and role in the region and in the world at large. The sub-major area includes a range of units concerned with the United States, Europe and Australia as well as with Asia itself, and units in international relations. It seeks to produce graduates with a broad, liberal education with the skills to mediate between Australia and the world in general and Asia in particular through political, economic, commercial, cultural, diplomatic and strategic links. Students are encouraged to undertake a sub-major in an Asian language in conjunction with the major. Employment opportunities may be found in the State and Commonwealth public service, overseas organisations, trade and tourist organisations, business and industry, education and research

**Location**

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal

**Unit Set Structure**

Students must complete 40 credit points from the following pools:

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

**Level 1 Unit Pool**

101737.2	World Politics: An Introduction
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**Level 2 Unit Pool**

101882.1	A History of Modern Global Buddhism
100245.2	Asian Cinema
100847.2	Asia and the West: The Imperial Encounter
100850.2	Buddhism in the Contemporary World
100855.2	Contemporary Japan: Culture and Society
101857.1	Doing Business in China
100861.3	Empire: European Colonial Rule and its Subjects, 1750-1920
101543.2	India: Global Contexts
100872.2	International Politics of North Asia
100904.2	Politics and Business in Asia
100277.3	Politics of Australia and Asia Relations
63111.3	Special Topics in Asian and International Studies
101404.3	The History of Modern Indonesia
101871.1	War

**Level 3 Unit Pool**

<b>100985.2</b>	American Foreign Policy Since 1945
<b>400087.5</b>	Applied Critical Methods
<b>101249.2</b>	Culture and Thought in Twentieth-Century China
<b>100903.2</b>	Democracy in Asia
<b>100507.4</b>	History of Modern China to 1949
<b>100961.4</b>	Humanities Internship
<b>100962.2</b>	International Politics of the Southeast Asian Region
<b>101467.2</b>	Islam in Southeast Asia
<b>101733.2</b>	Looking at Global Politics Through Film
<b>100271.3</b>	Modern Japanese History
<b>100278.2</b>	Politics of Post-War Japan
<b>63178.2</b>	Social and Political Developments in Contemporary China
<b>101667.3</b>	The External Relations of the European Union
<b>101782.2</b>	The History and Politics of Contemporary Central Asia
<b>101783.2</b>	The International Relations of the Middle East Since 1945
<b>101405.2</b>	The Politics of Contemporary Indonesia
<b>101866.1</b>	United States Government and Politics
<b>101375.3</b>	War and Peace
<b>100294.3</b>	Warlords, Artists and Emperors: Power and Authority in Premodern Japan
<b>100971.2</b>	Which New World Order?
<b>101830.2</b>	WWII in Asia and the Pacific

**Sub-major - Cultural and Social Analysis****SM1043.1**

Cultural and Social Analysis is an interdisciplinary sub-major developing knowledge, research skills and analytic capacities relevant to understanding and interpreting landscapes of cultural diversity and social difference in our contemporary world, both in terms of the broad contours, as well as specific micro-social environments. This sub-major provides grounding in contemporary debates and methodologies in cultural studies and social theory, and draws on various disciplines including history, sociology, communications, and linguistics. Topics include popular culture, everyday urban life, cultural and social impacts of scientific theories and new technologies, multiculturalism, and contemporary spirituality. Study in this area is relevant for work involving commentary and analysis of contemporary social issues and cultural practices (e.g. journalism, teaching, activism) and fields concerned with designing, delivering and evaluating cultural and artistic productions, and education, communication, welfare or health services, in culturally diverse communities.

**Location**

<b>Campus</b>	<b>Mode</b>
Bankstown Campus	Internal
Penrith Campus	Internal

**Unit Set Structure**

Students must complete 40 credit points from the Level 2/3 units from the following pools

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

**Level 2 Unit Pool**

<b>101409.2</b>	Aboriginal Cultural Texts
<b>100854.3</b>	Contemporary Popular Cultures
<b>100871.3</b>	International Texts and Contexts
<b>101251.2</b>	Introduction to Psychoanalysis
<b>100273.3</b>	New Ethnicities, Old Racisms
<b>100882.2</b>	Politics of Sex and Gender
<b>100281.3</b>	Sexual Culture/s
<b>100884.2</b>	Social Inequalities
<b>100886.2</b>	Special Topics in Cultural and Social Analysis
<b>100889.2</b>	Technocultures
<b>101867.1</b>	The Ethical Life
<b>100291.4</b>	Urban Life/Urban Culture
<b>101879.1</b>	Women with Muslim Identity
<b>100298.2</b>	Youth Cultures and Moral Panics

**Level 3 Unit Pool**

<b>400087.5</b>	Applied Critical Methods
<b>101265.2</b>	Children's Culture
<b>100990.2</b>	Cinema, Culture, Memory
<b>101870.1</b>	Climate Change and Culture
<b>100992.3</b>	Communication: Power and Practice
<b>100858.3</b>	Culture and Globalisation
<b>100996.3</b>	Death and Culture
<b>100860.3</b>	Emotions, Culture and Community
<b>100998.4</b>	Evolutionary Thinking
<b>101844.2</b>	Feminist Theories
<b>101716.3</b>	Healing and Culture
<b>100961.4</b>	Humanities Internship
<b>101468.2</b>	Islam, Media and Conflict
<b>101739.3</b>	Literature and Trauma
<b>101732.2</b>	Media, The Everyday and Uneven Modernities
<b>101800.2</b>	Media, Violence, Protest, Terror
<b>100877.3</b>	Multicultural Studies
<b>101252.2</b>	Psychoanalytic Criticism
<b>101253.3</b>	Public Memory and Commemoration
<b>101003.2</b>	Religion and Culture
<b>101005.4</b>	Representing Crime
<b>101006.2</b>	Social Semiotics
<b>101832.2</b>	Talking Normal: Sociolinguistics and Modern Literature
<b>101008.2</b>	Technologies of Racism
<b>101009.3</b>	The Body in Culture
<b>101848.1</b>	Transnationalism and Migration
<b>101798.2</b>	Understanding Freedom
<b>101731.2</b>	Understanding Power
<b>101010.3</b>	What is the Human?

**Sub-major - English, Text and Writing****SM1044.1**

The English, Text and Writing sub-major invites students to explore contemporary approaches to language, literary

study and writing, including literary criticism and theory, linguistic analysis, genre and textual study, and creative writing. English, Text and Writing focuses on the imaginative workings of language, and students can study a wide selection of modern and classic literature, as well as the relationships between written texts and other media such as film and information technology. Students also have the opportunity to produce their own creative writing and to edit and publish their work. Career prospects include publishing, editing, teaching, writing and advertising.

## Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

## Unit Set Structure

Students would be eligible for this sub-major having successfully completed 40 credit points.

Students must complete 40 credit points from the following pools with no more than one unit at Level 1.

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

### Level 1 unit pool

**100641.3** Approaches to Text

### Level 2 unit pool

**101626.3** Children's Literature: Image and Text  
**100900.3** Comedy and Tragedy  
**101408.2** Critical Discourse Analysis  
**101452.2** History of the English Language  
**100870.2** Hypertext Fictions  
**100871.3** International Texts and Contexts  
**100964.2** Introduction to Film Studies  
**100505.2** Special Topics in English, Text and Writing  
**101795.2** The Musical  
**100893.3** The Novel  
**101455.3** The Structure of English  
**100896.3** Writing Fiction  
**101869.1** Studies in Postcolonial Literature  
**101873.1** The Sound of Language

### Level 3 unit pool

**400087.5** Applied Critical Methods  
**100845.3** American Literature  
**100849.4** Australian Textual Studies  
**101242.3** Children's Literature  
**100856.4** Creative Non-Fiction  
**100859.3** Creative Writing Project  
**100256.4** Film and Affect  
**100866.3** Film and Drama  
**100961.4** Humanities Internship  
**101724.2** Literary Animals  
**100875.4** Literature and Philosophy  
**101739.3** Literature and Trauma  
**100874.4** Literature, History and Culture  
**101033.4** Modernism  
**101001.3** Modernity and Cinema

**101406.2** Queering Text  
**101650.3** Race in Literature  
**101005.4** Representing Crime  
**101791.2** Short Fiction in the Americas  
**101832.2** Talking Normal: Sociolinguistics and Modern Literature  
**101453.2** Text and Discourse in English  
**101471.2** Women in Arabic and Islamic Literature  
**101668.2** World Cinema  
**101669.2** World Literature in Translation  
**101670.3** Writing and Society  
**100895.4** Writing For Performance  
**101011.3** Writing Poetry  
**100582.2** Writing Portfolio  
**101796.1** 19th Century American Literature  
**101880.1** The Space of Literature

## Sub-major - Islamic Studies

### SM1045.1

Students engage in interdisciplinary study essential to an understanding of Islam, past and present. The area of study balances historical and modern Islamic studies and research methods. One of the keys to Islamic Studies is 'relevance' to contemporary Australian society but relevance can only come from a sound comprehension of past traditions in Islamic scholarship and their socio-historical contexts. Preparation for graduate study is also a key objective of this program, with its focus on developing critical and interdisciplinary research skills through a combination of approaches.

## Location

Campus	Mode
Bankstown Campus	Internal

## Unit Set Structure

Students must complete 40 credit points from the following pools with no more than one unit at level 1

### Level 2 unit pool

**101464.3** Great Texts of Islam: Qur'an and Hadith  
**100273.3** New Ethnicities, Old Racisms

### Level 3 unit pool

**101688.2** Anthropology of Religion  
**400087.5** Applied Critical Methods  
**101466.2** Ethical Traditions in Islam  
**100961.4** Humanities Internship  
**101822.2** Islam in the West  
**101463.4** Islam in the Modern World  
**101467.2** Islam in Southeast Asia  
**101468.2** Islam, Media and Conflict  
**101465.2** Islamic Law in a Changing World  
**100877.3** Multicultural Studies  
**101359.5** Sociology of Religion  
**101792.2** Texts in Contemporary Arab Society and Culture  
**101783.2** The International Relations of the Middle East Since 1945

**101471.2** Women in Arabic and Islamic Literature

## Sub-major - Linguistics

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### SM1046.1

Through study of what language is and how it works, students gain conceptual tools and knowledge relevant to the relationship of language and society as well linguistics-related disciplines, such as Sociolinguistics, Psycholinguistics, Developmental Linguistics, Bilingualism, and other applied linguistics areas. Understanding of the relationship between language learning, communicative competence and cultural practices, both in the Australian context and in a global context, provides a foundation for many careers including primary and secondary teaching, policy analysis, communication, social and welfare services in culturally diverse communities.

#### Location

Campus	Mode
Bankstown Campus	External

#### Unit Set Structure

Students must complete 40 credit points from the following pools with no more than one unit at level 1.

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

##### Level 1 unit pool

<b>100194.2</b>	Introduction to Interpreting
<b>100195.2</b>	Introduction to Translation

##### Level 2 unit pool

<b>101452.2</b>	History of the English Language
<b>100928.3</b>	Linguistics
<b>101873.1</b>	The Sound of Language
<b>101302.2</b>	Translation Technologies

##### Level 3 unit pool

<b>400087.5</b>	Applied Critical Methods
<b>101449.2</b>	Bilingualism and Biculturalism
<b>101441.2</b>	English Semantics and Pragmatics
<b>101454.2</b>	Intercultural Pragmatics
<b>101709.2</b>	Languages and Grammatical Concepts 3A: Arabic
<b>101710.2</b>	Languages and Grammatical Concepts 3A: Chinese
<b>101711.2</b>	Languages and Grammatical Concepts 3A: Italian
<b>101712.2</b>	Languages and Grammatical Concepts 3A: Japanese
<b>101713.2</b>	Languages and Grammatical Concepts 3A: Spanish
<b>101451.2</b>	Second Language Acquisition
<b>101721.2</b>	Second Language Learning and Teaching
<b>101450.2</b>	Sociolinguistics
<b>100201.2</b>	Special Study in Languages and Linguistics

**101832.2** Talking Normal: Sociolinguistics and Modern Literature

**101453.2** Text and Discourse in English

## Sub-major - Indigenous Australian Studies

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### SM1049.1

What does it mean to live in Indigenous Australia? The Indigenous Australian Studies Major and sub-majors offers students the exciting opportunity to acquire key cultural competencies that will enable them to understand and work more effectively with Indigenous Australians in professions such as the arts, communications, media industries; education; government and non-government; policy; health; sciences; and community services. The Indigenous Australian Studies Major and sub-majors addresses the cultural, historical, social and economic issues affecting Indigenous and Non-Indigenous Australians and relationships.

#### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

#### Unit Set Structure

Students must complete 40 credit points as follows

<b>101751.2</b>	Contextualising Indigenous Australia (Day Mode)
<b>101752.1</b>	Pigments of the Imagination
<b>101756.1</b>	Bridging the Gap: Re-engaging Indigenous Learners

Choose one of

<b>101757.1</b>	The Making of the 'Aborigines'
<b>101758.1</b>	Learning through Indigenous Australian Community Service (Day Mode)
<b>101759.1</b>	Rethinking Research with Indigenous Australians: Independent Study Project (Day Mode)

## Sub-major - Indigenous Economics

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### SM1050.1

What does it mean to live in Indigenous Australia? The Indigenous Australian Studies Major and sub-majors offers students the exciting opportunity to acquire key cultural competencies that will enable them to understand and work more effectively with Indigenous Australians in professions such as the arts, communications, media industries; education; government and non-government; policy; health; sciences; and community services. The Indigenous Australian Studies Major and sub-majors addresses the cultural, historical, social and economic issues affecting



Indigenous and Non-Indigenous Australians and relationships.

### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

### Unit Set Structure

Students must complete 40 credit points as follows

<b>101751.2</b>	Contextualising Indigenous Australia (Day Mode)
<b>101753.2</b>	Revaluing Indigenous Economics (Day Mode)
<b>101757.1</b>	The Making of the 'Aborigines'

Choose one of

<b>101758.1</b>	Learning through Indigenous Australian Community Service (Day Mode)
<b>101759.1</b>	Rethinking Research with Indigenous Australians: Independent Study Project (Day Mode)

### Sub-major - Indigenous Australian Creative Expressions

#### SM1051.1

What does it mean to live in Indigenous Australia? The Indigenous Australian Studies Major and sub-majors offers students the exciting opportunity to acquire key cultural competencies that will enable them to understand and work more effectively with Indigenous Australians in professions such as the arts, communications, media industries; education; government and non-government; policy; health; sciences; and community services. The Indigenous Australian Studies Major and sub-majors addresses the cultural, historical, social and economic issues affecting Indigenous and Non-Indigenous Australians and relationships.

### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

### Unit Set Structure

Students must complete 40 credit points as follows

<b>101751.2</b>	Contextualising Indigenous Australia (Day Mode)
<b>101754.2</b>	From Corroborees to Curtain Raisers (Day Mode)
<b>101755.1</b>	From Ochre to Acrylics to New Technologies

Choose one of

<b>101758.1</b>	Learning through Indigenous Australian Community Service (Day Mode)
<b>101759.1</b>	Rethinking Research with Indigenous Australians: Independent Study Project (Day Mode)

### Sub-major - Psychological Studies

#### SM1069.1

The Psychological Studies sub-major comprises units in the discipline of psychology that focus on the field of inquiry that uses scientific techniques and methods to understand and explain behaviour and experience. Units in the program are drawn from the following core areas of psychology: brain and behaviour, learning, motivation and emotion, social psychology, lifespan development, perception, and cognitive processes. A Psychological Studies sub-major does not meet APAC requirements for an accredited sequence in Psychology. Students wishing to enrol in an accredited Psychology sequence need to complete the Psychology key program of 200 credit points.

### Location

Campus	Mode
Bankstown Campus	Internal
Penrith Campus	Internal

### Unit Set Structure

This sub-major is restricted to students enrolled in 1604 - Bachelor of Arts, 1652 - Bachelor of Arts (Pathway to Teaching Secondary) or 1655 - Bachelor of Arts (Dean's Scholars).

Students must complete 40 credit points as follows

<b>101184.2</b>	Psychology: Human Behaviour
<b>101183.2</b>	Psychology: Behavioural Science
<b>100013.3</b>	Experimental Design and Analysis

Choose one of

<b>101680.3</b>	Perception
<b>101684.3</b>	Brain and Behaviour
<b>101676.2</b>	Human Learning
<b>101677.3</b>	Cognitive Processes
<b>101682.4</b>	Developmental Psychology

**SCHOOL OF COMPUTING, ENGINEERING  
AND MATHEMATICS****Bachelor of Computing (Information  
Systems) Advanced****3685.1**

The Bachelor of Computing (Information Systems) Advanced is a professional three year course being accredited by the Australian Computer Society. The Key Program in Information Systems focuses on computing and information technology in the context of business. In addition to the generic content, this course utilises advanced activities, extension projects, research training and hands on work on real business projects.

To assure students continue to excel through the course they are given a mentor and are regularly coached and supervised by the academic staff and industry professionals. Furthermore, within this degree students are required to attend to real business problems and also engage in cutting edge research.

After completing Bachelor of Computing (Information Systems) Advanced, graduates will have the skills required for work in various Information Systems areas, including systems analysis and design, programming, system security, data analysis and modelling, networking, systems and web-development, deployment and management.

**Study Mode**

3 years full-time.

**Location**

Campus	Attendance	Mode
Parramatta Campus	Full Time	Internal

**Accreditation**

The Bachelor of Computing (Information Systems) Advanced accredited with the Australian Computer Society (ACS) at Professional Level is being sought.

**Admission**

HSC Mathematics and any two units of HSC English Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English

proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

**Course Structure**

Students within the Advanced degree are required to complete five (5) Advanced units.

**Compulsory Advanced units**

- 300942 Emerging Trends in Information Systems (Advanced)
- 300900 Professional Experience (Advanced)

A further three (3) units to be chosen from

- 300946 Computer Networking (Advanced)
- 300941 Database Design and Development (Advanced)
- 300901 Human-Computer Interaction (Advanced)
- 300903 Programming Techniques (Advanced)
- 300902 Web Systems Development (Advanced)
- 300940 Commercial Applications Development (Advanced)

Qualification for this award requires the successful completion of 240 credit points which include the units listed in the recommended sequences below.

**Year 1****Autumn session**

<b>300580.2</b>	Programming Fundamentals
<b>100483.2</b>	Principles of Professional Communication 1
<b>300585.2</b>	Systems Analysis and Design
<b>300573.2</b>	Information Systems in Context

**Spring session**

<b>300144.4</b>	Object Oriented Analysis
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Choose one of:

<b>300565.2</b>	Computer Networking
<b>300946.1</b>	Computer Networking (Advanced)

Choose one of:

<b>300104.4</b>	Database Design and Development
<b>300941.1</b>	Database Design and Development (Advanced)

And one elective

**Year 2****Autumn session**

- 300582.2** Technologies for Web Applications  
**200032.5** Statistics for Business

Choose one of:

- 300570.3** Human-Computer Interaction  
**300901.1** Human-Computer Interaction (Advanced)

Choose one of:

- 300580.2** Programming Fundamentals  
**300903.1** Programming Techniques (Advanced)

**Spring session**

- 300569.2** Computer Security  
**300572.2** Information Systems Deployment and Management

Choose one of:

- 300583.2** Web Systems Development  
**300902.1** Web Systems Development (Advanced)

Choose one of:

- 300089.5** Commercial Applications Development  
**300940.1** Commercial Applications Development (Advanced)

**Year 3****Autumn session**

- 300578.3** Professional Development  
**300942.1** Emerging Trends in Information Systems (Advanced)

And two electives

**Spring session**

- 300900.1** Professional Experience (Advanced)

And three electives

**Bachelor of Computer Science****3506.5**

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year in this course was 2012 or later.

The Bachelor of Computer Science course is a three year course with three distinct majors which allow students to specialise in different applications of computer science and computer systems. The three majors are: computer forensics, networked systems and systems programming. The course and the three majors are all available on the Penrith Campus. Students may graduate without a major but where a major is completed it will appear on the student's transcript. Accreditation with the Australian Computer Society is being sought.

**Computer Forensics major:** Computer forensics focuses on the gathering of evidence (often as part of an investigation) from computers and computer networks. Such evidence may consist of actual files (e.g. an image) or the traces of a user's activities that are left in the activity logs of operating systems, browsers, databases, web proxies, or network firewalls, etc. Identifying such evidence requires in-depth technical knowledge of the interactions between hardware, the operating system, programs, and the network. Similarly, knowledge of cryptographic techniques is required where data has been encrypted and/or obfuscated. This major develops this requisite knowledge; it also develops the skills necessary to ensure that evidence is not corrupted, and can be documented and presented in an intelligible manner.

**Networked Systems major:** This major aims to develop graduates with sound skills in the discipline of networked computer systems. Recent advances in computer and telecommunications networked systems, particularly those based on TCP/IP, have increased the importance of network technologies in the discipline of computer science. This major covers a wide range of topics including computer communication network concepts and protocols, multimedia systems, Internet standards and technologies, network security, wireless and mobile computing, and distributed systems. The candidates are also introduced to some of the relevant current key research issues of the field.

**Systems Programming major:** This major aims to develop graduates with sound skills in the discipline of programming. The focus is on programming at the level of system calls to the underlying operating system and many of the units use the industry standard language for systems programming, namely C/C++, as the vehicle of instruction. There is a strong emphasis on the development of highly efficient and reliable code that can provide support services for higher level application oriented programs, as well as the development of programs suitable for systems administration and management. Practical work utilises both Unix and Microsoft environments. This major is appropriate where a career in systems programming or systems administration is planned, or where the student wishes to develop advanced systems programming skills.

**Study Mode**

Three years full-time.

**Location**

Campus	Attendance	Mode
Penrith Campus	Full Time	Internal

**Accreditation**

The Bachelor of Computer Science currently is accredited with the Australian Computer Society (ACS) at Professional Level.

**Admission**

Assumed knowledge: HSC Mathematics (2 unit)

Recommended studies: HSC Mathematics Extension 1

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the

Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

### Course Structure

Qualification for this award requires the successful completion of 240 credit points which include the units listed in the recommended sequence below.

### Recommended Sequence

#### Full-time

##### Year 1

##### Autumn session

<b>300700.5</b>	Statistical Decision Making
<b>300580.2</b>	Programming Fundamentals
<b>100483.2</b>	Principles of Professional Communication 1
<b>200025.2</b>	Discrete Mathematics

##### Spring session

<b>300096.5</b>	Computer Organisation
<b>300147.3</b>	Object Oriented Programming
<b>300104.4</b>	Database Design and Development
<b>300565.2</b>	Computer Networking

##### Year 2

##### Autumn session

<b>300167.3</b>	Systems Programming 1
<b>300103.2</b>	Data Structures and Algorithms
<b>300121.2</b>	Formal Languages and Automata

And one elective

##### Spring session

<b>300404.2</b>	Formal Software Engineering
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And two Computer Science alternate units

And one elective

##### Year 3

##### Autumn session

<b>300578.3</b>	Professional Development
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And two Computer Science alternate units

And one elective

### Spring session

<b>300579.3</b>	Professional Experience
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And two Computer Science alternate units

And one elective

### Computer Science Alternate Units

<b>300093.3</b>	Computer Graphics
<b>300095.4</b>	Computer Networks and Internets
<b>300115.2</b>	Distributed Systems and Programming
<b>300128.3</b>	Information Security
<b>300130.2</b>	Internet Programming
<b>300143.3</b>	Network Security
<b>300149.2</b>	Operating Systems
<b>300165.3</b>	Systems Administration Programming
<b>300166.2</b>	Systems and Network Management
<b>300168.2</b>	Systems Programming 2
<b>300368.2</b>	Intelligent Systems
<b>300447.2</b>	Computer Forensics Workshop
<b>300507.2</b>	Extended Computing Project 1
<b>300508.2</b>	Extended Computing Project 2
<b>300575.2</b>	Networked Systems Design

### Majors

The majors listed below were designed specifically for this course and are recommended for Bachelor of Computer Science students. Other majors, from the School of Computing and Mathematics or any other School may also be selected but may require more than the standard six semesters to complete depending on their affinity with this course.

<b>M31015V2.1</b>	Computer Forensics
<b>M3043.1</b>	Systems Programming
<b>M3044.1</b>	Networked Systems

### Sub-major elective spaces

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

### Bachelor of Computer Science (Advanced)

#### 3634.2

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year in this course was 2012 or later.

Students in the Bachelor of Computer Science (Advanced) will follow the study program set out for 3506 Bachelor of Computer Science. Each student will have an Academic Mentor and will participate in additional compulsory activities including research projects. To maintain their enrolment in the Bachelor of Computer Science (Advanced) students must maintain an overall above 5 Grade Point

Average (GPA), otherwise they will be transferred to the standard 3506 Bachelor of Computer Science course. At enrolment students will be required to sign a declaration acknowledging the requirement to maintain a GPA greater than 5.0.

For more information refer to the entry for 3506 Bachelor of Computer Science.

### Study Mode

Three years full-time.

### Location

Campus	Attendance	Mode
Penrith Campus	Full Time	Internal

### Accreditation

The Bachelor of Computer Science currently is accredited with the Australian Computer Society (ACS) at Professional Level.

### Admission

Assumed knowledge required: HSC Mathematics plus any two units of English (or equivalent). Recommended studies: Mathematics (extension 1).

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

### Special Requirements

Students must maintain a grade point average (GPA) of above 5.0 to remain in the course; those who do not maintain this average will be transferred to the Bachelor of Computer Science. At enrolment students will be required to sign a declaration acknowledging the requirement to maintain a GPA greater than 5.0.

### Course Structure

In addition to the units outlined in the course structure for 3506 Bachelor of Computer Science, students in the advanced program must also complete the following three units.

Students must enrol in both 1H and 2H sessions.

#### Year 1

##### 1H session

**300586.2** Advanced Computer Science Activities 1

##### 2H session

**300586.2** Advanced Computer Science Activities 1

#### Year 2

##### 1H session

**300587.2** Advanced Computer Science Activities 2

##### 2H session

**300587.2** Advanced Computer Science Activities 2

#### Year 3

##### 1H session

**300588.2** Advanced Computer Science Activities 3

##### 2H session

**300588.2** Advanced Computer Science Activities 3

## Bachelor of Computer Science (Honours)

### 3614.1

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year in this course was 2004 or later.

The Honours program encourages independence in learning and research; further develops academic ability, provides the opportunity to pursue undergraduate studies to a more advanced level, deepen intellectual understanding in the major field of study and develop research skills. Honours is a recognised point of entry into postgraduate research studies at PhD and Masters levels. If a career in industry is sought, Honours enables study to a more advanced level with a higher qualification. The course has the opportunity for direct commercial and industrial involvement with a diverse range of organisations through the provision and joint supervision of research projects.

### Study Mode

One year full-time or two years part-time.

### Location

Campus	Attendance	Mode
Campbelltown Campus	Full Time	Internal
Campbelltown Campus	Part Time	Internal
Parramatta Campus	Full Time	Internal
Parramatta Campus	Part Time	Internal
Penrith Campus	Full Time	Internal

Campus	Attendance	Mode
Penrith Campus	Part Time	Internal

## Accreditation

Professional accreditation by the Australian Computer Society (ACS) may be available, depending on a student's undergraduate degree. The Bachelor of Computer Science currently is accredited with the Australian Computer Society (ACS) at Professional Level.

## Course Structure

Qualification for this award requires the successful completion of 80 credit points including the units listed below.

The award is a year long program that will be divided into three main components: Computing Research Process and Practice (10 credit points), Computing Honours Seminar Program (10 credit points) and the Computing Honours Thesis (60 credit points).

Students must enrol in 300364 Computing Honours Seminar Program and 300363 Computing Honours Thesis in both Autumn and Spring sessions.

## Full-time

### Year 1

#### Autumn session

<b>300365.1</b>	Computing Research Process and Practice
<b>300364.3</b>	Computing Honours Seminar Program
<b>300363.3</b>	Computing Honours Thesis

#### Spring session

<b>300364.3</b>	Computing Honours Seminar Program
<b>300363.3</b>	Computing Honours Thesis

## Part-time

### Year 1

#### Autumn session

<b>300365.1</b>	Computing Research Process and Practice
<b>300363.3</b>	Computing Honours Thesis

#### Spring session

<b>300364.3</b>	Computing Honours Seminar Program
<b>300363.3</b>	Computing Honours Thesis

### Year 2

#### Autumn session

<b>300364.3</b>	Computing Honours Seminar Program
<b>300363.3</b>	Computing Honours Thesis

#### Spring session

<b>300363.3</b>	Computing Honours Thesis
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## Bachelor of Computing

### 3633.2

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year in this course was 2009 or later.

The Bachelor of Computing is a professional Information Communication Technology course that provides graduates with a skills and knowledge base in the IS/IT areas of ICT and the ability to apply IS/IT solutions to a wide area of ICT. It allows students to develop skills in program design, systems analysis, design and security, data analysis and modelling, networks, web-design and systems planning.

This degree develops the abilities to design, develop, deploy and manage a spectrum of ICT systems.

As an ICT specialist in the ICT world, these attributes enable graduates to work in software development companies, networking companies, banking companies, IT consulting companies, the health care industry and many other IS and business related roles.

The Bachelor of Computing course is a three year ICT course being accredited by the Australian Computer Society. The Key Program in Information Systems focuses on computing and information technology in the context of business. Majors and sub-majors may be chosen from a range of disciplines, subject to the approval of Head of Program and subject to the number of elective units available in the Key Program. Accreditation at Professional level will be sought with the Australian Computer Society.

## Study Mode

Three years full-time.

## Location

Campus	Attendance	Mode
Parramatta Campus	Full Time	Internal

## Accreditation

The Bachelor of Computing currently is accredited with the Australian Computer Society (ACS) at Professional Level.

## Admission

Assumed knowledge required: HSC Mathematics and any two units of HSC English.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English

proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

### Course Structure

Qualification for this award requires the successful completion of 240 credit points which include the units listed in the recommended sequences below.

Non-recent school leavers who have not studied mathematics, or those students who have completed HSC General Mathematics, or some students who have undertaken HSC Mathematics but have only achieved bands 2 or 3 may benefit from taking the following unit as an elective:

**300691.2** Mathematical Reasoning

Please seek further advice from the Head of Program.

### Bachelor of Computing (Information Systems)

**KT3000.1** Information Systems

#### Electives for majors and sub-majors

Electives for majors and sub-majors may not be available on all campuses and may create timetable clashes (given the range of possible progression options). Where an elective cannot be taken, the Head of Program may approve equivalent units where there is considerable overlap. Such units might be found within the School at UWS or cross-institutional study.

Please note: Majors and sub-majors are optional.

### Majors

<b>M3001.1</b>	Advanced Programming
<b>M3000.1</b>	Computer Systems
<b>M3002.1</b>	Information Technology
<b>M3004.1</b>	Health Informatics
<b>M3003.1</b>	Web Systems Development
<b>M3023.1</b>	Computational Decision Making
<b>M3005.1</b>	Entertainment Computing
<b>M3024.1</b>	Knowledge Discovery and Data Mining
<b>M3021.1</b>	Mathematics
<b>M3022.1</b>	Statistics

### Sub-majors

<b>SM3005.1</b>	Applied Mathematics
<b>SM3000.1</b>	Computer Systems
<b>SM3004.1</b>	Formal Systems
<b>SM3001.1</b>	Systems Administration
<b>SM3003.1</b>	Systems Programming
<b>SM3002.1</b>	Systems Security
<b>SM3006.1</b>	Web Application Development (for Computing Students)
<b>SM3007.1</b>	Web Application Development (for Non-Computing Students)
<b>SM3008.1</b>	Networking
<b>SM3010.1</b>	Health Information Applications
<b>SM3009.1</b>	Health Information Management
<b>SM3027.1</b>	Computational Decision Making

**SM3011.1**  
**SM3028.1**

Entertainment Computing  
Knowledge Discovery and Data Mining  
Mathematics  
Statistics

**SM3025.1**  
**SM3026.1**

### Sub-major elective spaces

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

### Bachelor of Computing (Honours)

#### 3588.1

The Honours program encourages independence in learning and research; further develops academic ability, provides the opportunity to pursue undergraduate studies to a more advanced level, deepen intellectual understanding in the major field of study and develop research skills. Honours is a recognised point of entry into postgraduate research studies at PhD and Masters levels. If a career in industry is sought, Honours enables study to a more advanced level with a higher qualification. The course has the opportunity for direct commercial and industrial involvement with a diverse range of organisations through the provision and joint supervision of research projects.

#### Study Mode

One year full-time or two years part-time.

#### Location

Campus	Attendance	Mode
Bankstown Campus	Full Time	Internal
Bankstown Campus	Part Time	Internal
Campbelltown Campus	Full Time	Internal
Campbelltown Campus	Part Time	Internal
Parramatta Campus	Full Time	Internal
Parramatta Campus	Part Time	Internal
Penrith Campus	Full Time	Internal
Penrith Campus	Part Time	Internal

#### Accreditation

Professional accreditation by the Australian Computer Society (ACS) may be available, depending on a student's undergraduate degree. The Bachelor of Computing currently is accredited with the Australian Computer Society (ACS) at Professional Level.

#### Course Structure

Qualification for this award requires the successful completion of 80 credit points as per the recommended sequence below.

The award is a year long program that will be divided into three main components: Computing Research Process and Practice (10 credit points), Computing Honours Seminar Program (10 credit points) and the Computing Honours Thesis (60 credit points).

Students must enrol in 300364 Computing Honours Seminar Program and 300363 Computing Honours Thesis in both Autumn and Spring sessions.

## Recommended Sequence

### Full-time

#### Year 1

##### Autumn session

<b>300365.1</b>	Computing Research Process and Practice
<b>300364.3</b>	Computing Honours Seminar Program
<b>300363.3</b>	Computing Honours Thesis

##### Spring session

<b>300364.3</b>	Computing Honours Seminar Program
<b>300363.3</b>	Computing Honours Thesis

### Part-time

#### Year 1

##### Autumn session

<b>300365.1</b>	Computing Research Process and Practice
<b>300363.3</b>	Computing Honours Thesis

##### Spring session

<b>300364.3</b>	Computing Honours Seminar Program
<b>300363.3</b>	Computing Honours Thesis

#### Year 2

##### Autumn session

<b>300364.3</b>	Computing Honours Seminar Program
<b>300363.3</b>	Computing Honours Thesis

##### Spring session

<b>300363.3</b>	Computing Honours Thesis
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## Bachelor of Construction Management

### 2607.4

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year in this course is 2010 or later.

This course is aimed at providing the skills and abilities necessary to perform competently at a professional level in the building industry, in one or more of the following roles: Construction Managers, Project Managers, Building Supervisors, Estimators, Quantity Surveyors and Building Researchers.

Students will develop specialised skills in construction management. The Construction Management program is widely recognised for delivering the full suite of theoretical, practical, and hands-on experience in the area of construction management. It offers a sophisticated, purpose-built laboratory complex where students will conduct experiments across the range of building sciences, including acoustics, heat flow through a building, corrosion of materials, concrete testing, and much more. Additionally, students will be required to undertake a total of 1,200 hours approved practical experience during the course.

There are a number of opportunities during the course for obtaining a cadetship in the building industry in areas including building surveying, construction economics, and construction management.

### Study Mode

Four years full-time or eight years part-time.

### Location

Campus	Attendance	Mode
Penrith Campus	Full Time	Internal

### Advanced Standing

Advanced standing is available to students who have completed the following courses at TAFE. Diploma of Building Studies, Diploma of Quantity Surveying, Diploma of Building Surveying, Diploma of Civil Engineering, Diploma of Structural Engineering, Diploma of Architectural Technology or relevant Diploma.

### Accreditation

Graduates are eligible for Probationer membership with advancement to Associate membership of the Australian Institute of Quantity Surveyors (AIQS) after Assessment of Professional Competence.

### Admission

Assumed knowledge required: HSC Mathematics, Physics and English.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.



## Course Structure

Qualification for this award requires the successful completion of 320 credit points which include units in the recommended sequence below. Electives within the sequence may be used towards obtaining an approved submajor for this award.

## Recommended Sequence

### Full-time

#### Year 1

##### Autumn session

<b>300706.2</b>	Building 1
<b>300729.2</b>	Graphic Communication and Design
<b>300674.2</b>	Engineering, Design and Construction Practice
<b>300016.2</b>	Design Science

##### Spring session

<b>300707.2</b>	Building 2
<b>200184.3</b>	Introduction to Business Law
<b>200101.3</b>	Accounting Information for Managers
<b>MG102A.3</b>	Management Foundations

#### Year 2

##### Autumn session

<b>300720.2</b>	Construction Technology 1 (Civil)
<b>200486.2</b>	Quantity Surveying 1
<b>200472.3</b>	Material Science in Construction
<b>300723.2</b>	Development Control

##### Spring session

<b>300721.2</b>	Construction Technology 2 (Substructure)
<b>200468.2</b>	Estimating 1
<b>200482.2</b>	Construction in Practice 1

Elective 1

#### Year 3

##### Autumn session

<b>200502.3</b>	Construction Technology 3 (Concrete Construction)
<b>200485.2</b>	Decision Making for Construction Professionals
<b>300727.2</b>	Project Management
<b>300728.2</b>	Construction Planning

##### Spring session

<b>200470.4</b>	Construction Technology 4 (Steel Construction)
<b>300722.2</b>	Building Regulations Studies
<b>300053.3</b>	Professional Practice
<b>200292.2</b>	Building Law

## Non-Honours Stream

### Year 4

#### Autumn session

<b>200471.3</b>	Construction Technology 5 (Envelope)
<b>200504.2</b>	Construction Economics
<b>300536.2</b>	Major Project in Construction

Elective 3

#### Spring session

<b>300725.2</b>	Construction Technology 6 (Services)
<b>200484.3</b>	Construction in Practice 3

Elective 2

Elective 4

## Honours Stream

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

### Year 4

#### Autumn session

<b>200471.3</b>	Construction Technology 5 (Envelope)
<b>200504.2</b>	Construction Economics
<b>300675.2</b>	Honours Thesis

#### Spring session

<b>300725.2</b>	Construction Technology 6 (Services)
<b>200484.3</b>	Construction in Practice 3
<b>300675.2</b>	Honours Thesis

## Sub-major in Construction Economics

<b>SM3029.1</b>	Construction Economics
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**To graduate with a sub-major in Construction Economics students must successfully complete the following specialist units:**

<b>200503.2</b>	Construction Information Systems
<b>200487.3</b>	Quantity Surveying 2
<b>300748.2</b>	Quality and Value Management
<b>300726.2</b>	Estimating 2

All students enrolled in Bachelor of Construction Management must obtain, through their own initiative, 1200 hours of construction management related employment prior to undertaking their final year of study.

To facilitate the recording of such experience it will be necessary to enrol in 300724 Industry Based Learning and have an Industry Experience Diary signed off by the Course Coordinator.

<b>300724.2</b>	Industry Based Learning
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## Sub-major elective spaces

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-

majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

## Bachelor of Design and Technology

### 3502.5

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year in this course was Spring 2010 or later.

This course prepares students for a career in industrial design and/or industrial graphics. This is achieved by providing a sound knowledge of units in a broad range of design disciplines, including design methodology, design innovation, product design, ergonomics, manufacturing technology and design, aesthetics, management 2D and 3D CAD. Students interested in a teaching career in Design and Technology may take the end-on Bachelor of Teaching degree or Graduate diploma in Education after completing their Design and Technology degree.

### Study Mode

Three years full-time. Combinations of full-time and part-time study or all part-time study are also permitted under the normal program.

### Location

Campus	Attendance	Mode
Penrith Campus	Full Time	Internal

### Advanced Standing

Advanced Standing will be assessed in accordance with UWS policy.

### Accreditation

Graduates are eligible for membership of the Design Institute of Australia (DIA).

### Admission

There are no specific subject prerequisites for entry into the course. Preferably, students should have successfully completed the HSC at the 2U level or better in English and at least two of the following units: Design & Technology, Arts, Physics, and Mathematics. Alternative entry: Certificate, Associate Diploma or Advanced Diploma from TAFE or another recognized teaching institution or equivalent in the discipline area. In some cases, professional experience will be counted towards alternative entry.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying

directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

### Course Structure

Qualification for this award requires the successful completion of 240 credit points which include the units listed in the recommended sequence below.

To be eligible to graduate from this course, students are required to complete a sub-major. Refer to the 'note' after the sub-major listing, for further details.

### Recommended Sequence

#### Full-time

##### Year 1

##### Autumn session

<b>300674.2</b>	Engineering, Design and Construction Practice
<b>300016.2</b>	Design Science
<b>300776.2</b>	Applied Ergonomics
<b>200191.4</b>	Fundamentals of Mathematics

##### Spring session

<b>300462.2</b>	Engineering and Design Concepts
<b>300302.2</b>	Industrial Graphics 1: Presentation
<b>300304.3</b>	Sustainable Design: Materials Technology
<b>200083.2</b>	Marketing Principles

##### Year 2

##### Autumn session

<b>300305.3</b>	Design Studio 1: Themes and Variations
<b>300309.3</b>	Sustainable Design: Life Cycle Analysis
<b>300282.2</b>	Industrial Graphics 2: Transition

Choose one of

One sub-major alternate unit

Or one elective

##### Spring session

<b>300308.3</b>	Design Studio 2: The Design Proposal
<b>300306.3</b>	Sustainable Design: Sustainable Futures
<b>300310.3</b>	Industrial Graphics 3: 3D Solids

Choose one of

One sub-major alternate unit

Or one elective

**Year 3****Autumn session**

- 300311.3** Design Studio 3: Product Realisation  
**300014.3** Design Management 3: Organisational Skills for Designers

Choose one of  
 Two sub-major alternate units  
 Or two electives

**Spring session**

- 300313.3** Design Studio 4: Simulate to Innovate  
**300314.2** Designed Inquiry

Choose one of  
 Two sub-major alternate units  
 Or two electives

**Industrial Experience**

- 300775.2** Industrial Experience

**Majors**

There are three Majors available, composed of units from the program, however these are not compulsory.

- M3503IDM.1** Innovation Design Management  
**M3503IIG2.1** Interactive Industrial Graphics  
**M3503INTDM.1** International Design Management

**Sub-majors**

There are three sub-majors, composed of units from the program.

- S3502DM.1** Design Management  
**S3502IG.1** Industrial Graphics  
**S3502SD.1** Sustainable Design

Note: In addition to the sub-major streams/electives offered from within Industrial Design (as listed above) students may choose other sub-major streams/electives within the School of Engineering and Industrial Design or the University of Western Sydney or other universities (as cross institutional studies).

**Sub-major elective spaces**

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

**Bachelor of Engineering****3621.6**

Students should follow the course structure for the course version relevant to the year they commenced. This version

applies to students whose commencement year in this course is 2012 or later.

This course has two intakes - Start year (Autumn) and Mid year (Spring). Students will need to check the entry relevant to their intake

The Bachelor of Engineering course is a four year course. It has a common first year program for all engineering disciplines and it also shares two units with the Bachelor of Industrial Design and three units with the Bachelor of Construction Management, exposing students to a wide range of experiences in the first year. Students have the opportunity to focus on an area of speciality by undertaking a key program in the disciplines of Civil, Computer, Construction, Electrical, Environmental, Mechanical, Robotics & Mechatronics, and Telecommunications. Sub-majors can be chosen from a range that will compliment their specialist discipline. Students also have an opportunity to broaden their experience by choosing sub-majors from other disciplines or alternately outside the School. An honours stream is offered, based on meritorious performance over the first three years of the course.

**Study Mode**

Four years of full-time study or part-time equivalent.

**Location**

Campus	Attendance	Mode
Penrith Campus	Full Time	Internal
Penrith Campus	Part Time	Internal

**Accreditation**

The course has been designed to meet the requirements of Engineers Australia. Six Key Programs, namely, Civil, Computer, Electrical, Environmental, Robotics & Mechatronic and Telecommunications, have received full accreditation from Engineers Australia at the level of Professional Engineer. Provisional accreditation for the Construction Engineering Key Program was granted in 2011. Provisional accreditation for the Mechanical Engineering Key Program is being sought.

**Admission**

Assumed knowledge required: Mathematics at Band 5 or higher, any two units of Science and any two units of English.

Recommended studies: Physics and HSC Mathematics Extension 1 or HSC Mathematics Extension 2.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English

proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

## Course Structure

### Academic Course Advisor

Dr Fidelis Mashiri is the Academic Course Advisor for Key Programs in Civil, Construction and Environmental

Dr Qi Cheng is the Academic Course Advisor for Key Programs in Electrical, Computer and Telecommunications.

Dr Jonathan Vincent is the Academic Course Advisor for Key Programs in Robotics & Mechatronics and Mechanical

### Recommended Sequence

Qualification for this award requires the successful completion of 320 credit points which include the units listed in the recommended sequences below.

### Full-time - Autumn intake

#### Year 1

##### Autumn session

<a href="#">200237.3</a>	Mathematics for Engineers 1
<a href="#">300464.2</a>	Physics and Materials
<a href="#">300027.2</a>	Engineering Computing
<a href="#">300674.2</a>	Engineering, Design and Construction Practice

##### Spring session

<a href="#">200238.2</a>	Mathematics for Engineers 2
<a href="#">300463.2</a>	Fundamentals of Mechanics
<a href="#">300021.2</a>	Electrical Fundamentals
<a href="#">300462.2</a>	Engineering and Design Concepts

#### Year 2 - Year 4

Students must then select one of the following key programs:

<a href="#">KT3043.1</a>	Civil
<a href="#">KT3046.1</a>	Computer
<a href="#">KT3026.1</a>	Construction
<a href="#">KT3088.1</a>	Electrical
<a href="#">KT3089.1</a>	Environmental
<a href="#">KT3042.1</a>	Mechanical
<a href="#">KT3045.1</a>	Robotics and Mechatronics
<a href="#">KT3034.1</a>	Telecommunications

### Recommended Sequence

#### Full-time - Spring Intake

The sequence of units for Year 1 Spring Intake is different for each Key Program. Please see details under each Key Program link above.

### Sub-majors

The following sub-majors are available to all UWS students apart from students studying the same Key Program discipline. However, some of the units in the sub-majors

may need prerequisites, which could restrict their selection to Engineering students. Please seek advice Course Advisor Academic.

<a href="#">SM3621CIVE.1</a>	Civil Engineering
<a href="#">SM3032.1</a>	Computer Engineering
<a href="#">SM3033.1</a>	Construction
<a href="#">SM3621ECOE.1</a>	Ecological Engineering
<a href="#">SM3034.1</a>	Electrical Engineering
<a href="#">SM3035.1</a>	Environmental Engineering
<a href="#">SM3621R&amp;M.1</a>	Robotics and Mechatronics
<a href="#">SM3621SOE.1</a>	Soil Engineering
<a href="#">SM3621STRE.1</a>	Structural Engineering
<a href="#">SM3621WATE.1</a>	Water Engineering
<a href="#">SM3036.1</a>	Wireless Engineering

### Sub-major elective spaces

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

## Bachelor of Engineering (Advanced)

### 3666.2

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year in this course is 2012 or later.

The Bachelor of Engineering (Advanced) course is a four year course and is designed for high achieving students to undertake advanced engineering topics and gain substantial research experience. This course is in parallel with the Bachelor of Engineering course which has a common first year program for all engineering disciplines and shares two units with the Bachelor of Industrial Design and three unit with Bachelor of Construction Management, exposing students to a wide range of experiences in the first year. Students have the opportunity to focus on an area of speciality by undertaking a key program in the disciplines of Civil, Computer, Construction, Electrical, Environmental, Mechanical, Robotics & Mechatronics, and Telecommunications. Students in this course will be challenged with special projects and assignments to realise their full potential. Students need to maintain a GPA (Grade Point Average) of 5.5 or above in this course and will carry out an honours project of 60 credit points in their fourth year of study.

### Study Mode

4 years full-time study or part-time equivalent.

### Location

Campus	Attendance	Mode
Penrith Campus	Full Time	Internal
Penrith Campus	Part Time	Internal

## Accreditation

The course has been designed to meet the requirements of Engineers Australia. Six Key Programs, namely, Civil, Computer, Electrical, Environmental, Robotics & Mechatronic and Telecommunications, have received full accreditation from Engineers Australia at the level of Professional Engineer. Provisional accreditation for the Construction Engineering Key Program was granted in 2011. Provisional accreditation for the Mechanical Engineering Key Program is being sought

## Admission

Assumed knowledge required: HSC Mathematics Extension 1, Physics and any two units of English.

Recommended studies: HSC Mathematics Extension 2.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

## Course Structure

### Academic Course Advisor

Dr Fidelis Mashiri is the Academic Course Advisor for Key Programs in Civil, Construction and Environmental

Dr Qi Cheng is the Academic Course Advisor for Key Programs in Electrical, Computer and Telecommunications.

Dr Jonathan Vincent is the Academic Course Advisor for Key Programs in Robotics & Mechatronics and Mechanical

### Recommended Sequence

Qualification for this award requires the successful completion of 320 credit points which include the units listed in the recommended sequence below.

### Full-time

#### Year 1

#### Autumn session

<b>200237.3</b>	Mathematics for Engineers 1
<b>300464.2</b>	Physics and Materials
<b>300027.2</b>	Engineering Computing
<b>300674.2</b>	Engineering, Design and Construction Practice

#### Spring session

<b>200238.2</b>	Mathematics for Engineers 2
<b>300463.2</b>	Fundamentals of Mechanics
<b>300021.2</b>	Electrical Fundamentals
<b>300462.2</b>	Engineering and Design Concepts

#### Year 2 - Year 4

Students must then select one of the following key programs

<b>KT3048.1</b>	Civil
<b>KT3051.1</b>	Computer
<b>KT3037.1</b>	Construction
<b>KT3038.1</b>	Electrical
<b>KT3087.1</b>	Environmental
<b>KT3047.1</b>	Mechanical
<b>KT3050.1</b>	Robotics and Mechatronics
<b>KT3041.1</b>	Telecommunications

## Bachelor of Engineering Science

### 3664.1

This course has two intakes - Start year (Autumn) and Mid year (Spring). Students will need to check the entry relevant to their intake.

The Bachelor of Engineering Science course is offered as an entry program. It is also a three year exit program for the following courses: 3621 Bachelor of Engineering, 3666 Bachelor of Engineering (Advanced), 3665 Bachelor of Engineering/Master of Engineering Science and 3667 Bachelor of Engineering (Advanced)/Master of Engineering Science. The course is identical to the first three years of the Bachelor of Engineering course with the common first year for all engineering disciplines and it also shares two units with the Bachelor of Industrial Design and two units with the Bachelor of Construction Management, exposing students to a wide range of experiences. Students have the opportunity to focus on an area of speciality by undertaking the following key programs: Civil, Computer, Construction, Electrical, Environmental, Mechanical, Robotics & Mechatronics, and Telecommunications.

### Study Mode

Three years full time or part-time equivalent.

### Location

Campus	Attendance	Mode
Penrith Campus	Full Time	Internal
Penrith Campus	Part Time	Internal

### Accreditation

Formal accreditation for the Bachelor of Engineering Science course at the Level of Engineering Technologist will be sought from Engineers Australia in 2012. It is expected that the course will be accredited by Engineers Australia from 2013.

## Admission

Assumed knowledge required: Mathematics at Band 4 or higher, any two units of science and any two units of English.

Recommended studies: Physics and HSC Mathematics Extension 1 or HSC Mathematics Extension 2.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

## Special Requirements

Background knowledge of calculus and physics is desirable.

## Course Structure

### Academic Course Advisor

Dr Fidelis Mashiri is the Academic Course Advisor for Key Programs in Civil, Construction and Environmental

Dr Qi Cheng is the Academic Course Advisor for Key Programs in Electrical, Computer and Telecommunications.

Dr Jonathan Vincent is the Academic Course Advisor for Key Programs in Robotics & Mechatronics and Mechanical

### Recommended Sequence

Qualification for this award requires the successful completion of 240 credit points which include the units listed in the recommended sequences below.

### Full-time - Autumn Intake

#### Year 1

##### Autumn session

**300743.2** Mathematics for Engineers Preliminary

or Elective\*

**300464.2** Physics and Materials  
**300027.2** Engineering Computing  
**300674.2** Engineering, Design and Construction Practice

##### Spring session

**200237.3** Mathematics for Engineers 1

**300463.2** Fundamentals of Mechanics  
**300021.2** Electrical Fundamentals  
**300462.2** Engineering and Design Concepts

\* **Students without Mathematics at Band 5 or higher should complete 300743 Mathematics for Engineers Preliminary as an elective.**

### Year 2 - Year 3

Students must then select one of the following key programs:

**KT3075.1** Civil  
**KT3076.1** Computer  
**KT3077.1** Construction  
**KT3078.1** Electrical  
**KT3079.1** Environmental  
**KT3080.1** Mechanical  
**KT3081.1** Robotics and Mechatronics  
**KT3082.1** Telecommunications

## Recommended Sequence

### Full-time - Spring Intake

The sequence of units for Year 1 Spring Intake is different for each Key Program. Please see details under each Key Program link above.

## Bachelor of Housing

### 3635.4

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year in this course is 2010 or later.

The Bachelor of Housing will prepare students to become managers in the private housing industry. They learn how to plan, finance and construct large scale housing projects.

The Degree provides for specialised skills for working in the housing industry with a strong emphasis on the design, construction, maintenance, and economics of dwellings for human habitation. The Bachelor of Housing degree gives students the opportunity to use the university's state-of-the-art, purpose-built laboratory complex to conduct experiments across the range of building sciences including acoustics, heat flow through a building, corrosion of materials, concrete testing, and much more.

This course is aimed at providing the skills and abilities necessary to perform competently at a professional level in the building industry, in one or more of the following roles: property developer; housing project manager site supervisor; building surveyor; estimator; facilities manager; property manager; building consultant.

### Study Mode

Three years full-time.

### Location

Campus	Attendance	Mode
Penrith Campus	Full Time	Internal

## Advanced Standing

Appropriately qualified TAFE applicants may be given up to 80 credit points worth of specified advanced Standing.

## Admission

Assumed knowledge required: Normal UWS UAI score with HSC 2 unit Mathematics, Physics and English for entry into first year.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

## Course Structure

Qualification for this award requires the successful completion of 240 credit points which include the units listed in the recommended sequence below. Students should have no more than 100 credit points of Level 1 units and no fewer than 60 credit points of Level 3 Units.

In some instances due to resource and demand considerations, there may be a need to rearrange the pattern set down below.

Electives within the sequence may be used towards obtaining an approved major or sub-major for this award.

## Recommended Sequence

### Full-time

#### Year 1

##### Autumn session

<b>300706.2</b>	Building 1
<b>300729.2</b>	Graphic Communication and Design
<b>300674.2</b>	Engineering, Design and Construction Practice
<b>300016.2</b>	Design Science

##### Spring session

<b>200184.3</b>	Introduction to Business Law
<b>200101.3</b>	Accounting Information for Managers
<b>300707.2</b>	Building 2
<b>MG102A.3</b>	Management Foundations

#### Year 2

##### Autumn session

<b>300720.2</b>	Construction Technology 1 (Civil)
<b>200486.2</b>	Quantity Surveying 1
<b>200472.3</b>	Material Science in Construction
<b>300723.2</b>	Development Control

##### Spring session

<b>300721.2</b>	Construction Technology 2 (Substructure)
<b>200468.2</b>	Estimating 1
<b>200482.2</b>	Construction in Practice 1

And Alternate unit 1 or elective

#### Year 3

##### Autumn session

<b>200485.2</b>	Decision Making for Construction Professionals
<b>300727.2</b>	Project Management
<b>300728.2</b>	Construction Planning

And Alternate unit 2 or elective

##### Spring session

<b>300722.2</b>	Building Regulations Studies
<b>300053.3</b>	Professional Practice
<b>200292.2</b>	Building Law

And Alternate unit 3 or elective

### Please note:

Students may choose electives from any course at UWS including the following alternate units

#### Alternate

Choose one of the following:

<b>200503.2</b>	Construction Information Systems
<b>200502.3</b>	Construction Technology 3 (Concrete Construction)

#### Alternate

<b>300748.2</b>	Quality and Value Management
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#### Alternate

Choose one of the following:

<b>200487.3</b>	Quantity Surveying 2
<b>200470.4</b>	Construction Technology 4 (Steel Construction)

Bachelor of Housing students wishing to continue on to gain Bachelor of Construction Management would be required to undertake the following electives: 200502 - Construction Technology 3 and 200470 - Construction Technology 4.

## Bachelor of Industrial Design

### 3503.5

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year in this course was Spring 2010 or later.

The industrial design program prepares students to be flexible and innovative, with the emphasis placed on design, and its place in and effect on society and people. The Bachelor of Industrial Design program takes account of the rapid transformation of communication and industrial technologies, and recognizes the need for designers to resolve increasingly complex issues. It provides students with the knowledge and skills to enable them to respond with flexibility to the challenges of industrial design.

#### Study Mode

Four years full-time. Reduced loads are available with consultation during Years 1 to 3 of the program.

#### Location

Campus	Attendance	Mode
Penrith Campus	Full Time	Internal

#### Advanced Standing

Where tertiary studies have been undertaken previously, credit transfer may be approved, reducing the overall study time.

#### Accreditation

Graduates are eligible for membership of the Design Institute of Australia (DIA).

#### Admission

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

#### Course Structure

Qualification for this award requires the successful completion of 320 credit points which include the units

listed in the recommended sequence below. To be eligible to graduate from this course, students are required to complete a sub-major. Refer to the 'note' after the sub-major listing, for further details.

#### Recommended Sequence

##### Full-time

##### Year 1

##### Autumn session

<b>300674.2</b>	Engineering, Design and Construction Practice
<b>300016.2</b>	Design Science
<b>300776.2</b>	Applied Ergonomics
<b>200191.4</b>	Fundamentals of Mathematics

##### Spring session

<b>300462.2</b>	Engineering and Design Concepts
<b>300302.2</b>	Industrial Graphics 1: Presentation
<b>300304.3</b>	Sustainable Design: Materials Technology
<b>200083.2</b>	Marketing Principles

##### Year 2

##### Autumn session

<b>300305.3</b>	Design Studio 1: Themes and Variations
<b>300309.3</b>	Sustainable Design: Life Cycle Analysis
<b>300282.2</b>	Industrial Graphics 2: Transition

And one sub-major alternate unit or one elective

##### Spring session

<b>300308.3</b>	Design Studio 2: The Design Proposal
<b>300306.3</b>	Sustainable Design: Sustainable Futures
<b>300310.3</b>	Industrial Graphics 3: 3D Solids

And one sub-major alternate unit or one elective

##### Year 3

##### Autumn session

<b>300311.3</b>	Design Studio 3: Product Realisation
<b>300014.3</b>	Design Management 3: Organisational Skills for Designers

And two sub-major alternate units or two electives

##### Spring session

<b>300313.3</b>	Design Studio 4: Simulate to Innovate
<b>300314.2</b>	Designed Inquiry

And two sub-major alternate units or two electives

Students enrolled in the 3503 - Bachelor of Industrial Design may exit the course with the 3502 - Bachelor of Design and Technology at the completion of Year 3.

##### Year 4

#### Honours Stream

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.



**Autumn session****300773.2** Industrial Design Project (Commencement)

Co-requisite: One alternate unit - selected based on final year theme/issue in consultation with the Unit Coordinator.

**Spring session****300774.2** Industrial Design Project (Completion)**Industrial Experience****300775.2** Industrial Experience**Year 4****Coursework Stream****Autumn session****300459.2** Major Project Commencement

Co-requisite: One alternate unit - selected based on final year theme/issue in consultation with the Unit Coordinator.

Choose one of

**300012.3** Design Management 1: Product Design Audit  
**300312.3** Industrial Graphics 4: Surface**Spring session****300460.2** Major Project Completion

Choose one of

**300013.3** Design Management 2: Corporate Image and Identity  
**300015.3** Design Management 4: Design Process  
**300315.3** Industrial Graphics 5: Integrated  
**300735.2** Automated Manufacturing**Industrial Experience****300775.2** Industrial Experience**Majors****M3503IDM.1** Innovation Design Management  
**M3503IIG2.1** Interactive Industrial Graphics  
**M3503INTDM.1** International Design Management**Sub-majors****S3502DM.1** Design Management  
**S3502IG.1** Industrial Graphics  
**S3502SD.1** Sustainable Design

Note: In addition to the sub-major streams/electives offered from within Industrial Design (as listed above) students may choose other sub-major streams/electives within the School of Computing, Engineering and Mathematics at the University of Western Sydney or other universities (as cross-institutional studies).

**Sub-major elective spaces**

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-

majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

**Bachelor of Information and Communications Technology****3639.1**

The Bachelor of Information and Communications Technology is a professional ICT course that provides graduates with a skills and knowledge base in networking and IT applications areas of ICT and the ability to apply practical solutions across ICT. It allows students to develop skills in application development, program design, systems analysis & design, networks, web-design, and the implementation of technology.

Their attributes can be conceptually grouped into the knowledge and skills necessary to:

- investigate - the ability to draw on a solid technological and software core of ICT knowledge and practice in analysing and developing applications;

The Bachelor of Information and Communications Technology is a three year ICT course being accredited by the Australian Computer Society. It provides a solid foundation in Networks, Databases, Systems Analysis & Design, Programming, Web Technologies, Project Management, Professional Communications and Operating Systems and associated Computer Security. It also covers the necessary mathematical and statistical skills as needed by an ICT practitioner. The foundation core provides a basis for electives, sub-majors or majors in further studies including the areas of networks, web, interactive technologies, Mathematics, Statistics, Computational Decision Making, Knowledge Discovery and Data Mining, and health informatics. Some of these majors and electives may be offered at particular campuses and subject to the approval of the Director, Academic Programs.

**Study Mode**

Three years full-time.

**Location**

Campus	Attendance	Mode
Campbelltown Campus	Full Time	Internal
Parramatta Campus	Full Time	Internal
Penrith Campus	Full Time	Internal

**Accreditation**

The Bachelor of Information and Communications Technology is currently accredited with the Australian Computer Society (ACS) at Professional level.

**Admission**

Assumed knowledge required: HSC Mathematics and any two units of HSC English.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

## Course Structure

Qualification for this award requires the successful completion of 240 credit points which include the units listed in the recommended sequence below.

## Recommended Sequence

### Full-time - Start Year Intake

#### Year 1

##### Autumn session

<b>300580.2</b>	Programming Fundamentals
<b>100483.2</b>	Principles of Professional Communication 1
<b>300585.2</b>	Systems Analysis and Design
<b>300700.5</b>	Statistical Decision Making

##### Spring session

<b>300565.2</b>	Computer Networking
<b>300144.4</b>	Object Oriented Analysis
<b>300104.4</b>	Database Design and Development

And one elective

#### Year 2

##### Autumn session

<b>300582.2</b>	Technologies for Web Applications
<b>300581.2</b>	Programming Techniques
<b>300095.4</b>	Computer Networks and Internets

And one elective

##### Spring session

<b>300583.2</b>	Web Systems Development
<b>300699.2</b>	Discrete Structures and Complexity

And two electives

#### Year 3

##### Autumn session

<b>300570.3</b>	Human-Computer Interaction
<b>300578.3</b>	Professional Development

**300698.3** Operating Systems Programming

And one elective

##### Spring session

**300579.3** Professional Experience

And three electives

### Full-Time Mid Year Intake

#### Spring session 1

<b>300565.2</b>	Computer Networking
<b>300144.4</b>	Object Oriented Analysis
<b>300104.4</b>	Database Design and Development
<b>300580.2</b>	Programming Fundamentals

#### Autumn session 2

<b>300582.2</b>	Technologies for Web Applications
<b>300585.2</b>	Systems Analysis and Design
<b>300700.5</b>	Statistical Decision Making

And one elective

#### Spring session 3

<b>300583.2</b>	Web Systems Development
<b>300699.2</b>	Discrete Structures and Complexity

And two electives

#### Autumn session 4

<b>300570.3</b>	Human-Computer Interaction
<b>300581.2</b>	Programming Techniques
<b>100483.2</b>	Principles of Professional Communication 1
<b>300095.4</b>	Computer Networks and Internets

#### Spring session 5

**300579.3** Professional Experience

And three electives

#### Autumn session 6

<b>300578.3</b>	Professional Development
<b>300698.3</b>	Operating Systems Programming

And two electives

### Electives for majors and sub-majors

Electives for majors and sub-majors may not be available on all campuses and may create timetable clashes (given the range of possible progression options). Where an elective cannot be taken, the Course Advisor may approve equivalent units where there is considerable overlap. Such units might be found within the School at UWS or cross-institutional study.

Please note: Majors and sub-majors are optional.

## Majors

<b>M3025.1</b>	Networking
<b>M3001.1</b>	Advanced Programming
<b>M3000.1</b>	Computer Systems
<b>M3002.1</b>	Information Technology
<b>M3004.1</b>	Health Informatics

<b>M3003.1</b>	Web Systems Development
<b>M3023.1</b>	Computational Decision Making
<b>M3005.1</b>	Entertainment Computing
<b>M3024.1</b>	Knowledge Discovery and Data Mining
<b>M3021.1</b>	Mathematics
<b>M3022.1</b>	Statistics

### Sub-majors

<b>SM3031.1</b>	IT Support
<b>SM3005.1</b>	Applied Mathematics
<b>SM3000.1</b>	Computer Systems
<b>SM3004.1</b>	Formal Systems
<b>SM3001.1</b>	Systems Administration
<b>SM3003.1</b>	Systems Programming
<b>SM3002.1</b>	Systems Security
<b>SM3006.1</b>	Web Application Development (for Computing Students)
<b>SM3007.1</b>	Web Application Development (for Non-Computing Students)
<b>SM3008.1</b>	Networking
<b>SM3010.1</b>	Health Information Applications
<b>SM3009.1</b>	Health Information Management
<b>SM3027.1</b>	Computational Decision Making
<b>SM3011.1</b>	Entertainment Computing
<b>SM3028.1</b>	Knowledge Discovery and Data Mining
<b>SM3025.1</b>	Mathematics
<b>SM3026.1</b>	Statistics

### Major and Sub-major elective spaces

Elective units may be used toward obtaining an additional approved major (80 credit points) or sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

## Bachelor of Information and Communications Technology/Bachelor of Arts

### 3654.1

This double degree program is designed in recognition of the globalizing nature of the information technology industry. In addition to providing a strong technical background in IT, the course also provide students the necessary knowledge in the areas of Bachelor of Arts in Global Studies Key Program, as well as the following majors: Asian Studies and International Relations; Religion, Anthropology and Philosophy; and submajors in Chinese and Japanese language, Asian Studies and International Relations; Religion, Anthropology and Philosophy; and Global Studies.

In the IT area, the program allows students to develop skills in application development, program design, systems analysis & design, networks, web-design, and the implementation of technology.

### Study Mode

Four years full-time.

### Location

Campus	Attendance	Mode
Parramatta Campus	Full Time	Internal

### Accreditation

The Bachelor of Information and Communications Technology is currently accredited with the Australian Computer Society (ACS) at Professional level.

### Admission

Assumed knowledge required: HSC Mathematics and any two units of HSC English.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

### Course Structure

Qualification for this award requires the successful completion of 320 credit points as specified in the structure below.

Students who complete this award will graduate with a Bachelor of Information and Communications Technology and a Bachelor of Arts.

The conceptual design of this BICT/BA double degree is as follows.

Years 1 to 3 - Students will complete 160cp of Bachelor of Information and Communications Technology units as listed in the course structure below.

In years 1 to 4 they will complete the 4 BA core units and 12 BA key program units from the following key programs in the Bachelor of Arts as offered on Parramatta campus only.

- Global Studies key program
- Humanities key program with the following majors only:
- Asian Studies and International Relations major and/or

Sub-majors are available in these BA key programs as follows.

- Asian Studies and International Relations
- Religion, Anthropology and Philosophy
- Global Studies
- Japanese
- Chinese

### Arts Units

For details of the relevant Arts units, refer to the current listing of Bachelor of Arts, course code 1604.

#### Year 1

##### Autumn session

<b>300580.2</b>	Programming Fundamentals
<b>100483.2</b>	Principles of Professional Communication 1
<b>300585.2</b>	Systems Analysis and Design
<b>300700.5</b>	Statistical Decision Making

##### Spring session

<b>300565.2</b>	Computer Networking
<b>300144.4</b>	Object Oriented Analysis
<b>300104.4</b>	Database Design and Development

Arts Core 1

#### Year 2

##### Autumn session

<b>300582.2</b>	Technologies for Web Applications
<b>300581.2</b>	Programming Techniques
<b>300095.4</b>	Computer Networks and Internets

Arts Core 2

##### Spring session

<b>300583.2</b>	Web Systems Development
<b>300699.2</b>	Discrete Structures and Complexity

Arts Core 3

Arts Key Program Unit 1

#### Year 3

##### Autumn session

<b>300570.3</b>	Human-Computer Interaction
<b>300578.3</b>	Professional Development
<b>300698.3</b>	Operating Systems Programming

Arts Core 4

##### Spring session

<b>300579.3</b>	Professional Experience
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Arts Key Program Unit 2

Arts Key Program Unit 3

Arts Key Program Unit 4

#### Year 4

##### Autumn session

Arts Key Program Unit 5  
Arts Key Program Unit 6  
Arts Key Program Unit 7  
Arts Key Program Unit 8

##### Spring session

Arts Key Program Unit 9  
Arts Key Program Unit 10  
Arts Key Program Unit 11  
Arts Key Program Unit 12

## Bachelor of Information and Communications Technology/Bachelor of Business and Commerce

### 3655.3

Students should follow the course structure for the course version relevant to the year they commenced. This course version applies to students who commenced study in this course in 2012 or later.

This double degree program targets the wide application of information technology in Business and Commerce. It provides students with a strong technical background in IT and Business and Commerce. It allows students to develop skills in application development, program design, systems analysis & design, networks, web-design, and the implementation of technology.

This degree combines information technology with one of seven Majors in:

#### Study Mode

Four years full-time.

#### Location

Campus	Attendance	Mode
Campbelltown Campus	Full Time	Internal
Parramatta Campus	Full Time	Internal

#### Accreditation

The Bachelor of Information and Communications Technology is currently accredited with the Australian Computer Society (ACS) at Professional level.

#### Admission

Eligibility for admission to the Bachelor of Information and Communications Technology/Bachelor of Business and Commerce is based on the following requirements:

Assumed knowledge required: HSC Mathematics and two units of HSC English.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

### Course Structure

Qualification for this award requires the successful completion of 320 credit points as per the structure below.

Students are eligible to graduate with a Bachelor of Information and Communications Technology, on completion of all the 24 units listed in the first three years of the relevant sequence below.

The conceptual design of this Bachelor of Information and Communications Technology/Bachelor of Business and Commerce double degree is as follows.

1) Years 1 to 3 students complete their BICT (16 units) and two elective units;

2) Also, in Years 1 to 3 students complete five common BBC core units and one BBC Major unit. Students may also elect to take two alternate BBC units in Year 1 which will be deemed equivalent to two BICT units. In Year 4 they complete eight BBC Major units.

3) Students within this course will only be permitted to undertake the following majors within 2753 Bachelor Business and Commerce.

\* Applied Finance

\* Hospitality Management

\* Human Resource Development and Organisational Development

\* International Business

\* Management

\* Marketing

\* Sport Management

**Please note that the Sport Management major is only offered at Campbelltown campus.**

### Bachelor of Information and Communications Technology/ Bachelor of Business and Commerce (Applied Finance)

#### Parramatta and Campbelltown campus

##### Year 1

##### Autumn session

**300585.2** Systems Analysis and Design

**300580.2** Programming Fundamentals

Choose one of

**200336.3** Business Academic Skills

**100483.2** Principles of Professional Communication 1

Choose one of

**300700.5** Statistical Decision Making

**200032.5** Statistics for Business

##### Spring session

**200083.2** Marketing Principles

**300144.4** Object Oriented Analysis

**300565.2** Computer Networking

**300104.4** Database Design and Development

##### Year 2

##### Autumn session

**200571.2** Management Dynamics

**300582.2** Technologies for Web Applications

**300581.2** Programming Techniques

**300095.4** Computer Networks and Internets

##### Spring session

**300583.2** Web Systems Development

**300699.2** Discrete Structures and Complexity

**200184.3** Introduction to Business Law

**200525.2** Principles of Economics

##### Year 3

##### Autumn session

**300570.3** Human-Computer Interaction

**300578.3** Professional Development

**300698.3** Operating Systems Programming

**200101.3** Accounting Information for Managers

##### Spring session

**300579.3** Professional Experience

**200488.3** Corporate Financial Management

And two electives

##### Year 4

##### Autumn session

**200549.2** The Australian Macroeconomy

**200048.2** Financial Institutions and Markets

**200537.3** Economics and Finance Engagement Project

And one alternate unit

##### Spring session

**200053.3** Economic Modelling

**200057.3** Investment Management

And two alternate units

##### Alternate units

**200078.2** Portfolio Management

<b>200055.4</b>	International Finance
<b>200077.2</b>	The Superannuation Industry
<b>200079.2</b>	Derivatives
<b>200518.2</b>	Behavioural Finance
<b>200059.2</b>	Financial Economics

### Bachelor of Information and Communications Technology/ Bachelor of Business and Commerce (Hospitality Management)

#### Parramatta campus

##### Year 1

##### Autumn session

<b>300585.2</b>	Systems Analysis and Design
<b>300580.2</b>	Programming Fundamentals

Choose one of

<b>100483.2</b>	Principles of Professional Communication 1
<b>200336.3</b>	Business Academic Skills

Choose one of

<b>200032.5</b>	Statistics for Business
<b>300700.5</b>	Statistical Decision Making

##### Spring session

<b>200083.2</b>	Marketing Principles
<b>300144.4</b>	Object Oriented Analysis
<b>300565.2</b>	Computer Networking
<b>300104.4</b>	Database Design and Development

##### Year 2

##### Autumn session

<b>200571.2</b>	Management Dynamics
<b>300582.2</b>	Technologies for Web Applications
<b>300581.2</b>	Programming Techniques
<b>300095.4</b>	Computer Networks and Internets

##### Spring session

<b>300583.2</b>	Web Systems Development
<b>300699.2</b>	Discrete Structures and Complexity
<b>200184.3</b>	Introduction to Business Law
<b>200525.2</b>	Principles of Economics

##### Year 3

##### Autumn session

<b>300570.3</b>	Human-Computer Interaction
<b>300578.3</b>	Professional Development
<b>300698.3</b>	Operating Systems Programming
<b>200273.4</b>	Managing Service and Experience

##### Spring session

<b>300579.3</b>	Professional Experience
<b>200101.3</b>	Accounting Information for Managers

And two electives

##### Year 4

##### Autumn session

<b>200709.2</b>	Managing the Accommodation Experience
<b>200710.2</b>	Managing the Food and Beverage Experience
<b>200708.2</b>	Hospitality Industry
<b>200707.2</b>	Service Industry Studies

##### Spring session

<b>200584.3</b>	Hospitality Management Operations
<b>200742.2</b>	Sport and Hospitality Event Management
<b>200148.2</b>	Planning and Design of Hospitality Facilities
<b>200561.3</b>	Hospitality Management Applied Project

### Bachelor of Information and Communications Technology/ Bachelor of Business and Commerce (Human Resource Management and Industrial Relations)

#### Parramatta and Campbelltown campus

##### Year 1

##### Autumn session

<b>300580.2</b>	Programming Fundamentals
<b>300585.2</b>	Systems Analysis and Design

Choose one of

<b>200336.3</b>	Business Academic Skills
<b>100483.2</b>	Principles of Professional Communication 1

Choose one of

<b>300700.5</b>	Statistical Decision Making
<b>200032.5</b>	Statistics for Business

##### Spring session

<b>200083.2</b>	Marketing Principles
<b>300144.4</b>	Object Oriented Analysis
<b>300565.2</b>	Computer Networking
<b>300104.4</b>	Database Design and Development

##### Year 2

##### Autumn session

<b>200571.2</b>	Management Dynamics
<b>300582.2</b>	Technologies for Web Applications
<b>300581.2</b>	Programming Techniques
<b>300095.4</b>	Computer Networks and Internets

##### Spring session

<b>300583.2</b>	Web Systems Development
<b>300699.2</b>	Discrete Structures and Complexity
<b>200184.3</b>	Introduction to Business Law
<b>200525.2</b>	Principles of Economics

**Year 3****Autumn session**

<b>300570.3</b>	Human-Computer Interaction
<b>300578.3</b>	Professional Development
<b>300698.3</b>	Operating Systems Programming
<b>200101.3</b>	Accounting Information for Managers

**Spring session**

<b>300579.3</b>	Professional Experience
<b>200300.2</b>	Managing People at Work

And two electives

**Year 4****Autumn session**

<b>200614.2</b>	Enterprise Industrial Relations
<b>200621.3</b>	International Human Resource Management
<b>200616.3</b>	Workplace Behaviour
<b>200613.2</b>	Negotiation, Bargaining and Advocacy

**Spring session**

<b>200739.2</b>	Reward and Performance Management
<b>200740.2</b>	Human Resource and Industrial Relations Strategy
<b>200575.3</b>	Processes and Evaluation in Employment Relations

Choose one of

<b>200610.2</b>	Employee Training and Development
<b>200150.2</b>	Managing Diversity
<b>200753.2</b>	Occupational Health and Safety

**Bachelor of Information and Communications Technology/ Bachelor of Business and Commerce (International Business)****Parramatta campus****Year 1****Autumn session**

<b>300580.2</b>	Programming Fundamentals
<b>300585.2</b>	Systems Analysis and Design

Choose one of

<b>100483.2</b>	Principles of Professional Communication 1
<b>200336.3</b>	Business Academic Skills

Choose one of

<b>200032.5</b>	Statistics for Business
<b>300700.5</b>	Statistical Decision Making

**Spring session**

<b>200083.2</b>	Marketing Principles
<b>300144.4</b>	Object Oriented Analysis
<b>300565.2</b>	Computer Networking
<b>300104.4</b>	Database Design and Development

**Year 2****Autumn session**

<b>200571.2</b>	Management Dynamics
<b>300582.2</b>	Technologies for Web Applications
<b>300581.2</b>	Programming Techniques
<b>300095.4</b>	Computer Networks and Internets

**Spring session**

<b>300583.2</b>	Web Systems Development
<b>300699.2</b>	Discrete Structures and Complexity
<b>200184.3</b>	Introduction to Business Law
<b>200525.2</b>	Principles of Economics

**Year 3****Autumn session**

<b>300570.3</b>	Human-Computer Interaction
<b>300578.3</b>	Professional Development
<b>300698.3</b>	Operating Systems Programming
<b>200101.3</b>	Accounting Information for Managers

**Spring session**

<b>300579.3</b>	Professional Experience
<b>200591.2</b>	Introduction to International Business

And two electives

**Year 4****Autumn session**

<b>200541.2</b>	Globalisation and Trade
<b>200094.2</b>	International Marketing
<b>200626.2</b>	International Business Strategy
<b>200595.3</b>	International Business Finance

**Spring session**

<b>200590.2</b>	International Business Project
<b>200374.3</b>	International Marketing Research
<b>200589.2</b>	Export Strategy and Applications

Choose one of

<b>200098.2</b>	The Markets of Asia
<b>200099.3</b>	The Markets of Europe

**Bachelor of Information and Communications Technology/ Bachelor of Business and Commerce (Management)****Parramatta and Campbelltown campus****Year 1****Autumn session**

<b>300580.2</b>	Programming Fundamentals
<b>300585.2</b>	Systems Analysis and Design

Choose one of

<b>200336.3</b>	Business Academic Skills
<b>100483.2</b>	Principles of Professional Communication 1

Choose one of

- 200032.5** Statistics for Business  
**300700.5** Statistical Decision Making

**Spring session**

- 200083.2** Marketing Principles  
**300144.4** Object Oriented Analysis  
**300565.2** Computer Networking  
**300104.4** Database Design and Development

**Year 2****Autumn session**

- 200571.2** Management Dynamics  
**300582.2** Technologies for Web Applications  
**300581.2** Programming Techniques  
**300095.4** Computer Networks and Internets

**Spring session**

- 300583.2** Web Systems Development  
**300699.2** Discrete Structures and Complexity  
**200184.3** Introduction to Business Law  
**200525.2** Principles of Economics

**Year 3****Autumn session**

- 300570.3** Human-Computer Interaction  
**300578.3** Professional Development  
**300698.3** Operating Systems Programming  
**200101.3** Accounting Information for Managers

**Spring session**

- 300579.3** Professional Experience  
**200585.2** Organisational Behaviour

And two electives

**Year 4****Autumn session**

- 200158.3** Business, Society and Policy  
**200586.2** Cross Cultural Management  
**200570.3** Management of Change  
**200752.2** Power, Politics and Knowledge

**Spring session**

- 200588.2** Global Operations and Logistics Management  
**200159.3** Organisation Analysis and Design  
**200568.3** Contemporary Management Issues  
**200587.2** Strategic Management

**Bachelor of Information and Communications Technology/ Bachelor of Business and Commerce (Marketing)****Parramatta and Campbelltown campus****Year 1****Autumn session**

- 300580.2** Programming Fundamentals  
**300585.2** Systems Analysis and Design

Choose one of

- 200336.3** Business Academic Skills  
**100483.2** Principles of Professional Communication 1

Choose one of

- 200032.5** Statistics for Business  
**300700.5** Statistical Decision Making

**Spring session**

- 200083.2** Marketing Principles  
**300144.4** Object Oriented Analysis  
**300565.2** Computer Networking  
**300104.4** Database Design and Development

**Year 2****Autumn session**

- 200571.2** Management Dynamics  
**300582.2** Technologies for Web Applications  
**300581.2** Programming Techniques  
**300095.4** Computer Networks and Internets

**Spring session**

- 300583.2** Web Systems Development  
**300699.2** Discrete Structures and Complexity  
**200184.3** Introduction to Business Law  
**200525.2** Principles of Economics

**Year 3****Autumn session**

- 300570.3** Human-Computer Interaction  
**300578.3** Professional Development  
**300698.3** Operating Systems Programming  
**200101.3** Accounting Information for Managers

**Spring session**

- 300579.3** Professional Experience  
**200084.2** Consumer Behaviour

And two electives

**Year 4****Autumn session**

- 200086.3** Marketing Communications  
**200592.2** Marketing Research  
**200087.3** Strategic Marketing Management



**200094.2** International Marketing

And two electives

**Spring session**

**200090.3** Marketing of Services  
**200088.2** Brand and Product Management  
**200091.3** Business to Business Marketing  
**200096.3** Marketing Planning Project

## Bachelor of Information and Communications Technology/ Bachelor of Business and Commerce (Sport Management)

**Campbelltown campus****Year 1****Autumn session**

**300585.2** Systems Analysis and Design  
**300580.2** Programming Fundamentals

Choose one of

**200336.3** Business Academic Skills  
**100483.2** Principles of Professional Communication 1

Choose one of

**300700.5** Statistical Decision Making  
**200032.5** Statistics for Business

**Spring session**

**200083.2** Marketing Principles  
**300144.4** Object Oriented Analysis  
**300565.2** Computer Networking  
**300104.4** Database Design and Development

**Year 2****Autumn session**

**200571.2** Management Dynamics  
**300582.2** Technologies for Web Applications  
**300581.2** Programming Techniques  
**300095.4** Computer Networks and Internets

**Spring session**

**300583.2** Web Systems Development  
**300699.2** Discrete Structures and Complexity  
**200184.3** Introduction to Business Law  
**200525.2** Principles of Economics

**Year 3****Autumn session**

**300570.3** Human-Computer Interaction  
**300578.3** Professional Development  
**300698.3** Operating Systems Programming  
**200705.2** The World of Sport Management

**Spring session**

**300579.3** Professional Experience  
**200101.3** Accounting Information for Managers

**Year 4****Autumn session**

**200665.2** Strategic Communication in Sport  
**200273.4** Managing Service and Experience  
**200754.2** Sports Management - Planning and Development  
**200707.2** Service Industry Studies

**Spring session**

**200664.2** Sport Management Internship  
**200742.2** Sport and Hospitality Event Management  
**200751.2** Sport Management Applied Project  
**400335.3** Contemporary Issues in Sport Management

## Bachelor of Information and Communications Technology/Bachelor of Business and Commerce (Accounting)

**3656.2**

Students should follow the course structure for the course version relevant to the year they commenced. This course version applies to students who commenced study in this course in 2012 or later.

This double degree program targets the wide application of information technology in Business and Commerce in Accounting. It provides students with a strong technical background in IT and Business and Commerce in Accounting. It allows students to develop skills in application development, program design, systems analysis & design, networks, web-design, and the implementation of technology.

This degree combines information technology with knowledge required by professional Accountants.

**Study Mode**

Four years full-time.

**Location**

Campus	Attendance	Mode
Campbelltown Campus	Full Time	Internal
Parramatta Campus	Full Time	Internal

**Accreditation**

The Bachelor of Information and Communications Technology is currently accredited with the Australian Computer Society (ACS) at Professional level. The Bachelor of Business and Commerce has accreditation with CPA Australia and The Institute of Chartered Accountants in Australia.

**Admission**

Eligibility for admission to the Bachelor of Information and Communications Technology/Bachelor of Business and Commerce (Accounting) is based on the following requirements:

Assumed knowledge required: HSC Mathematics and two units of HSC English.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

### Course Structure

Qualification for this award requires the successful completion of 320 credit points as per the structure below.

Students are eligible to graduate with a Bachelor of Information and Communications Technology, on completion of all the 24 units listed in the first three years of the relevant sequence below.

The conceptual design of this Bachelor of Information and Communications Technology/Bachelor of Business and Commerce (Accounting) double degree is as follows.

- 1) Years 1 to 3 students complete their Bachelor of Information and Communications Technology (16 units);
- 2) Also, in Years 1 to 3 students complete two common core units of the Bachelor of Business and Commerce and six of the Bachelor of Business and Commerce Accounting Major units. Students may also elect to take two alternate Bachelor of Business and Commerce units (as suggested in the course document) in Year 1 which will be deemed equivalent to two Bachelor of Information and Communications Technology units. In Year 4 they complete three Bachelor of Business and Commerce common core units and five Bachelor of Business and Commerce Accounting Major units.

#### Year 1

##### Autumn session

- 300580.2** Programming Fundamentals  
**300585.2** Systems Analysis and Design

Choose one of

- 100483.2** Principles of Professional Communication 1  
**200336.3** Business Academic Skills

Choose one of

- 300700.5** Statistical Decision Making  
**200032.5** Statistics for Business

#### Spring session

- 300565.2** Computer Networking  
**300144.4** Object Oriented Analysis  
**300104.4** Database Design and Development  
**200101.3** Accounting Information for Managers

#### Year 2

##### Autumn session

- 300582.2** Technologies for Web Applications  
**300581.2** Programming Techniques  
**300095.4** Computer Networks and Internets  
**200111.2** Financial Accounting Applications

#### Spring session

- 300583.2** Web Systems Development  
**300699.2** Discrete Structures and Complexity  
**200116.4** Management Accounting Fundamentals  
**200488.3** Corporate Financial Management

#### Year 3

##### Autumn session

- 300570.3** Human-Computer Interaction  
**300578.3** Professional Development  
**300698.3** Operating Systems Programming  
**200536.2** Intermediate Financial Accounting

#### Spring session

- 300579.3** Professional Experience  
**200534.3** Accounting Information Systems  
**200109.4** Corporate Accounting Systems  
**200571.2** Management Dynamics

#### Year 4

##### Autumn session

- 200535.2** Auditing and Assurance Services  
**200108.2** Contemporary Management Accounting  
**200183.4** Law of Business Organisations  
**200525.2** Principles of Economics

#### Spring session

- 200184.3** Introduction to Business Law  
**200083.2** Marketing Principles  
**200267.2** Advanced Accounting  
**200118.3** The Accountant as a Consultant

Note: This course will satisfy membership requirements of the CPA professional accounting body. However, students will be required to complete a postgraduate unit in Taxation Law to be eligible for membership to Chartered Accountants accounting body.

## Bachelor of Information Technology (Honours)

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### 3613.1

The Honours program encourages independence in learning and research; further develops academic ability, provides the opportunity to pursue undergraduate studies to a more advanced level, deepen intellectual understanding in the major field of study and develop research skills. Honours is a recognised point of entry into postgraduate research studies at PhD and Masters levels. If a career in industry is sought, Honours enables study to a more advanced level with a higher qualification. The course has the opportunity for direct commercial and industrial involvement with a diverse range of organisations through the provision and joint supervision of research projects.

### Study Mode

One year full-time or two years part-time.

### Location

Campus	Attendance	Mode
Campbelltown Campus	Full Time	Internal
Campbelltown Campus	Part Time	Internal
Parramatta Campus	Full Time	Internal
Parramatta Campus	Part Time	Internal
Penrith Campus	Full Time	Internal
Penrith Campus	Part Time	Internal

### Accreditation

Professional accreditation by the Australian Computer Society (ACS) may be available, depending on a student's undergraduate degree.

### Course Structure

Qualification for this award requires the successful completion of 80 credit points including the units listed below.

The award is a year long program that will be divided into three main components: Computing Research Process and Practice (10 credit points), Computing Honours Seminar Program (10 credit points) and the Computing Honours Thesis (60 credit points).

Students must enrol in 300364 Computing Honours Seminar Program and 300363 Computing Honours Thesis in both Autumn and Spring sessions.

### Full-time

#### Year 1

#### Autumn session

<b>300365.1</b>	Computing Research Process and Practice
<b>300364.3</b>	Computing Honours Seminar Program
<b>300363.3</b>	Computing Honours Thesis

#### Spring session

<b>300364.3</b>	Computing Honours Seminar Program
<b>300363.3</b>	Computing Honours Thesis

### Part-time

#### Year 1

#### Autumn session

<b>300365.1</b>	Computing Research Process and Practice
<b>300363.3</b>	Computing Honours Thesis

#### Spring session

<b>300364.3</b>	Computing Honours Seminar Program
<b>300363.3</b>	Computing Honours Thesis

#### Year 2

#### Autumn session

<b>300364.3</b>	Computing Honours Seminar Program
<b>300363.3</b>	Computing Honours Thesis

#### Spring session

<b>300363.3</b>	Computing Honours Thesis
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## Bachelor of Science (Honours) Mathematics

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### 2711.1

The honours program encourages independence in learning and research, further develops academic ability, provides the opportunity to pursue undergraduate studies to a more advanced level, deepen intellectual understanding in the major field of study and develop research skills. An Honours degree is a recognised point of entry into postgraduate research studies at PhD level. If a career in industry is sought, Honours enables study to a more advanced level with a higher qualification. The course has the opportunity for direct commercial and industrial involvement with a diverse range of organisations through the provision of and joint supervision of research projects.

### Study Mode

One year full-time or two years part-time.

### Location

Campus	Attendance	Mode
Campbelltown Campus	Full Time	Internal
Campbelltown Campus	Part Time	Internal
Parramatta Campus	Full Time	Internal
Parramatta Campus	Part Time	Internal

### Admission

Admission requirements follow the recommendations and guidelines in the UWS Honours Policy. The basic

requirement is completion of a bachelors pass degree in which the advanced level units in a relevant field of study were completed at a grade point average of 5.0 or better.

### Course Structure

Qualification for this award requires the successful completion of 80 credit points which includes three core units made up of an advanced topic unit in mathematics, a research proposal and seminar plus a thesis in mathematics.

### Core Units

<b>200411.2</b>	Advanced Topics in Mathematics
<b>200412.5</b>	Research Proposal and Seminar
<b>200413.3</b>	Mathematics Honours Thesis

## Associate Degree in Engineering

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### 7022.1

The Associate Degree in Engineering is a two year program in Engineering designed for people who are currently working in engineering or related areas with a trade or Cert IV qualification or higher who wish to upgrade their qualifications in Engineering and possibly continue to the full degree program. The Associate Degree in Engineering has a common first year program for all engineering disciplines, exposing students to a wide range of experiences in the first year. In the second year students may choose units from the elective pool that will allow them to follow their interests in the various Engineering disciplines. If students choose to apply to study in the Bachelor of Engineering after graduating from the Associate Degree in Engineering they will have completed at least 12 units in eight of the current key programs.

### Study Mode

Four Sessions

### Location

Campus	Attendance Mode
UWSC - Nirimba Education Precinct	Full Time    Internal

### Admission

Applicants may be regarded as eligible for admission if they have completed the NSW HSC and attained the required ATAR (Australian Tertiary Admission Rank), or have completed other equivalent qualifications such as a recognised Certificate III or Certificate IV and vocational experience and attained the required entrance standard set for entry to the course. This may include bridging/preparatory courses, para-professional and other post-secondary qualifications. Admission to the Associate Degree in Engineering also requires an applicant to have at least 5 years relevant industry experience.

### Course Structure

#### Session 1:

<b>700112.1</b>	Fundamentals for Engineering Studies (UWSC Assoc Deg)
<b>700106.1</b>	Engineering Computing (UWSC Assoc Deg)

#### Session 2:

<b>700114.1</b>	Introduction to Engineering Business Management (UWSC Assoc Deg)
<b>700107.1</b>	Engineering, Design and Construction Practice (UWSC Assoc Deg)

#### Session 3:

<b>700103.1</b>	Mathematics for Engineers Preliminary (UWSC Assoc Deg)
<b>700109.1</b>	Engineering Management for Engineer Associates (UWSC Assoc Deg)

#### Session 4:

<b>700113.1</b>	Fundamentals of Mechanics (UWSC Assoc Deg)
<b>700105.1</b>	Engineering and Design Concepts (UWSC Assoc Deg)

#### Session 5:

<b>700101.1</b>	Mathematics for Engineers 1 (UWSC Assoc Deg)
<b>700117.1</b>	Physics and Materials (UWSC Assoc Deg)

#### Session 6:

<b>700118.1</b>	Professional Practice for Engineer Associates (UWSC Assoc Deg)
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One unit selected from the Alternate units

#### Session 7:

<b>700104.1</b>	Electrical Fundamentals (UWSC Assoc Deg)
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One unit selected from the Alternate units

#### Session 8:

<b>700110.1</b>	Engineering Project (UWSC Assoc Deg)
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One unit selected from the Alternate units

### Alternate Units

<b>700116.1</b>	Mechanics of Materials (UWSC Assoc Deg)
<b>700102.1</b>	Mathematics for Engineers 2 (UWSC Assoc Deg)
<b>700120.1</b>	Surveying for Engineers (UWSC Assoc Deg)
<b>700111.1</b>	Fluid Mechanics (UWSC Assoc Deg)
<b>700119.1</b>	Soil Engineering (UWSC Assoc Deg)
<b>700115.1</b>	Introduction to Structural Engineering (UWSC Assoc Deg)

## Diploma in Construction Management

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### 7015.3

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year for this course is 2012 or later.

This course is delivered by UWSCollege as an agent of the University of Western Sydney.

The Diploma in Construction Management is designed to provide students with the first year units included in the Bachelor of Construction Management course. The Diploma presents students with a range of subjects covering the science, building and management aspects of construction management. Transition to Tertiary study is assisted by the inclusion of Foundation level Mathematics and Physics. The Diploma aims to produce students who are fully prepared for study beyond the first year of the Bachelor of Construction Management degree. The Diploma in Construction Management, completed in a smaller, more supportive learning environment than usually found in first year undergraduate programs, is designed to develop students to have greater ability in self-directed study and have the self esteem that comes from prior achievement in a tertiary environment.

For more information on UWSCollege, please refer to the UWSCollege web site.

### Study Mode

One year full-time (three semesters)

### Location

Campus	Attendance	Mode
UWSC - Nirimba Education Precinct	Full Time	Internal

### Admission

The aim of the course is to prepare students for tertiary study in Construction Management. The Diploma will be accredited by the University, as principal, to enable its agent, UWSCollege, to produce students who are fully prepared for study beyond the first year of a tertiary award. International students entering this Diploma are required to have met the following.

- English Entry Requirements
  - IELTS 6.0 with a minimum of 5.0 in all areas OR
  - Completion of UWS College EAPIII course with a 50% pass OR
  - A pass in the Foundation Academic English course OR
  - A pass in the UWSCollege English Entrance test at IELTS 6.0 equivalent.

#### 2. Academic Entry Requirements

Vary according to country of origin. However, in general, completion of Year 12 or its equivalent is the minimum entry requirement OR to have passed the UWSCollege Foundation Certificate, offered by UWSCollege, with a Grade Point Average of 5.5 or higher.

Students are also assumed to have completed a Mathematics subject, equivalent to the Mathematics subject in the NSW Higher School Certificate or to have passed Foundation Level Mathematics.

Local students entering this Diploma are required to have met the following.

- Completed an English subject in the NSW Higher School Certificate; or to have competency in English at IELTS 6.0 with a minimum of 5.5 in all areas (unless a native speaker); or have completed the UWS College English test at IELTS 6.0 equivalent with a minimum of 5.5 in all areas; or to have passed the UWSCollege Foundation English unit.

- Other entry requirements such as an ATAR identified prior to the offer of a place, or to have completed the UWSCollege Foundation Studies course, offered by UWSCollege, with a GPA of 5.5 or better.
- Assumed knowledge of Mathematics at the NSW Higher School Certificate level or a pass in Foundation Mathematics.

### Special Requirements

All students must complete Tertiary Study Skills with UWSCollege prior to completion of the Diploma.

### Course Structure

Qualification for this award requires the successful completion of the units listed below.

Students are required to successfully complete the following units

<b>700126.1</b>	Design Science (UWSC)
<b>700021.1</b>	Engineering and Design Concepts (UWSC)
<b>700038.2</b>	Engineering Design and Construction Practice (UWSC)
<b>700070.1</b>	Building 1 (UWSC)
<b>700071.1</b>	Building 2 (UWSC)
<b>700003.2</b>	Management Dynamics (UWSC)
<b>700004.1</b>	Introduction to Business Law (UWSC)
<b>700005.1</b>	Accounting Information for Managers (UWSC)

Students are required to achieve a Satisfactory grade for the following units

<b>700026.2</b>	Physics (UWSCFS)
<b>700069.2</b>	Mathematics B (UWSCFS)

Students also complete a special requirement unit, Tertiary Study Skills, although this does not count for credit towards the Diploma.

## Diploma in Construction Management Fast Track

### 7016.3

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year for this course is 2012 or later.

This course is delivered by UWSCollege as an agent of the University of Western Sydney.

The Diploma in Construction Management (Fast Track) is designed to provide students with the first year units included in the Bachelor of Construction Management course. The Diploma presents students with a range of subjects covering the science, building and management aspects of construction management. The Diploma aims to produce students who are fully prepared for study beyond the first year of the Bachelor of Construction Management degree. The Diploma in Construction Management, completed in a smaller, more supportive learning environment than usually found in first year undergraduate programs, is designed to develop students to have greater ability in self-directed study and have the self esteem that comes from prior achievement in a tertiary environment.

For more information on UWSCollege, please refer to the UWSCollege web site.

### Study Mode

Eight months (two semesters)

### Location

Campus	Attendance	Mode
UWSC - Nirimba Education Precinct	Full Time	Internal

### Admission

The aim of the course is to prepare students for tertiary study in Construction Management. The Diploma will be accredited by the University, as principal, to enable its agent, UWSCollege, to produce students who are fully prepared for study beyond the first year of a tertiary award.

International students entering this Diploma are required to have met the following:

- English Entry Requirements
  - IELTS 6.0 with a minimum of 5.5 in all areas, or
  - Completion of UWS College EAPIII course with a 50% pass, or
  - A pass in the Foundation Academic English course, or
  - A pass in the UWSCollege English Entrance test at IELTS 6.0 with a minimum of 5.5 in all areas.

#### 2. Academic Entry Requirements

Vary according to country of origin. However, in general, completion of Year 12 or its equivalent is the minimum entry requirement OR to have passed the UWSCollege Foundation Certificate, offered by UWSCollege, with a Grade Point Average of 5.5 or higher.

Students are also assumed to have background in Mathematics at senior high school level and assumed background in Science knowledge, preferably in Physics.

Local students entering this Diploma are required to have met the following:

- Completed an English subject in the NSW Higher School Certificate; or to have competency in English at IELTS 6.0 with a minimum of 5.5 in all areas (unless a native speaker); or have completed the UWSCollege English test at IELTS 6.0 equivalent with a minimum of 5.5 in all areas; or to have passed the UWSCollege Foundation English Course.
- Required to have met other entry requirements such as an ATAR identified prior to the offer of a place, or to have completed the UWS College Foundation Studies course, offered by UWS College, with a GPA of 6.0 or better.
- Assumed to have background in Mathematics at Senior High School level or a pass grade in Foundation level Mathematics at UWSCollege and assumed background Science knowledge preferably in Physics.

The aim of the course is to prepare students for tertiary study in Construction Management. The Diploma will be accredited by the University, as principal, to enable its agent, UWS College, to produce students who are fully prepared for study beyond the first year of a tertiary award.

### Special Requirements

All students must complete Tertiary Study Skills with UWS College prior to completion of the Diploma.

### Course Structure

To be awarded the Diploma in Construction Management, student must pass the following units

700126.1	Design Science (UWSC)
700021.1	Engineering and Design Concepts (UWSC)
700038.2	Engineering Design and Construction Practice (UWSC)
700070.1	Building 1 (UWSC)
700071.1	Building 2 (UWSC)
700003.2	Management Dynamics (UWSC)
700004.1	Introduction to Business Law (UWSC)
700005.1	Accounting Information for Managers (UWSC)

Students also complete a special requirement unit, Tertiary Study Skills, although this does not count for credit towards the Diploma.

### Diploma in Engineering

#### 7006.2

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year for this course is 2011 or later.

This course is delivered by UWSCollege as an agent of the University of Western Sydney.

The Diploma in Engineering is designed to prepare students for tertiary study in Engineering and in doing so address any perceived deficiencies in the students' mathematical and physics knowledge and skills. The Diploma presents students with units from the first year of the Bachelor of Engineering Degree. The Diploma aims to produce students who are fully prepared for study beyond the first year of the Bachelor of Engineering degree. The Diploma in Engineering, completed in a smaller, more supportive learning environment than usually found in first year undergraduate programs, is designed to develop students to have greater ability in self-directed study and have the self esteem that comes from prior achievement in a tertiary environment.

For more information on UWSCollege, please refer to the UWSCollege web site.

### Study Mode

1 year

### Location

Campus	Attendance	Mode
UWSC - Nirimba Education Precinct	Full Time	Internal

### Admission

The aim of the Diploma is to prepare students for tertiary study in Engineering. The Diploma is accredited by the University, as principal, to enable its agent, UWSCollege, to offer to its students who are fully prepared for study beyond the first year of a tertiary award.

International students entering this Diploma are required to have met the following.

- English Entry Requirements

- IELTS 6.0 with a minimum of 5.5 in all areas, or
- Completion of UWS College EAP III course with a 50% pass, or
- A pass in the Foundation Academic English course, or
- A pass in the UWS College English Entrance test at IELTS 6.0 with a minimum of 5.5 in all areas.

## 2. Academic Entry Requirements

Vary according to country of origin. However, in general, completion of Year 12 or its equivalent is the minimum entry requirement OR to have passed the UWS College Foundation Certificate, offered by UWS College, with a Grade Point Average of 5.5 or higher.

Local students entering this Diploma are required to have met the following.

1. Completed an English subject in the NSW Higher School Certificate, or to have competency in English at IELTS 6.0 with a minimum of 5.5 in all areas (unless a native speaker) or have completed the UWS College English test at IELTS 6.0 equivalent with a minimum of 5.5 in all areas; or to have passed the UWS College Foundation English unit.
2. Other entry requirements such as an ATAR identified prior to the offer of a place, or to have completed the UWS College Foundation Studies course, with a Grade Point Average of 5.5 or better, and a pass in Foundation level Mathematics Extension.
3. Assumed to have background in mathematics at Senior High School level and assumed background Science knowledge, preferably in Physics.

## Special Requirements

All students must complete Tertiary Study Skills with UWS College prior to completion of the diploma.

## Course Structure

Qualification for this award requires the successful completion of the units listed in the recommended sequence below.

Students who have completed an HSC equivalent qualification with study in the relevant areas will be eligible for advanced standing for Mathematics C and Physics and therefore need to complete the remaining 8 units.

Students are required to achieve a Satisfactory grade for the following units

- 700025.1** Mathematics C (UWSCFS)  
**700026.2** Physics (UWSCFS)

Students are required to successfully complete the following units

- 700038.2** Engineering Design and Construction Practice (UWSC)  
**700019.3** Mathematics for Engineers 1 (UWSC)  
**700020.1** Physics and Materials (UWSC)  
**700018.1** Engineering Computing (UWSC)  
**700022.1** Mathematics for Engineers 2 (UWSC)  
**700023.1** Fundamentals of Mechanics (UWSC)  
**700024.1** Electrical Fundamentals (UWSC)  
**700021.1** Engineering and Design Concepts (UWSC)

Students also complete a mandatory special requirement unit, Tertiary Study Skills, although this does not count for credit towards the Diploma.

## Diploma in Engineering Fast Track

### 7010.2

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year for this course is Term N 2010.

This course is delivered by UWS College as an agent of the University of Western Sydney.

The Diploma in Engineering is designed to prepare students for tertiary study in Engineering. The Diploma presents students with subjects from the first year of subjects in the Bachelor of Engineering Degree. The Diploma aims to produce students who are fully prepared for study beyond the first year of the Bachelor of Engineering degree. The Diploma in Engineering, completed in a smaller, more supportive learning environment than usually found in first year undergraduate programs, is designed to develop students to have greater ability in self-directed study and have the self esteem that comes from prior achievement in a tertiary environment.

For more information on UWS College, please refer to the UWS College web site.

## Study Mode

8 months

## Location

Campus

Attendance Mode

UWSC - Nirimba Education Precinct Full Time Internal

## Admission

The aim of the course is to prepare students for tertiary study in Engineering. The Diploma is accredited by the University, as principal, to enable its agent, UWS College, to prepare students for study beyond the first year of a tertiary award.

International students entering this Diploma are required to have met the following.

### 1. English Entry Requirements

- IELTS 6.0 with a minimum of 5.5 in all areas, or
- Completion of UWS College EAP III course with a 50% pass, or
- A pass in the Foundation Academic English course, or
- A pass in the UWS College English Entrance test at IELTS 6.0 with a minimum of 5.5 in all areas.

### 2. Academic Entry Requirements

Vary according to country of origin. However, in general, completion of Year 12 or its equivalent is the minimum entry requirement OR to have passed the UWS College Foundation Certificate, offered by UWS College, with a Grade Point Average of 6.0 or higher.

Students are also assumed to have background in Mathematics at senior high school level and assumed background Science knowledge, preferably in Physics.

Local students entering this Diploma are required to have met the following.

1. Completed an English subject in the NSW Higher School Certificate; or to have competency in English at IELTS 6.0 with a minimum of 5.5 in all areas (unless a native speaker); or have completed the UWSCollege English test at IELTS 6.0 equivalent with a minimum of 5.5 in all areas; or to have passed the UWSCollege Foundation English unit.

2. Other entry requirements such as an ATAR identified prior to the offer of a place, or to have completed the UWSCollege Foundation Studies course, with a GPA of 6.0 or better and a pass in Foundation level Mathematics Extension.

3. Assumed to have background in Mathematics at senior high school level and assumed background Science knowledge, preferably in Physics.

### Special Requirements

All students must complete Tertiary Study Skills with UWSCollege prior to completion of the Diploma.

### Course Structure

Qualification for this award requires the successful completion of the units listed below.

<b>700018.1</b>	Engineering Computing (UWSC)
<b>700019.3</b>	Mathematics for Engineers 1 (UWSC)
<b>700020.1</b>	Physics and Materials (UWSC)
<b>700021.1</b>	Engineering and Design Concepts (UWSC)
<b>700022.1</b>	Mathematics for Engineers 2 (UWSC)
<b>700023.1</b>	Fundamentals of Mechanics (UWSC)
<b>700024.1</b>	Electrical Fundamentals (UWSC)
<b>700038.2</b>	Engineering Design and Construction Practice (UWSC)

Students also complete a mandatory special requirement unit, Tertiary Study Skills, although this does not count for credit towards the Diploma.

## Diploma in Information and Communications Technology

### 7005.2

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year for this course is 2011 or later.

This course is delivered by UWSCollege as an agent of the University of Western Sydney.

The Diploma in Information and Communications Technology is designed to provide a generalist tertiary level foundation for further study in undergraduate Information and Communications Technology program. It has been constructed to provide students with a sample of ICT units and university experiences to allow for well informed choices to be made in selecting their professional focus.

The Diploma aims to produce students who are fully prepared for study beyond the first year of an undergraduate degree. The Diploma in Information and Communications Technology, completed in a smaller, more supportive learning environment than usually found in first year undergraduate programs, is designed to develop students who are more aware of their roles and responsibilities within a university, have greater ability in

self-directed study and have the self esteem that comes from prior achievement in a tertiary environment.

For more information on UWSCollege, please refer to the UWSCollege web site.

### Study Mode

1 year

### Location

Campus

Attendance Mode

UWSC - Nirimba Education Precinct Full Time Internal

### Admission

The aim of the Diploma is to prepare students for tertiary study in Information and Communications Technology. The Diploma is accredited by the University, as principal, to enable its agent, UWSCollege, to offer to its students who are fully prepared for study beyond the first year of a tertiary award.

International students entering this Diploma are required to have met the following.

#### 1. English Entry Requirements

- IELTS 6.0 with a minimum of 5.5 in all areas, or
- Completion of UWSCollege EAPIII course with a 50% pass level, or
- Pass in the Foundation Studies English, or
- A pass in the UWSCollege English test at IELTS 6.0 with a minimum of 5.5 in all areas.

#### 2. Academic Entry Requirements

Vary according to country of origin. However, in general, completion of Year 12 or its equivalent is the minimum entry requirement or to have passed the UWSCollege Foundation Certificate, offered by UWSCollege, with a Grade Point Average of 5.5 or higher.

Students are also assumed to have completed a Mathematics subject, equivalent to the Mathematics subject in the NSW Higher School Certificate or to have passed Foundation Level Mathematics.

Local students entering this Diploma are required to have met the following.

1. Completed an English subject in the NSW Higher School Certificate, or to have competency in English at IELTS 6.0 with a minimum of 5.5 in all areas (unless a native speaker) or have completed the UWSCollege English test at IELTS 6.0 equivalent with a minimum of 5.5 in all areas or to have passed the UWSCollege Foundation English unit.

2. Other entry requirements such as an ATAR identified prior to the offer of a place, or to have completed the UWSCollege Foundation Studies course, offered by UWSCollege, with a Grade Point Average of 5.5 or better.

3. Assumed knowledge of Mathematics at the NSW Higher School Certificate or a pass in Foundation Mathematics.

### Special Requirements

Students must complete Tertiary Study Skills with UWSCollege prior to completion of the diploma.

### Course Structure

To be awarded a Diploma in Information and Communications Technology students will successfully



complete with at least a pass (50% or more) the eight units listed below.

Students who wish to enter the Bachelor of Computing on completion of this Diploma course will, subject to student numbers, study 700007 Statistics for Business (UWSC). Students intending to enter the Bachelor of Information and Communications Technology will study 700041 Statistical Decision Making (UWSC).

All other units are compulsory core units of the course.

Choose one of

- 700007.3** Statistics for Business (UWSC)  
**700041.3** Statistical Decision Making (UWSC)

Students must successfully complete the following units

- 700040.2** Principles of Professional Communication 1 (UWSC)  
**700008.1** Programming Fundamentals (UWSC)  
**700000.2** Information Systems in Context (UWSC)  
**700011.1** Database Design and Development (UWSC)  
**700012.1** Computer Networking (UWSC)  
**700013.1** System Analysis and Design (UWSC)  
**700039.1** Object Oriented Analysis (UWSC)

Students are also required to achieve a Satisfactory grade for the following two units for which no advanced standing is granted in the degree program.

- 700045.1** Statistics for Academic Purposes (UWSCFS)  
**700047.1** Programming Design (UWSCFS)

Students also complete a mandatory unit Tertiary Study Skills, although this does not count for credit towards the Diploma.

## Diploma in Information and Communications Technology Fast Track

### 7004.2

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year for this course is Term N 2010.

This course is delivered by UWSCollege as an agent of the University of Western Sydney.

The Diploma in Information and Communications Technology is designed to provide a generalist tertiary level foundation for further study in undergraduate Information and Communications Technology and Computing programs. It has been constructed to provide students with a sample of computing units and university experiences to allow for well informed choices to be made in selecting their professional focus.

The Diploma aims to produce students who are fully prepared for study beyond the first year of an undergraduate degree. The Diploma in Information and Communications Technology, completed in a smaller, more supportive learning environment than usually found in first year undergraduate programs, is designed to develop students who are more aware of their roles and responsibilities within a university, have greater ability in self-directed study and have the self esteem that comes from prior achievement in a tertiary environment

For more information on UWSCollege, please refer to the UWSCollege web site.

### Study Mode

8 months

### Location

Campus	Attendance	Mode
UWSC - Nirimba Education Precinct	Full Time	Internal

### Accreditation

8 months

### Admission

The aim of the Diploma is to prepare students for tertiary study in Information and Communications Technology or Computing. The Diploma is accredited by the University, as principal, to enable its agent, UWSCollege, to offer to its students who are fully prepared for study beyond the first year of a tertiary award.

International students entering this Diploma are required to have met the following.

- English Entry Requirements
  - IELTS 6.0 with a minimum of 5.5 in all areas, or
  - Completion of UWSCollege EAPIII course with a 50% pass level, or
  - Pass in the Foundation Studies English course, or
  - A pass in the UWSCollege English test at IELTS 6.0 with a minimum of 5.5 in all areas

#### 2. Academic Entry Requirements

Vary according to country of origin. However, in general, completion of Year 12 or its equivalent is the minimum entry requirement OR to have passed the Foundation Certificate, offered by UWSCollege, with a Grade Point Average (GPA) of 6.0 or higher.

Students are also assumed to have completed a Mathematics subject, equivalent to the Mathematics course in the NSW Higher School Certificate or to have passed Foundation Level Mathematics.

Local students entering this Diploma are required to have met the following.

- Completed an English subject in the NSW Higher School Certificate; or to have competency in English at IELTS 6.0 with a minimum of 5.5 in all areas (unless a native speaker); or have completed the UWS College English test at IELTS 6.0 equivalent with a minimum of 5.5 in all areas; or to have passed the UWSCollege Foundation English unit.
- Other entry requirements such as an ATAR identified prior to the offer of a place, or to have completed the UWSCollege Foundation Studies course, offered by UWSCollege, with a GPA of 6.0 or better.
- Assumed knowledge of Mathematics at the NSW Higher School Certificate or a pass in Foundation Mathematics.

### Special Requirements

Students must complete Tertiary Study Skills with UWSCollege prior to completion of the diploma.

### Course Structure

To be awarded a Diploma in Information and Communications Technology Fast Track, students will

successfully complete with at least a pass (50% or more) eight units as listed below.

Students who wish to enter the B Computing on completion of this Diploma course will, subject to student numbers, study 700007 Statistics for Business (UWSC). Students intending to enter the Bachelor of Information and Communications Technology will, subject to student numbers, study 700041 Statistical Decision Making (UWSC).

All other units are compulsory core units of the course.

Choose one of

- 700007.3** Statistics for Business (UWSC)
- 700041.3** Statistical Decision Making (UWSC)

Students must also complete the following seven units:

- 700040.2** Principles of Professional Communication 1 (UWSC)
- 700008.1** Programming Fundamentals (UWSC)
- 700000.2** Information Systems in Context (UWSC)
- 700011.1** Database Design and Development (UWSC)
- 700012.1** Computer Networking (UWSC)
- 700013.1** System Analysis and Design (UWSC)
- 700039.1** Object Oriented Analysis (UWSC)

Students also complete a mandatory unit Tertiary Study Skills, although this does not count for credit towards the Diploma.

**Unit Sets****Key Program - Information Systems****KT3000.1**

The Key Program in Information Systems focuses on computing and information technology in the context of business.

**Location**

Campus	Mode
Parramatta Campus	Internal

**Unit Set Structure****Start of Year Intake****Year 1****Autumn session**

<b>300580.2</b>	Programming Fundamentals
<b>100483.2</b>	Principles of Professional Communication 1
<b>300585.2</b>	Systems Analysis and Design
<b>300573.2</b>	Information Systems in Context

**Spring session**

<b>300565.2</b>	Computer Networking
<b>300104.4</b>	Database Design and Development
<b>300144.4</b>	Object Oriented Analysis

And one elective

**Year 2****Autumn session**

<b>300582.2</b>	Technologies for Web Applications
<b>300570.3</b>	Human-Computer Interaction
<b>300581.2</b>	Programming Techniques
<b>200032.5</b>	Statistics for Business

**Spring session**

<b>300583.2</b>	Web Systems Development
<b>300569.2</b>	Computer Security
<b>300572.2</b>	Information Systems Deployment and Management
<b>300089.5</b>	Commercial Applications Development

**Year 3****Autumn session**

<b>300578.3</b>	Professional Development
<b>300584.3</b>	Emerging Trends in Information Systems

And two electives

**Spring session**

**300579.3** Professional Experience

And three electives

**Mid Year Intake****Year 1****Spring session**

<b>300565.2</b>	Computer Networking
<b>300104.4</b>	Database Design and Development
<b>300144.4</b>	Object Oriented Analysis

And one elective

**Year 2****Autumn session**

<b>300580.2</b>	Programming Fundamentals
<b>100483.2</b>	Principles of Professional Communication 1
<b>300585.2</b>	Systems Analysis and Design
<b>300573.2</b>	Information Systems in Context

**Spring session**

<b>300569.2</b>	Computer Security
<b>300572.2</b>	Information Systems Deployment and Management
<b>300089.5</b>	Commercial Applications Development

And one elective

**Year 3****Autumn session**

<b>300582.2</b>	Technologies for Web Applications
<b>300570.3</b>	Human-Computer Interaction
<b>300581.2</b>	Programming Techniques
<b>200032.5</b>	Statistics for Business

**Spring session**

<b>300579.3</b>	Professional Experience
<b>300583.2</b>	Web Systems Development

And two electives

**Year 4****Autumn session**

<b>300578.3</b>	Professional Development
<b>300584.3</b>	Emerging Trends in Information Systems

And two electives

**Sub-major elective spaces**

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

## Key Program - Construction

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### KT3026.1

The Construction Key Program consists of core subjects in structural engineering, project management and construction technologies. Graduates will work in the fields of construction, structural design, project management, quantity surveying and estimation. Career opportunities include those in the private or public sector on projects covering roads, bridges, airports, and residential and commercial buildings.

### Location

Campus	Mode
Penrith Campus	Internal

### Unit Set Structure

#### Full time - Autumn intake

##### Year 2

##### Autumn session

300731.2	Soil Engineering
300040.2	Mechanics of Materials
200486.2	Quantity Surveying 1
300482.2	Engineering Geology and Concrete Materials

##### Spring session

300733.2	Introduction to Structural Engineering
MG102A.3	Management Foundations
300738.3	Surveying for Engineers
200468.2	Estimating 1

##### Year 3

##### Autumn session

300732.2	Structural Analysis
300727.2	Project Management
300728.2	Construction Planning

And one elective

##### Spring session

300053.3	Professional Practice
300730.2	Steel Structures
300736.2	Concrete Structures (UG)

And one elective

##### Industrial Experience

300741.2	Industrial Experience (Engineering)
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##### Year 4 (Non-Honours stream)

##### Autumn session

300483.3	Engineering Project
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**Please note: Students must enrol in 300483 Engineering Project in both Autumn and Spring sessions.**

200471.3	Construction Technology 5 (Envelope)
300488.3	Numerical Methods in Engineering

And one elective

##### Spring session

300483.3	Engineering Project
300725.2	Construction Technology 6 (Services)
300485.3	Foundation Engineering

And one elective

### Honours Stream

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

#### Year 4 (Honours stream)

##### Autumn session

300675.2	Honours Thesis
300488.3	Numerical Methods in Engineering

And one elective

##### Spring session

300675.2	Honours Thesis
300485.3	Foundation Engineering

And one elective

#### Full-time - Spring intake

##### Year 1

##### Spring session

200237.3	Mathematics for Engineers 1
300463.2	Fundamentals of Mechanics
300021.2	Electrical Fundamentals
300462.2	Engineering and Design Concepts

##### Autumn session

200238.2	Mathematics for Engineers 2
300464.2	Physics and Materials
300040.2	Mechanics of Materials
300674.2	Engineering, Design and Construction Practice

##### Year 2

##### Spring session

300733.2	Introduction to Structural Engineering
MG102A.3	Management Foundations
300738.3	Surveying for Engineers
200468.2	Estimating 1

##### Autumn session

300731.2	Soil Engineering
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**300027.2** Engineering Computing  
**200486.2** Quantity Surveying 1  
**300482.2** Engineering Geology and Concrete Materials

**Year 3****Spring session**

**300053.3** Professional Practice  
**300730.2** Steel Structures  
**300736.2** Concrete Structures (UG)

And one elective

**Autumn session**

**300732.2** Structural Analysis  
**300727.2** Project Management  
**300728.2** Construction Planning

And one elective

**Industrial Experience**

**300741.2** Industrial Experience (Engineering)

**Year 4 (Non-Honours stream)****Spring session**

**300483.3** Engineering Project

**Please note: Students must enrol in 300483 Engineering Project in both Spring and Autumn sessions.**

**300725.2** Construction Technology 6 (Services)  
**300485.3** Foundation Engineering

And one elective

**Autumn session**

**300483.3** Engineering Project  
**200471.3** Construction Technology 5 (Envelope)  
**300488.3** Numerical Methods in Engineering

And one elective

**Honours Stream**

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

**Year 4 (Honours stream)****Spring session**

**300675.2** Honours Thesis  
**300485.3** Foundation Engineering

And one elective

**Autumn session**

**300675.2** Honours Thesis  
**300488.3** Numerical Methods in Engineering

And one elective

**Although students may choose any unit offered by the University as an elective, it is recommended that electives are chosen from the following list.**

**300706.2** Building 1  
**300707.2** Building 2  
**300748.2** Quality and Value Management  
**300723.2** Development Control  
**300722.2** Building Regulations Studies  
**200482.2** Construction in Practice 1  
**200484.3** Construction in Practice 3  
**300762.2** Fluid Mechanics  
**300486.2** Infrastructure Engineering  
**200471.3** Construction Technology 5 (Envelope)  
**300725.2** Construction Technology 6 (Services)

**Sub-major elective spaces**

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

**Key Program - Telecommunications****KT3034.1**

This program emphasises the hardware issues related to telecommunications, including digital systems, antenna design, communication hardware, data transfer and management and signal processing. Graduates will work in a variety of situations, such as communications in offices, communications between machines, and intercontinental communication issues. There is a high demand for telecommunications engineers as providers struggle to meet the rapid increase demand for both personal and business use of different modes of communications, including the mobile telephone and Internet.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure****Professional Accreditation**

This Key Program has received full accreditation from Engineers Australia at the level of Professional Engineer.

**Full-time - Autumn intake****Year 2****Autumn session**

**200242.3** Mathematics for Engineers 3  
**300018.2** Digital Systems 1  
**300005.2** Circuit Theory  
**300025.3** Electronics

**Spring session**

<b>300076.3</b>	Microprocessor Systems
<b>300057.3</b>	Signals and Systems
<b>300481.2</b>	Engineering Electromagnetics
<b>300052.2</b>	Power and Machines

**Year 3****Autumn session**

<b>300007.2</b>	Communication Systems
<b>300167.3</b>	Systems Programming 1
<b>300029.3</b>	Engineering Visualization

And one elective

**Spring session**

<b>300065.4</b>	Wireless Communications
<b>300053.3</b>	Professional Practice
<b>300069.3</b>	Digital Signal Processing

And one elective

Elective in Year 3 must be at least a Level 3 unit.

**Industrial Experience:**

<b>300741.2</b>	Industrial Experience (Engineering)
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**Year 4 (Non-honours stream)****Autumn session**

<b>300483.3</b>	Engineering Project
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**Please note: Students must enrol in 300483 Engineering Project in both Autumn and Spring sessions.**

<b>300075.4</b>	Instrumentation and Measurement
<b>300010.3</b>	Data Networks

Choose one of

<b>300019.3</b>	Digital Systems 2
<b>300046.2</b>	Multimedia Signal Processing

**Spring session**

<b>300483.3</b>	Engineering Project
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Choose one of

<b>300068.3</b>	Communication Electronics
<b>300489.2</b>	Radio and Satellite Communication

Please note: Even years students choose 300068 Communications Electronics. Odd years students choose 300489 Radio Satellite Communication.

And two electives

**Honours Stream**

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

**Year 4 (Honours stream)****Autumn session**

<b>300675.2</b>	Honours Thesis
<b>300010.3</b>	Data Networks

And one elective

**Spring session**

<b>300675.2</b>	Honours Thesis
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Choose one of

<b>300068.3</b>	Communication Electronics
<b>300489.2</b>	Radio and Satellite Communication

Please note: Even years students choose 300068 Communications Electronics. Odd years students choose 300489 Radio Satellite Communication.

And one elective

**Full-time - Spring intake****Year 1****Spring intake**

<b>200237.3</b>	Mathematics for Engineers 1
<b>300463.2</b>	Fundamentals of Mechanics
<b>300021.2</b>	Electrical Fundamentals
<b>300462.2</b>	Engineering and Design Concepts

**Autumn session**

<b>200238.2</b>	Mathematics for Engineers 2
<b>300464.2</b>	Physics and Materials
<b>300027.2</b>	Engineering Computing
<b>300005.2</b>	Circuit Theory

**Year 2****Spring session**

<b>200242.3</b>	Mathematics for Engineers 3
<b>300057.3</b>	Signals and Systems
<b>300481.2</b>	Engineering Electromagnetics
<b>300052.2</b>	Power and Machines

**Autumn session**

<b>300007.2</b>	Communication Systems
<b>300018.2</b>	Digital Systems 1
<b>300674.2</b>	Engineering, Design and Construction Practice
<b>300025.3</b>	Electronics

**Year 3****Spring session**

<b>300076.3</b>	Microprocessor Systems
<b>300053.3</b>	Professional Practice
<b>300069.3</b>	Digital Signal Processing
<b>300065.4</b>	Wireless Communications

**Autumn session**

**300167.3** Systems Programming 1  
**300029.3** Engineering Visualization

And two electives

One elective in Year 3 must be at least a Level 3 unit

**Industrial Experience:**

**300741.2** Industrial Experience (Engineering)

**Year 4 (Non-Honours stream)****Spring session**

**300483.3** Engineering Project

**Please note: Students must enrol in 300483 Engineering Project in both Spring and Autumn sessions.**

And choose one of

**300068.3** Communication Electronics  
**300489.2** Radio and Satellite Communication

Please note: Even years students choose 300068 Communications Electronics. Odd years students choose 300489 Radio Satellite Communication.

And two electives

**Autumn session**

**300483.3** Engineering Project  
**300075.4** Instrumentation and Measurement  
**300010.3** Data Networks

Choose one of

**300019.3** Digital Systems 2  
**300046.2** Multimedia Signal Processing

**Honours Stream**

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

**Year 4 (Honours stream)****Spring session**

**300675.2** Honours Thesis

Choose one of

**300068.3** Communication Electronics  
**300489.2** Radio and Satellite Communication

Please note: Even years students choose 300068 Communications Electronics. Odd years students choose 300489 Radio Satellite Communication.

And one elective

**Autumn session**

**300675.2** Honours Thesis  
**300010.3** Data Networks

And one elective

**Sub-major elective spaces**

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

**Key Program - Construction****KT3037.1**

The Construction Key Program consists of core subjects in structural engineering, project management and construction technologies. Graduates will work in the fields of construction, structural design, project management, quantity surveying and estimation. Career opportunities include those in the private or public sector on projects covering roads, bridges, airports, and residential and commercial buildings.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure****Full-time****Year 1****Autumn session**

**200237.3** Mathematics for Engineers 1  
**300464.2** Physics and Materials  
**300027.2** Engineering Computing  
**300674.2** Engineering, Design and Construction Practice

**Spring session**

**200238.2** Mathematics for Engineers 2  
**300463.2** Fundamentals of Mechanics  
**300021.2** Electrical Fundamentals  
**300462.2** Engineering and Design Concepts

**Year 2****Autumn session**

**300731.2** Soil Engineering  
**300040.2** Mechanics of Materials  
**200486.2** Quantity Surveying 1  
**300482.2** Engineering Geology and Concrete Materials

**Spring session**

**300733.2** Introduction to Structural Engineering  
**MG102A.3** Management Foundations

**300738.3** Surveying for Engineers  
**200468.2** Estimating 1

**Year 3****Autumn session**

**300732.2** Structural Analysis  
**300488.3** Numerical Methods in Engineering  
**300728.2** Construction Planning  
**300666.2** Advanced Engineering Topic 1

**Spring session**

**300053.3** Professional Practice  
**300730.2** Steel Structures  
**300736.2** Concrete Structures (UG)  
**300485.3** Foundation Engineering

**Industrial experience**

**300741.2** Industrial Experience (Engineering)

**Honours Stream**

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

**Year 4 (Honours stream)****Autumn session**

**300668.2** Advanced Engineering Thesis  
**300727.2** Project Management

**Spring session**

**300668.2** Advanced Engineering Thesis  
**300667.2** Advanced Engineering Topic 2

**Key Program - Electrical****KT3038.1**

This program includes core subjects from all branches of electrical engineering. Graduates will work in the fields of electronic components, computers, electro-magnetics, power generation and distribution systems, power and control in public utilities, telecommunications, manufacturing, and electrical systems.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure****Professional Accreditation**

This Key Program has received full accreditation from Engineers Australia at the level of Professional Engineer

**Full-time****Year 1****Autumn session**

**200237.3** Mathematics for Engineers 1  
**300464.2** Physics and Materials  
**300027.2** Engineering Computing  
**300674.2** Engineering, Design and Construction Practice

**Spring session**

**200238.2** Mathematics for Engineers 2  
**300463.2** Fundamentals of Mechanics  
**300021.2** Electrical Fundamentals  
**300462.2** Engineering and Design Concepts

**Year 2****Autumn session**

**200242.3** Mathematics for Engineers 3  
**300018.2** Digital Systems 1  
**300005.2** Circuit Theory  
**300025.3** Electronics

**Spring session**

**300076.3** Microprocessor Systems  
**300057.3** Signals and Systems  
**300481.2** Engineering Electromagnetics  
**300052.2** Power and Machines

**Year 3****Autumn session**

**300007.2** Communication Systems  
**300666.2** Advanced Engineering Topic 1  
**300071.2** Electrical Machines 1  
**300009.3** Control Systems

**Spring session**

**300026.3** Energy Systems  
**300053.3** Professional Practice  
**300070.4** Electrical Drives  
**300069.3** Digital Signal Processing

**Industrial experience**

**300741.2** Industrial Experience (Engineering)

**Honours Stream**

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

**Year 4 (Honours stream)****Autumn session**

**300668.2** Advanced Engineering Thesis  
**300075.4** Instrumentation and Measurement



**Spring session**

**300668.2** Advanced Engineering Thesis  
**300667.2** Advanced Engineering Topic 2

**Key Program - Telecommunications****KT3041.1**

This program emphasises the hardware issues related to telecommunications, including digital systems, antenna design, communication hardware, data transfer and management and signal processing. Graduates will work in a variety of situations, such as communications in offices, communications between machines, and intercontinental communication issues. There is a high demand for telecommunications engineers as providers struggle to meet the rapid increase demand for both personal and business use of different modes of communications, including the mobile telephone and Internet.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure****Professional Accreditation**

This Key Program has received full accreditation from Engineers Australia at the level of Professional Engineer

**Full-time****Year 1****Autumn session**

**200237.3** Mathematics for Engineers 1  
**300464.2** Physics and Materials  
**300027.2** Engineering Computing  
**300674.2** Engineering, Design and Construction Practice

**Spring session**

**200238.2** Mathematics for Engineers 2  
**300463.2** Fundamentals of Mechanics  
**300021.2** Electrical Fundamentals  
**300462.2** Engineering and Design Concepts

**Year 2****Autumn session**

**200242.3** Mathematics for Engineers 3  
**300018.2** Digital Systems 1  
**300005.2** Circuit Theory  
**300025.3** Electronics

**Spring session**

**300076.3** Microprocessor Systems  
**300057.3** Signals and Systems  
**300481.2** Engineering Electromagnetics  
**300052.2** Power and Machines

**Year 3****Autumn session**

**300007.2** Communication Systems  
**300069.3** Digital Signal Processing  
**300167.3** Systems Programming 1  
**300029.3** Engineering Visualization

**Spring session**

**300065.4** Wireless Communications  
**300053.3** Professional Practice  
**300010.3** Data Networks  
**300666.2** Advanced Engineering Topic 1

**Industrial experience**

**300741.2** Industrial Experience (Engineering)

**Honours Stream**

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

**Year 4 (Honours stream)****Autumn session**

**300668.2** Advanced Engineering Thesis  
**300667.2** Advanced Engineering Topic 2

**Spring session**

**300668.2** Advanced Engineering Thesis

Choose one of

**300068.3** Communication Electronics  
**300489.2** Radio and Satellite Communication

**Key Program - Mechanical****KT3042.1**

In addition to providing training in conventional mechanical engineering subjects, the course structure introduces students to units of study that address sustainability including sustainable design and sustainable energy engineering. Graduates will be well equipped with broad-based skills that meet the demand of Australian industries and are conscious of the need to promote sustainable design and practices. Examples include mechanical and machinery design; manufacturing; energy production; and marketing and management activities. Skills gained are required in industries such as manufacturing, materials handling, automobile, aerospace, mining, building services and infrastructure development.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure****Full-time - Autumn Intake****Year 2****Autumn session**

<b>300282.2</b>	Industrial Graphics 2: Transition
<b>300035.3</b>	Kinematics and Kinetics of Machines
<b>300040.2</b>	Mechanics of Materials
<b>300762.2</b>	Fluid Mechanics

**Spring session**

<b>300044.2</b>	Microcontrollers and PLCs
<b>300480.2</b>	Dynamics of Mechanical Systems
<b>300735.2</b>	Automated Manufacturing

Choose one of

<b>300760.1</b>	Thermodynamics and Heat Transfer
<b>300761.1</b>	Advanced Mechanics of Materials

**Year 3****Autumn session**

<b>300056.3</b>	Robotics
<b>300764.1</b>	Mechanical Design

Choose one of

<b>300763.1</b>	Advanced Dynamics
<b>300759.1</b>	Thermal and Fluid Engineering

And one elective

**Spring session**

<b>300043.3</b>	Mobile Robotics
<b>300053.3</b>	Professional Practice

Choose one of

<b>300760.1</b>	Thermodynamics and Heat Transfer
<b>300761.1</b>	Advanced Mechanics of Materials

And one elective

**Industrial Experience**

<b>300741.2</b>	Industrial Experience (Engineering)
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**Year 4 (Non-Honours stream)****Autumn session**

<b>300483.3</b>	Engineering Project
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**Please note: Students must enrol in 300483 Engineering Project in both Autumn and Spring sessions.**

<b>300025.3</b>	Electronics
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Choose one of

<b>300763.1</b>	Advanced Dynamics
<b>300759.1</b>	Thermal and Fluid Engineering

And one elective

**Spring session**

<b>300483.3</b>	Engineering Project
<b>300304.3</b>	Sustainable Design: Materials Technology
<b>300487.2</b>	Mechatronic Design

And one elective

**Honours Stream**

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

**Year 4 (Honours stream)****Autumn session**

<b>300675.2</b>	Honours Thesis
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Choose one of

<b>300763.1</b>	Advanced Dynamics
<b>300759.1</b>	Thermal and Fluid Engineering

And one elective

**Spring session**

<b>300675.2</b>	Honours Thesis
<b>300487.2</b>	Mechatronic Design

And one elective

**Full-time - Spring Intake****Year 1****Spring session**

<b>200237.3</b>	Mathematics for Engineers 1
<b>300463.2</b>	Fundamentals of Mechanics
<b>300021.2</b>	Electrical Fundamentals
<b>300462.2</b>	Engineering and Design Concepts

**Autumn session**

<b>200238.2</b>	Mathematics for Engineers 2
<b>300464.2</b>	Physics and Materials
<b>300040.2</b>	Mechanics of Materials
<b>300762.2</b>	Fluid Mechanics

**Year 2****Spring session**

<b>300735.2</b>	Automated Manufacturing
<b>300044.2</b>	Microcontrollers and PLCs

Choose one of

<b>300760.1</b>	Thermodynamics and Heat Transfer
<b>300761.1</b>	Advanced Mechanics of Materials

And one elective

#### Autumn session

- 300282.2** Industrial Graphics 2: Transition  
**300027.2** Engineering Computing  
**300674.2** Engineering, Design and Construction Practice  
**300035.3** Kinematics and Kinetics of Machines

#### Year 3

##### Spring session

- 300053.3** Professional Practice  
**300480.2** Dynamics of Mechanical Systems  
**300043.3** Mobile Robotics

Choose one of

- 300760.1** Thermodynamics and Heat Transfer  
**300761.1** Advanced Mechanics of Materials

##### Autumn session

- 300764.1** Mechanical Design  
**300056.3** Robotics

Choose one of

- 300763.1** Advanced Dynamics  
**300759.1** Thermal and Fluid Engineering

And one elective

#### Industrial Experience

- 300741.2** Industrial Experience (Engineering)

#### Year 4 (Non-Honours stream)

##### Spring session

- 300483.3** Engineering Project

**Please note: Students must enrol in 300483 Engineering Project in both Spring and Autumn sessions.**

- 300304.3** Sustainable Design: Materials Technology  
**300487.2** Mechatronic Design

And one elective

##### Autumn session

- 300483.3** Engineering Project  
**300025.3** Electronics

Choose one of

- 300763.1** Advanced Dynamics  
**300759.1** Thermal and Fluid Engineering

And one elective

#### Honours Stream

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

#### Year 4 (Honours stream)

##### Spring session

- 300675.2** Honours Thesis  
**300487.2** Mechatronic Design

And one elective

##### Autumn session

- 300675.2** Honours Thesis

Choose one of

- 300763.1** Advanced Dynamics  
**300759.1** Thermal and Fluid Engineering

And one elective

**Although students may choose any unit offered by the University as an elective, students are recommended to choose their electives from the following list.**

- 300725.2** Construction Technology 6 (Services)  
**300733.2** Introduction to Structural Engineering  
**300052.2** Power and Machines  
**300005.2** Circuit Theory  
**300071.2** Electrical Machines 1  
**300075.4** Instrumentation and Measurement  
**300732.2** Structural Analysis

#### Sub-major elective spaces

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

#### Key Program - Civil

##### **KT3043.1**

Civil engineering covers the fields of structural design, construction management and water engineering, together with quality assurance and environmental engineering. Graduates will work in the fields of design, construction and management. Projects may cover roads, airports, water supply and sewerage schemes, and large buildings. You may be an engineer in private industry, government departments, or in city, municipal or shire councils.

#### Location

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure****Full-time - Autumn Intake****Year 2****Autumn session**

<b>300731.2</b>	Soil Engineering
<b>300040.2</b>	Mechanics of Materials
<b>300762.2</b>	Fluid Mechanics
<b>300482.2</b>	Engineering Geology and Concrete Materials

**Spring session**

<b>300733.2</b>	Introduction to Structural Engineering
<b>MG102A.3</b>	Management Foundations
<b>300738.3</b>	Surveying for Engineers
<b>300765.2</b>	Hydraulics

**Year 3****Autumn session**

<b>300732.2</b>	Structural Analysis
<b>300486.2</b>	Infrastructure Engineering
<b>300766.2</b>	Hydrology

And one elective

**Spring session**

<b>300053.3</b>	Professional Practice
<b>300730.2</b>	Steel Structures
<b>300736.2</b>	Concrete Structures (UG)

And one elective

**Industrial Experience**

<b>300741.2</b>	Industrial Experience (Engineering)
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**Year 4 (Non-Honours stream)****Autumn session**

<b>300483.3</b>	Engineering Project
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**Please note: Students must enrol in 300483 Engineering Project in both Autumn and Spring sessions.**

<b>300739.2</b>	Timber Structures (UG)
<b>300488.3</b>	Numerical Methods in Engineering

And one elective

**Spring session**

<b>300483.3</b>	Engineering Project
<b>300737.3</b>	Environmental Engineering
<b>300485.3</b>	Foundation Engineering

And one elective

**Honours Stream**

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

**Year 4 (Honours stream)****Autumn session**

<b>300675.2</b>	Honours Thesis
<b>300488.3</b>	Numerical Methods in Engineering

And one elective

**Spring session**

<b>300675.2</b>	Honours Thesis
<b>300485.3</b>	Foundation Engineering

And one elective

**Full-time - Spring Intake****Year 1****Spring session**

<b>200237.3</b>	Mathematics for Engineers 1
<b>300463.2</b>	Fundamentals of Mechanics
<b>300021.2</b>	Electrical Fundamentals
<b>300462.2</b>	Engineering and Design Concepts

**Autumn session**

<b>200238.2</b>	Mathematics for Engineers 2
<b>300464.2</b>	Physics and Materials
<b>300040.2</b>	Mechanics of Materials
<b>300762.2</b>	Fluid Mechanics

**Year 2****Spring session**

<b>300733.2</b>	Introduction to Structural Engineering
<b>300765.2</b>	Hydraulics
<b>300738.3</b>	Surveying for Engineers
<b>MG102A.3</b>	Management Foundations

**Autumn session**

<b>300731.2</b>	Soil Engineering
<b>300027.2</b>	Engineering Computing
<b>300674.2</b>	Engineering, Design and Construction Practice
<b>300482.2</b>	Engineering Geology and Concrete Materials

**Year 3****Spring session**

<b>300053.3</b>	Professional Practice
<b>300730.2</b>	Steel Structures
<b>300736.2</b>	Concrete Structures (UG)

And one elective

**Autumn session**

**300732.2** Structural Analysis  
**300486.2** Infrastructure Engineering  
**300766.2** Hydrology

And one elective

### Industrial Experience

**300741.2** Industrial Experience (Engineering)

### Year 4 (Non-Honours stream)

#### Spring session

**300483.3** Engineering Project

**Please note: Students must enrol in 300483 Engineering Project in both Spring and Autumn sessions.**

**300737.3** Environmental Engineering  
**300485.3** Foundation Engineering

And one elective

#### Autumn session

**300483.3** Engineering Project  
**300739.2** Timber Structures (UG)  
**300488.3** Numerical Methods in Engineering

And one elective

### Honours Stream

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

### Year 4 (Honours stream)

#### Spring session

**300675.2** Honours Thesis  
**300485.3** Foundation Engineering

And one elective

#### Autumn session

**300675.2** Honours Thesis  
**300488.3** Numerical Methods in Engineering

And one elective

### Sub-major elective spaces

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

## Key Program - Robotics and Mechatronics

### KT3045.1

This program provides the skills necessary for the design of smart machines of all types: cruise control in automobiles, pilotless spacecraft, automated factories and medical telerobotics. The course, accompanied by an extensive and integrated hands-on laboratory program, is essentially concerned with the design of intelligent mechanical systems and automation, and includes the study of robotics, computer control, automated manufacturing, microprocessor applications and machine design. Graduates in the program acquire the combined skills of mechanical and computer/electrical engineering that are needed in leading-edge industries such as aerospace systems, the car industry, automation and robotic applications, biomedical engineering, laser systems, and building materials manufacture.

### Location

Campus	Mode
Penrith Campus	Internal

### Unit Set Structure

#### Full-time - Autumn intake

##### Year 2

##### Autumn session

**300025.3** Electronics  
**300035.3** Kinematics and Kinetics of Machines  
**300040.2** Mechanics of Materials  
**300005.2** Circuit Theory

##### Spring session

**300044.2** Microcontrollers and PLCs  
**300480.2** Dynamics of Mechanical Systems  
**300735.2** Automated Manufacturing  
**300052.2** Power and Machines

##### Year 3

##### Autumn session

**300764.1** Mechanical Design  
**300056.3** Robotics

Choose one of

**300763.1** Advanced Dynamics  
**300018.2** Digital Systems 1

Or one elective

##### Spring session

**300043.3** Mobile Robotics  
**300053.3** Professional Practice  
**300487.2** Mechatronic Design

And one elective

#### Industrial Experience:

**300741.2** Industrial Experience (Engineering)

#### Year 4 (Non-Honours stream)

##### Autumn session

**300483.3** Engineering Project

**Please note: Students must enrol in 300483 Engineering Project in both Autumn and Spring sessions.**

**300075.4** Instrumentation and Measurement

**300071.2** Electrical Machines 1

Choose one of

**300763.1** Advanced Dynamics

**300018.2** Digital Systems 1

##### Spring session

**300483.3** Engineering Project

**300304.3** Sustainable Design: Materials Technology

And two electives

#### Honours Stream

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

#### Year 4 (Honours stream)

##### Autumn session

**300675.2** Honours Thesis

**300071.2** Electrical Machines 1

Choose one of

**300763.1** Advanced Dynamics

**300018.2** Digital Systems 1

##### Spring session

**300675.2** Honours Thesis

And two electives

#### Full-time - Spring Intake

##### Year 1

##### Spring session

**200237.3** Mathematics for Engineers 1

**300463.2** Fundamentals of Mechanics

**300021.2** Electrical Fundamentals

**300462.2** Engineering and Design Concepts

##### Autumn session

**200238.2** Mathematics for Engineers 2

**300464.2** Physics and Materials

**300040.2** Mechanics of Materials

**300005.2** Circuit Theory

##### Year 2

##### Spring session

**300735.2** Automated Manufacturing

**300044.2** Microcontrollers and PLCs

**300052.2** Power and Machines

And one elective

##### Autumn session

**300027.2** Engineering Computing

**300674.2** Engineering, Design and Construction Practice

**300035.3** Kinematics and Kinetics of Machines

And one elective

##### Year 3

##### Spring session

**300053.3** Professional Practice

**300480.2** Dynamics of Mechanical Systems

**300487.2** Mechatronic Design

**300043.3** Mobile Robotics

##### Autumn session

**300025.3** Electronics

**300764.1** Mechanical Design

**300056.3** Robotics

Choose one of

**300763.1** Advanced Dynamics

**300018.2** Digital Systems 1

##### Industrial Experience

**300741.2** Industrial Experience (Engineering)

#### Year 4 (Non-Honours stream)

##### Spring session

**300483.3** Engineering Project

**Please note: Students must enrol in 300483 Engineering Project in both Spring and Autumn sessions.**

**300304.3** Sustainable Design: Materials Technology

And two electives

##### Autumn session

**300483.3** Engineering Project

**300075.4** Instrumentation and Measurement

**300071.2** Electrical Machines 1

Choose one of

**300763.1** Advanced Dynamics

**300018.2** Digital Systems 1

## Honours Stream

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

### Year 4 (Honours stream)

#### Spring session

**300675.2** Honours Thesis

And two electives

#### Autumn session

**300675.2** Honours Thesis  
**300071.2** Electrical Machines 1

Choose one of

**300763.1** Advanced Dynamics  
**300018.2** Digital Systems 1

**Although students may choose any unit offered by the University as an elective, students are recommended to choose their electives from the following:**

**300761.1** Advanced Mechanics of Materials  
**300762.2** Fluid Mechanics  
**300760.1** Thermodynamics and Heat Transfer  
**300759.1** Thermal and Fluid Engineering

## Sub-major elective spaces

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

## Key Program - Computer

### KT3046.1

Computer engineering is a specialist area that relates to computers and communication systems that process information and control physical processes and to designing faster computers. Subjects include computer networks, digital systems and communications, microprocessors and embedded micro-controllers. Graduates will work in hardware and software development, in supervisory and data acquisition systems, in industrial applications of computer controlled equipment, in networking and data communications and in developing networking technologies. You will primarily be a problem-solver and organiser, with specialist knowledge of computer hardware, software, communications, computer networking, computer control and real-time computer systems.

## Location

Campus	Mode
Penrith Campus	Internal

## Unit Set Structure

### Full-time - Autumn session

#### Year 2

#### Autumn session

**200242.3** Mathematics for Engineers 3  
**300018.2** Digital Systems 1  
**300005.2** Circuit Theory  
**300025.3** Electronics

#### Spring session

**300076.3** Microprocessor Systems  
**300057.3** Signals and Systems  
**300096.5** Computer Organisation  
**300052.2** Power and Machines

#### Year 3

#### Autumn session

**300167.3** Systems Programming 1  
**300075.4** Instrumentation and Measurement  
**300009.3** Control Systems

And one elective

#### Spring session

**300149.2** Operating Systems  
**300053.3** Professional Practice  
**300069.3** Digital Signal Processing

And one elective

#### Industrial Experience

**300741.2** Industrial Experience (Engineering)

### Year 4 (Non-Honours stream)

#### Autumn session

**300483.3** Engineering Project

**Please note: Students must enrol in 300483 Engineering Project in both Autumn and Spring sessions.**

**300095.4** Computer Networks and Internets  
**300010.3** Data Networks

Choose one of

**300019.3** Digital Systems 2  
**300029.3** Engineering Visualization

Please note: Even years students choose 300019 Digital Systems 2. Odd years students choose 300029 Engineering Visualization.

**Spring session****300483.3** Engineering Project

Choose one of

**300370.1** Digital Control Systems  
**300044.2** Microcontrollers and PLCs

Please note: Even years students choose 300370 Digital Control Systems. Odd years students choose 300044 - Microcontrollers and PLCs.

And two electives

**Honours Stream**

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

**Year 4 (Honours stream)****Autumn session****300675.2** Honours Thesis  
**300095.4** Computer Networks and Internets  
**300010.3** Data Networks**Spring session****300675.2** Honours Thesis

And two electives

**Full-time - Spring intake****Year 1****Spring session****200237.3** Mathematics for Engineers 1  
**300463.2** Fundamentals of Mechanics  
**300021.2** Electrical Fundamentals  
**300462.2** Engineering and Design Concepts**Autumn session****200238.2** Mathematics for Engineers 2  
**300464.2** Physics and Materials  
**300027.2** Engineering Computing  
**300005.2** Circuit Theory**Year 2****Spring session****200242.3** Mathematics for Engineers 3  
**300057.3** Signals and Systems  
**300096.5** Computer Organisation  
**300052.2** Power and Machines**Autumn session****300167.3** Systems Programming 1  
**300018.2** Digital Systems 1  
**300674.2** Engineering, Design and Construction Practice  
**300025.3** Electronics**Year 3****Spring session****300069.3** Digital Signal Processing  
**300053.3** Professional Practice  
**300149.2** Operating Systems  
**300076.3** Microprocessor Systems**Autumn session****300075.4** Instrumentation and Measurement  
**300009.3** Control Systems

And two electives

**Industrial Experience:****300741.2** Industrial Experience (Engineering)**Year 4 (Non-Honours stream)****Spring session****300483.3** Engineering Project**Please note: Students must enrol in 300483 Engineering Project in both Spring and Autumn sessions.**

And choose one of

**300370.1** Digital Control Systems  
**300044.2** Microcontrollers and PLCs

Please note: Even years students choose 300370 Digital Control Systems. Odd years students choose 300044 Microcontrollers and PLCs.

And two electives

**Autumn session****300483.3** Engineering Project  
**300095.4** Computer Networks and Internets  
**300010.3** Data Networks

Choose one of

**300019.3** Digital Systems 2  
**300029.3** Engineering Visualization

Please note: Even years students choose 300019 Digital Systems 2. Odd years students choose 300029 Engineering Visualization.

**Honours Stream**

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

**Year 4 (Honours stream)****Spring session****300675.2** Honours Thesis

And two electives

**Autumn session**



<b>300675.2</b>	Honours Thesis
<b>300095.4</b>	Computer Networks and Internets
<b>300010.3</b>	Data Networks

### Sub-major elective spaces

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

### Key Program - Mechanical

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#### KT3047.1

In addition to providing training in conventional mechanical engineering subjects, the course structure introduces students to units of study that address sustainability including sustainable design and sustainable energy engineering. Graduates will be well equipped with broad-based skills that meet the demand of Australian industries and are conscious of the need to promote sustainable design and practices. Skills gained are required in industries such as manufacturing, materials handling, automobile, aerospace, mining, building services and infrastructure development.

#### Location

Campus	Mode
Penrith Campus	Internal

#### Unit Set Structure

##### Full-time

##### Year 1

##### Autumn session

<b>200237.3</b>	Mathematics for Engineers 1
<b>300464.2</b>	Physics and Materials
<b>300027.2</b>	Engineering Computing
<b>300674.2</b>	Engineering, Design and Construction Practice

##### Spring session

<b>200238.2</b>	Mathematics for Engineers 2
<b>300463.2</b>	Fundamentals of Mechanics
<b>300021.2</b>	Electrical Fundamentals
<b>300462.2</b>	Engineering and Design Concepts

##### Year 2

##### Autumn session

<b>300040.2</b>	Mechanics of Materials
<b>300035.3</b>	Kinematics and Kinetics of Machines
<b>300282.2</b>	Industrial Graphics 2: Transition
<b>300762.2</b>	Fluid Mechanics

##### Spring session

<b>300735.2</b>	Automated Manufacturing
<b>300480.2</b>	Dynamics of Mechanical Systems
<b>300044.2</b>	Microcontrollers and PLCs

Choose one of

<b>300760.1</b>	Thermodynamics and Heat Transfer
<b>300761.1</b>	Advanced Mechanics of Materials

##### Year 3

##### Autumn session

<b>300056.3</b>	Robotics
<b>300666.2</b>	Advanced Engineering Topic 1
<b>300764.1</b>	Mechanical Design

Choose one of

<b>300763.1</b>	Advanced Dynamics
<b>300759.1</b>	Thermal and Fluid Engineering

##### Spring session

<b>300053.3</b>	Professional Practice
<b>300043.3</b>	Mobile Robotics
<b>300487.2</b>	Mechatronic Design

Choose one of

<b>300760.1</b>	Thermodynamics and Heat Transfer
<b>300761.1</b>	Advanced Mechanics of Materials

##### Industrial experience

<b>300741.2</b>	Industrial Experience (Engineering)
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#### Honours Stream

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

##### Year 4 (Honours stream)

##### Autumn session

<b>300668.2</b>	Advanced Engineering Thesis
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Choose one of

<b>300763.1</b>	Advanced Dynamics
<b>300759.1</b>	Thermal and Fluid Engineering

Spring session

<b>300668.2</b>	Advanced Engineering Thesis
<b>300667.2</b>	Advanced Engineering Topic 2

### Key Program - Civil

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#### KT3048.1

Civil engineering covers the fields of structural design, construction management and water engineering, together

with quality assurance and environmental engineering. Graduates will work in the fields of design, construction and management. Projects may cover roads, airports, water supply and sewerage schemes, and large buildings. You may be an engineer in private industry, government departments, or in city, municipal or shire councils.

## Location

Campus	Mode
Penrith Campus	Internal

## Unit Set Structure

### Full-time

#### Year 1

##### Autumn session

<b>200237.3</b>	Mathematics for Engineers 1
<b>300464.2</b>	Physics and Materials
<b>300027.2</b>	Engineering Computing
<b>300674.2</b>	Engineering, Design and Construction Practice

##### Spring session

<b>200238.2</b>	Mathematics for Engineers 2
<b>300463.2</b>	Fundamentals of Mechanics
<b>300021.2</b>	Electrical Fundamentals
<b>300462.2</b>	Engineering and Design Concepts

#### Year 2

##### Autumn session

<b>300731.2</b>	Soil Engineering
<b>300040.2</b>	Mechanics of Materials
<b>300482.2</b>	Engineering Geology and Concrete Materials
<b>300762.2</b>	Fluid Mechanics

##### Spring session

<b>300733.2</b>	Introduction to Structural Engineering
<b>300738.3</b>	Surveying for Engineers
<b>300737.3</b>	Environmental Engineering
<b>300765.2</b>	Hydraulics

#### Year 3

##### Autumn session

<b>300732.2</b>	Structural Analysis
<b>300488.3</b>	Numerical Methods in Engineering
<b>300666.2</b>	Advanced Engineering Topic 1

Choose one of

<b>300486.2</b>	Infrastructure Engineering
<b>300766.2</b>	Hydrology

##### Spring session

<b>300053.3</b>	Professional Practice
<b>300730.2</b>	Steel Structures
<b>300736.2</b>	Concrete Structures (UG)

**300485.3** Foundation Engineering

### Industrial experience:

**300741.2** Industrial Experience (Engineering)

## Honours Stream

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

### Year 4 (Honours stream)

#### Autumn session

**300668.2** Advanced Engineering Thesis

Choose one of

<b>300739.2</b>	Timber Structures (UG)
<b>MG102A.3</b>	Management Foundations

#### Spring session

<b>300668.2</b>	Advanced Engineering Thesis
<b>300667.2</b>	Advanced Engineering Topic 2

## Key Program - Robotics and Mechatronics

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### KT3050.1

An intensive hands-on laboratory program is an essential part of the course. Mechatronics provides skills necessary for the design of smart machines of all types: from cruise control in automobiles to pilotless spacecraft, from automated factories to medical telerobotics. It is especially concerned with design of intelligent mechanical systems. Examples include design and development of automated machinery and their control; design of mechanical equipment and integrated systems; and marketing and management activities. Skills gained are required in all sections of industry, including manufacturing, packaging, materials handling, aerospace and mining.

## Location

Campus	Mode
Penrith Campus	Internal

## Unit Set Structure

### Full-time

#### Year 1

##### Autumn session

<b>200237.3</b>	Mathematics for Engineers 1
<b>300464.2</b>	Physics and Materials
<b>300027.2</b>	Engineering Computing
<b>300674.2</b>	Engineering, Design and Construction Practice

**Spring session**

<b>200238.2</b>	Mathematics for Engineers 2
<b>300463.2</b>	Fundamentals of Mechanics
<b>300021.2</b>	Electrical Fundamentals
<b>300462.2</b>	Engineering and Design Concepts

**Year 2****Autumn session**

<b>300040.2</b>	Mechanics of Materials
<b>300035.3</b>	Kinematics and Kinetics of Machines
<b>300025.3</b>	Electronics
<b>300005.2</b>	Circuit Theory

**Spring session**

<b>300735.2</b>	Automated Manufacturing
<b>300480.2</b>	Dynamics of Mechanical Systems
<b>300044.2</b>	Microcontrollers and PLCs
<b>300052.2</b>	Power and Machines

**Year 3****Autumn session**

<b>300071.2</b>	Electrical Machines 1
<b>300056.3</b>	Robotics
<b>300764.1</b>	Mechanical Design

Choose one of

<b>300763.1</b>	Advanced Dynamics
<b>300018.2</b>	Digital Systems 1

**Spring session**

<b>300053.3</b>	Professional Practice
<b>300666.2</b>	Advanced Engineering Topic 1
<b>300487.2</b>	Mechatronic Design
<b>300043.3</b>	Mobile Robotics

**Industrial experience**

<b>300741.2</b>	Industrial Experience (Engineering)
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**Honours Stream**

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

**Year 4 (Honours stream)****Autumn session**

<b>300668.2</b>	Advanced Engineering Thesis
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Choose one of

<b>300763.1</b>	Advanced Dynamics
<b>300018.2</b>	Digital Systems 1

**Spring session**

<b>300668.2</b>	Advanced Engineering Thesis
<b>300667.2</b>	Advanced Engineering Topic 2

**Key Program - Computer****KT3051.1**

Computer engineering is a specialist area that relates to computers and communication systems that process information and control physical processes and to designing faster computers. Subjects include computer networks, digital systems and communications, microprocessors and embedded micro-controllers. Graduates will work in hardware and software development, in supervisory and data acquisition systems, in industrial applications of computer controlled equipment, in networking and data communications and in developing networking technologies. You will primarily be a problem-solver and organiser, with specialist knowledge of computer hardware, software, communications, computer networking, computer control and real-time computer systems.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure****Full-time****Year 1****Autumn session**

<b>200237.3</b>	Mathematics for Engineers 1
<b>300464.2</b>	Physics and Materials
<b>300027.2</b>	Engineering Computing
<b>300674.2</b>	Engineering, Design and Construction Practice

**Spring session**

<b>200238.2</b>	Mathematics for Engineers 2
<b>300463.2</b>	Fundamentals of Mechanics
<b>300021.2</b>	Electrical Fundamentals
<b>300462.2</b>	Engineering and Design Concepts

**Year 2****Autumn session**

<b>200242.3</b>	Mathematics for Engineers 3
<b>300018.2</b>	Digital Systems 1
<b>300005.2</b>	Circuit Theory
<b>300025.3</b>	Electronics

**Spring session**

<b>300076.3</b>	Microprocessor Systems
<b>300057.3</b>	Signals and Systems
<b>300096.5</b>	Computer Organisation
<b>300052.2</b>	Power and Machines

**Year 3****Autumn session**

<b>300167.3</b>	Systems Programming 1
<b>300010.3</b>	Data Networks
<b>300075.4</b>	Instrumentation and Measurement
<b>300009.3</b>	Control Systems

**Spring session**

<b>300149.2</b>	Operating Systems
<b>300053.3</b>	Professional Practice
<b>300069.3</b>	Digital Signal Processing
<b>300666.2</b>	Advanced Engineering Topic 1

**Industrial experience:**

<b>300741.2</b>	Industrial Experience (Engineering)
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**Honours Stream**

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

**Year 4 (Honours stream)****Autumn session**

<b>300668.2</b>	Advanced Engineering Thesis
<b>300095.4</b>	Computer Networks and Internets

**Spring session**

<b>300668.2</b>	Advanced Engineering Thesis
<b>300667.2</b>	Advanced Engineering Topic 2

**Key Program - Civil****KT3075.1**

Civil engineering covers the fields of structural design, construction management and water engineering, together with quality assurance and environmental engineering. Graduates will work in the fields of design, construction and management. Projects may cover roads, airports, water supply and sewerage schemes, and large buildings. You may be an engineering technologist in private industry, government departments, or in city, municipal or shire councils.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure****Full-time - Autumn Intake****Year 2****Autumn session**

<b>300731.2</b>	Soil Engineering
<b>300040.2</b>	Mechanics of Materials
<b>300762.2</b>	Fluid Mechanics
<b>200238.2</b>	Mathematics for Engineers 2

**Spring session**

<b>300733.2</b>	Introduction to Structural Engineering
<b>MG102A.3</b>	Management Foundations
<b>300738.3</b>	Surveying for Engineers
<b>300765.2</b>	Hydraulics

**Industrial Experience**

<b>300741.2</b>	Industrial Experience (Engineering)
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**Year 3****Autumn session**

<b>300732.2</b>	Structural Analysis
<b>300486.2</b>	Infrastructure Engineering
<b>300766.2</b>	Hydrology
<b>300482.2</b>	Engineering Geology and Concrete Materials

**Spring session**

<b>300053.3</b>	Professional Practice
<b>300730.2</b>	Steel Structures
<b>300736.2</b>	Concrete Structures (UG)

And one elective

**Full-time - Spring Intake****Year 1****Spring session**

<b>300743.2</b>	Mathematics for Engineers Preliminary
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or Elective\*

<b>300463.2</b>	Fundamentals of Mechanics
<b>300021.2</b>	Electrical Fundamentals
<b>300462.2</b>	Engineering and Design Concepts

**\*Elective - Students without a HSC Mathematics band 5 or higher should complete 300743 Mathematics for Engineers Preliminary as an elective**

**Autumn session**

<b>200237.3</b>	Mathematics for Engineers 1
<b>300464.2</b>	Physics and Materials
<b>300040.2</b>	Mechanics of Materials
<b>300762.2</b>	Fluid Mechanics

**Year 2****Spring session**

<b>300733.2</b>	Introduction to Structural Engineering
<b>300765.2</b>	Hydraulics
<b>300738.3</b>	Surveying for Engineers
<b>200238.2</b>	Mathematics for Engineers 2

**Autumn session**

<b>300731.2</b>	Soil Engineering
<b>300027.2</b>	Engineering Computing
<b>300674.2</b>	Engineering, Design and Construction Practice
<b>300482.2</b>	Engineering Geology and Concrete Materials

**Industrial Experience**

<b>300741.2</b>	Industrial Experience (Engineering)
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**Year 3****Spring session**

<b>300053.3</b>	Professional Practice
<b>300730.2</b>	Steel Structures
<b>300736.2</b>	Concrete Structures (UG)
<b>MG102A.3</b>	Management Foundations

**Autumn session**

<b>300732.2</b>	Structural Analysis
<b>300486.2</b>	Infrastructure Engineering
<b>300766.2</b>	Hydrology

And one elective

**Key Program - Computer****KT3076.1**

Computer engineering is a specialist area that relates to computers and communication systems that process information and control physical processes and to designing faster computers. Subjects include computer networks, digital systems and communications, microprocessors and embedded micro-controllers. Graduates will work in hardware and software development, in supervisory and data acquisition systems, in industrial applications of computer controlled equipment, in networking and data communications and in developing networking technologies. You will primarily be a problem-solver and organiser, with specialist knowledge of computer hardware, software, communications, computer networking, computer control and real-time computer systems.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure****Full Time Autumn Intake****Year 2****Autumn session**

<b>200238.2</b>	Mathematics for Engineers 2
<b>300018.2</b>	Digital Systems 1
<b>300005.2</b>	Circuit Theory
<b>300025.3</b>	Electronics

**Spring session**

<b>200242.3</b>	Mathematics for Engineers 3
<b>300057.3</b>	Signals and Systems
<b>300096.5</b>	Computer Organisation
<b>300052.2</b>	Power and Machines

**Year 3****Autumn session**

<b>300167.3</b>	Systems Programming 1
<b>300075.4</b>	Instrumentation and Measurement
<b>300009.3</b>	Control Systems

And one elective

**Spring session**

<b>300149.2</b>	Operating Systems
<b>300053.3</b>	Professional Practice
<b>300069.3</b>	Digital Signal Processing
<b>300076.3</b>	Microprocessor Systems

**Industrial Experience**

<b>300741.2</b>	Industrial Experience (Engineering)
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**Full-time - Spring Intake****Year 1****Spring session**

<b>300743.2</b>	Mathematics for Engineers Preliminary
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or Elective\*

<b>300463.2</b>	Fundamentals of Mechanics
<b>300021.2</b>	Electrical Fundamentals
<b>300462.2</b>	Engineering and Design Concepts

**\*Elective - Students without a HSC Mathematics band 5 or higher should complete 300743 Mathematics for Engineers Preliminary as an elective**

**Autumn session**

<b>200237.3</b>	Mathematics for Engineers 1
<b>300464.2</b>	Physics and Materials
<b>300027.2</b>	Engineering Computing
<b>300005.2</b>	Circuit Theory

**Year 2****Spring session**

<b>200238.2</b>	Mathematics for Engineers 2
<b>300057.3</b>	Signals and Systems
<b>300096.5</b>	Computer Organisation
<b>300052.2</b>	Power and Machines

**Autumn session**

<b>300167.3</b>	Systems Programming 1
<b>300018.2</b>	Digital Systems 1
<b>300674.2</b>	Engineering, Design and Construction Practice
<b>300025.3</b>	Electronics

**Year 3****Spring session**

<b>300069.3</b>	Digital Signal Processing
<b>300053.3</b>	Professional Practice
<b>300149.2</b>	Operating Systems
<b>300076.3</b>	Microprocessor Systems

**Autumn session**

<b>200242.3</b>	Mathematics for Engineers 3
<b>300075.4</b>	Instrumentation and Measurement
<b>300009.3</b>	Control Systems

And one elective

**Industrial Experience**

<b>300741.2</b>	Industrial Experience (Engineering)
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**Key Program - Construction****KT3077.1**

The Construction Key Program consists of core subjects in structural engineering, project management and construction technologies. Graduates will work in the fields of construction, structural design, project management, quantity surveying and estimation. Career opportunities include those in the private or public sector on projects covering roads, bridges, airports, and residential and commercial buildings.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure****Full-time - Autumn Intake****Year 2****Autumn session**

<b>300731.2</b>	Soil Engineering
<b>300040.2</b>	Mechanics of Materials
<b>200486.2</b>	Quantity Surveying 1
<b>200238.2</b>	Mathematics for Engineers 2

**Spring session**

<b>300733.2</b>	Introduction to Structural Engineering
<b>MG102A.3</b>	Management Foundations
<b>300738.3</b>	Surveying for Engineers
<b>200468.2</b>	Estimating 1

**Industrial Experience**

<b>300741.2</b>	Industrial Experience (Engineering)
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**Year 3****Autumn session**

<b>300732.2</b>	Structural Analysis
<b>300727.2</b>	Project Management
<b>300728.2</b>	Construction Planning
<b>300482.2</b>	Engineering Geology and Concrete Materials

**Spring session**

<b>300053.3</b>	Professional Practice
<b>300730.2</b>	Steel Structures
<b>300736.2</b>	Concrete Structures (UG)

And one elective

**Full-time - Spring Intake****Year 1****Spring session**

<b>300743.2</b>	Mathematics for Engineers Preliminary
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or Elective\*

<b>300463.2</b>	Fundamentals of Mechanics
<b>300021.2</b>	Electrical Fundamentals
<b>300462.2</b>	Engineering and Design Concepts

**\*Elective - Students without a HSC Mathematics band 5 or higher should complete 300743 Mathematics for Engineers Preliminary as an elective**

**Autumn session**

<b>200237.3</b>	Mathematics for Engineers 1
<b>300464.2</b>	Physics and Materials
<b>300040.2</b>	Mechanics of Materials
<b>300674.2</b>	Engineering, Design and Construction Practice

**Year 2****Spring session**

<b>300733.2</b>	Introduction to Structural Engineering
<b>MG102A.3</b>	Management Foundations
<b>300738.3</b>	Surveying for Engineers
<b>200238.2</b>	Mathematics for Engineers 2

**Autumn session**

<b>300731.2</b>	Soil Engineering
<b>300027.2</b>	Engineering Computing
<b>200486.2</b>	Quantity Surveying 1
<b>300482.2</b>	Engineering Geology and Concrete Materials

**Industrial Experience**

<b>300741.2</b>	Industrial Experience (Engineering)
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**Year 3****Spring session**

<b>300053.3</b>	Professional Practice
<b>300730.2</b>	Steel Structures
<b>300736.2</b>	Concrete Structures (UG)
<b>200468.2</b>	Estimating 1

**Autumn session**

<b>300732.2</b>	Structural Analysis
<b>300727.2</b>	Project Management
<b>300728.2</b>	Construction Planning

And one elective

**Key Program - Electrical****KT3078.1**

This program includes core subjects from all branches of electrical engineering. Graduates will work in the fields of electronic components, computers, electro-magnetics, power generation and distribution systems, power and control in public utilities, telecommunications, manufacturing, and electrical systems.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure****Full-time - Autumn Intake****Year 2****Autumn session**

<b>200238.2</b>	Mathematics for Engineers 2
<b>300018.2</b>	Digital Systems 1
<b>300005.2</b>	Circuit Theory
<b>300025.3</b>	Electronics

**Spring session**

<b>200242.3</b>	Mathematics for Engineers 3
<b>300057.3</b>	Signals and Systems
<b>300481.2</b>	Engineering Electromagnetics
<b>300052.2</b>	Power and Machines

**Year 3****Autumn session**

<b>300007.2</b>	Communication Systems
<b>300071.2</b>	Electrical Machines 1
<b>300009.3</b>	Control Systems

And one elective

**Spring session**

<b>300026.3</b>	Energy Systems
<b>300053.3</b>	Professional Practice
<b>300069.3</b>	Digital Signal Processing
<b>300076.3</b>	Microprocessor Systems

**Industrial Experience**

<b>300741.2</b>	Industrial Experience (Engineering)
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**Full-time - Spring Intake****Year 1****Spring session**

<b>300743.2</b>	Mathematics for Engineers Preliminary
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or Elective\*

<b>300463.2</b>	Fundamentals of Mechanics
<b>300021.2</b>	Electrical Fundamentals
<b>300462.2</b>	Engineering and Design Concepts

\*Elective - Students without a HSC Mathematics band 5 or higher should complete 300743 Mathematics for Engineers Preliminary as an elective

**Autumn session**

<b>200237.3</b>	Mathematics for Engineers 1
<b>300464.2</b>	Physics and Materials
<b>300027.2</b>	Engineering Computing
<b>300005.2</b>	Circuit Theory

**Year 2****Spring session**

<b>200238.2</b>	Mathematics for Engineers 2
<b>300057.3</b>	Signals and Systems
<b>300481.2</b>	Engineering Electromagnetics
<b>300052.2</b>	Power and Machines

**Autumn session**

<b>200242.3</b>	Mathematics for Engineers 3
<b>300018.2</b>	Digital Systems 1
<b>300674.2</b>	Engineering, Design and Construction Practice
<b>300025.3</b>	Electronics

**Year 3****Spring session**

<b>300026.3</b>	Energy Systems
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**300053.3** Professional Practice  
**300069.3** Digital Signal Processing  
**300076.3** Microprocessor Systems

**Autumn session**

**300007.2** Communication Systems  
**300071.2** Electrical Machines 1  
**300009.3** Control Systems

And one elective

**Industrial Experience**

**300741.2** Industrial Experience (Engineering)

**Key Program - Environmental****KT3079.1**

This program provides an essential grounding in ecology, civil engineering and environmental management. Environmental engineers are concerned with ensuring a sustainable and better future for the community by developing and managing systems that integrate with and protect our environment. Graduates will work as environmental engineering technologists in private, industrial, and mining companies; government departments; and city, municipal and shire councils.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure****Full-time - Autumn Intake****Year 2****Autumn session**

**300731.2** Soil Engineering  
**300040.2** Mechanics of Materials  
**300762.2** Fluid Mechanics  
**300469.2** Introductory Chemistry

**Spring session**

**300733.2** Introduction to Structural Engineering  
**300738.3** Surveying for Engineers  
**200238.2** Mathematics for Engineers 2  
**300765.2** Hydraulics

**Industrial Experience**

**300741.2** Industrial Experience (Engineering)

**Year 3****Autumn session**

**300777.2** Air Quality and Climate Change  
**300482.2** Engineering Geology and Concrete Materials

**300486.2** Infrastructure Engineering  
**300766.2** Hydrology

**Spring session**

**300737.3** Environmental Engineering  
**300663.2** Resource Sustainability  
**300053.3** Professional Practice

And one elective (elective must be at least a Level 3 unit)

**Full-time - Spring Intake****Year 1****Spring session**

**300743.2** Mathematics for Engineers Preliminary

or Elective\*

**300463.2** Fundamentals of Mechanics  
**300021.2** Electrical Fundamentals  
**300462.2** Engineering and Design Concepts

**\*Elective - Students without a HSC Mathematics band 5 or higher should complete 300743 Mathematics for Engineers Preliminary as an elective**

**Autumn session**

**200237.3** Mathematics for Engineers 1  
**300464.2** Physics and Materials  
**300040.2** Mechanics of Materials  
**300762.2** Fluid Mechanics

**Year 2****Spring session**

**300733.2** Introduction to Structural Engineering  
**300738.3** Surveying for Engineers  
**200238.2** Mathematics for Engineers 2  
**300765.2** Hydraulics

**Autumn session**

**300731.2** Soil Engineering  
**300027.2** Engineering Computing  
**300674.2** Engineering, Design and Construction Practice  
**300469.2** Introductory Chemistry

**Industrial Experience**

**300741.2** Industrial Experience (Engineering)

**Year 3****Spring session**

**300737.3** Environmental Engineering  
**300663.2** Resource Sustainability  
**300053.3** Professional Practice

And one elective (elective must be at least a Level 3 unit)

**Autumn session**



<b>300777.2</b>	Air Quality and Climate Change
<b>300482.2</b>	Engineering Geology and Concrete Materials
<b>300486.2</b>	Infrastructure Engineering
<b>300766.2</b>	Hydrology

<b>300763.1</b>	Advanced Dynamics
<b>300759.1</b>	Thermal and Fluid Engineering

## Key Program - Mechanical

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### KT3080.1

In addition to providing training in conventional mechanical engineering subjects, the course structure introduces students to units of study that address sustainability including sustainable design and sustainable energy engineering. Graduates will be well equipped with broad-based skills that meet the demand of Australian industries and are conscious of the need to promote sustainable design and practices. Examples include mechanical and machinery design; manufacturing; energy production; and marketing and management activities. Skills gained are required in industries such as manufacturing, materials handling, automobile, aerospace, mining, building services and infrastructure development.

### Location

Campus	Mode
Penrith Campus	Internal

### Unit Set Structure

#### Full-time - Autumn Intake

##### Year 2

##### Autumn session

<b>200238.2</b>	Mathematics for Engineers 2
<b>300035.3</b>	Kinematics and Kinetics of Machines
<b>300040.2</b>	Mechanics of Materials
<b>300762.2</b>	Fluid Mechanics

##### Spring session

<b>300044.2</b>	Microcontrollers and PLCs
<b>300480.2</b>	Dynamics of Mechanical Systems
<b>300735.2</b>	Automated Manufacturing

Choose one of

<b>300760.1</b>	Thermodynamics and Heat Transfer
<b>300761.1</b>	Advanced Mechanics of Materials

### Industrial Experience

<b>300741.2</b>	Industrial Experience (Engineering)
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##### Year 3

##### Autumn session

<b>300282.2</b>	Industrial Graphics 2: Transition
<b>300764.1</b>	Mechanical Design
<b>300056.3</b>	Robotics

Choose one of

##### Spring session

<b>300043.3</b>	Mobile Robotics
<b>300053.3</b>	Professional Practice

Choose one of

<b>300760.1</b>	Thermodynamics and Heat Transfer
<b>300761.1</b>	Advanced Mechanics of Materials

And one elective

#### Full-time - Spring Intake

##### Year 1

##### Spring session

<b>300743.2</b>	Mathematics for Engineers Preliminary
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or Elective\*

<b>300463.2</b>	Fundamentals of Mechanics
<b>300021.2</b>	Electrical Fundamentals
<b>300462.2</b>	Engineering and Design Concepts

**\*Elective - Students without a HSC Mathematics band 5 or higher should complete 300743 Mathematics for Engineers Preliminary as an elective**

##### Autumn session

<b>200237.3</b>	Mathematics for Engineers 1
<b>300464.2</b>	Physics and Materials
<b>300040.2</b>	Mechanics of Materials
<b>300762.2</b>	Fluid Mechanics

##### Year 2

##### Spring session

<b>200238.2</b>	Mathematics for Engineers 2
<b>300735.2</b>	Automated Manufacturing
<b>300044.2</b>	Microcontrollers and PLCs

Choose one of

<b>300760.1</b>	Thermodynamics and Heat Transfer
<b>300761.1</b>	Advanced Mechanics of Materials

##### Autumn session

<b>300282.2</b>	Industrial Graphics 2: Transition
<b>300027.2</b>	Engineering Computing
<b>300674.2</b>	Engineering, Design and Construction Practice
<b>300035.3</b>	Kinematics and Kinetics of Machines

### Industrial Experience

<b>300741.2</b>	Industrial Experience (Engineering)
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##### Year 3

##### Spring session

**300053.3** Professional Practice  
**300480.2** Dynamics of Mechanical Systems  
**300043.3** Mobile Robotics

Choose one of

**300760.1** Thermodynamics and Heat Transfer  
**300761.1** Advanced Mechanics of Materials

#### Autumn session

**300764.1** Mechanical Design  
**300056.3** Robotics

Choose one of

**300763.1** Advanced Dynamics  
**300759.1** Thermal and Fluid Engineering

And one elective

### Key Program - Robotics and Mechatronics

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#### **KT3081.1**

This program provides the skills necessary for the design of smart machines of all types: cruise control in automobiles, pilotless spacecraft, automated factories and medical telerobotics. The course, accompanied by an extensive and integrated hands-on laboratory program, is essentially concerned with the design of intelligent mechanical systems and automation, and includes the study of robotics, computer control, automated manufacturing, microprocessor applications and machine design. Graduates in the program acquire the combined skills of mechanical and computer/electrical engineering that are needed in leading-edge industries such as aerospace systems, the car industry, automation and robotic applications, biomedical engineering, laser systems, and building materials manufacture.

#### Location

Campus	Mode
Penrith Campus	Internal

#### Unit Set Structure

##### Full-time - Autumn Intake

###### Year 2

###### Autumn session

**200238.2** Mathematics for Engineers 2  
**300035.3** Kinematics and Kinetics of Machines  
**300040.2** Mechanics of Materials  
**300005.2** Circuit Theory

###### Spring session

**300044.2** Microcontrollers and PLCs  
**300480.2** Dynamics of Mechanical Systems  
**300735.2** Automated Manufacturing  
**300052.2** Power and Machines

##### Industrial Experience

**300741.2** Industrial Experience (Engineering)

###### Year 3

###### Autumn session

**300025.3** Electronics  
**300764.1** Mechanical Design  
**300056.3** Robotics

Choose one of

**300763.1** Advanced Dynamics  
**300018.2** Digital Systems 1

###### Spring session

**300043.3** Mobile Robotics  
**300053.3** Professional Practice  
**300487.2** Mechatronic Design

And one elective

##### Full-time - Spring Intake

###### Year 1

###### Spring session

**300743.2** Mathematics for Engineers Preliminary

or Elective\*

**300463.2** Fundamentals of Mechanics  
**300021.2** Electrical Fundamentals  
**300462.2** Engineering and Design Concepts

**\*Elective - Students without a HSC Mathematics band 5 or higher should complete 300743 Mathematics for Engineers Preliminary as an elective**

###### Autumn session

**200237.3** Mathematics for Engineers 1  
**300464.2** Physics and Materials  
**300040.2** Mechanics of Materials  
**300005.2** Circuit Theory

###### Year 2

###### Spring session

**200238.2** Mathematics for Engineers 2  
**300735.2** Automated Manufacturing  
**300044.2** Microcontrollers and PLCs  
**300052.2** Power and Machines

###### Autumn session

**300027.2** Engineering Computing  
**300674.2** Engineering, Design and Construction Practice  
**300035.3** Kinematics and Kinetics of Machines

And one elective

**Industrial Experience****300741.2** Industrial Experience (Engineering)**Year 3****Spring session**

**300053.3** Professional Practice  
**300480.2** Dynamics of Mechanical Systems  
**300487.2** Mechatronic Design  
**300043.3** Mobile Robotics

**Autumn session**

**300025.3** Electronics  
**300764.1** Mechanical Design  
**300056.3** Robotics

Choose one of

**300763.1** Advanced Dynamics  
**300018.2** Digital Systems 1

**Key Program - Telecommunications****KT3082.1**

This program emphasises the hardware issues related to telecommunications, including digital systems, antenna design, communication hardware, data transfer and management and signal processing. Graduates will work in a variety of situations, such as communications in offices, communications between machines, and intercontinental communication issues. There is a high demand for telecommunications engineering technologists as providers struggle to meet the rapid increase demand for both personal and business use of different modes of communications, including the mobile telephone and Internet.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure****Full-time - Autumn Intake****Year 2****Autumn session**

**200238.2** Mathematics for Engineers 2  
**300018.2** Digital Systems 1  
**300005.2** Circuit Theory  
**300025.3** Electronics

**Spring session**

**200242.3** Mathematics for Engineers 3  
**300057.3** Signals and Systems  
**300481.2** Engineering Electromagnetics

**300052.2** Power and Machines**Year 3****Autumn session**

**300007.2** Communication Systems  
**300167.3** Systems Programming 1  
**300029.3** Engineering Visualization

and one elective (elective must be at least a Level 3 unit)

**Spring session**

**300065.4** Wireless Communications  
**300053.3** Professional Practice  
**300069.3** Digital Signal Processing  
**300076.3** Microprocessor Systems

**Industrial Experience****300741.2** Industrial Experience (Engineering)**Full-time - Spring Intake****Year 1****Spring session****300743.2** Mathematics for Engineers Preliminary

or Elective\*

**300463.2** Fundamentals of Mechanics  
**300021.2** Electrical Fundamentals  
**300462.2** Engineering and Design Concepts

**\*Elective - Students without a HSC Mathematics band 5 or higher should complete 300743 Mathematics for Engineers Preliminary as an elective**

**Autumn session**

**200237.3** Mathematics for Engineers 1  
**300464.2** Physics and Materials  
**300027.2** Engineering Computing  
**300005.2** Circuit Theory

**Year 2****Spring session**

**200238.2** Mathematics for Engineers 2  
**300057.3** Signals and Systems  
**300481.2** Engineering Electromagnetics  
**300052.2** Power and Machines

**Autumn session**

**300007.2** Communication Systems  
**300018.2** Digital Systems 1  
**300674.2** Engineering, Design and Construction Practice  
**300025.3** Electronics

**Year 3****Spring session**

<b>300076.3</b>	Microprocessor Systems
<b>300053.3</b>	Professional Practice
<b>300069.3</b>	Digital Signal Processing
<b>300065.4</b>	Wireless Communications

**Autumn session**

<b>200242.3</b>	Mathematics for Engineers 3
<b>300167.3</b>	Systems Programming 1
<b>300029.3</b>	Engineering Visualization

and one elective (elective must be at least a Level 3 unit)

**Industrial Experience**

<b>300741.2</b>	Industrial Experience (Engineering)
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**Key Program - Environmental****KT3087.1**

This program provides an essential grounding in ecology, civil engineering and environmental management. Environmental engineers are concerned with ensuring a sustainable and better future for the community by developing and managing systems that integrate with and protect our environment. Graduates will work as environmental engineers in private, industrial, and mining companies; government departments; and city, municipal and shire councils.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure****Full-time****Year 1****Autumn session**

<b>200237.3</b>	Mathematics for Engineers 1
<b>300464.2</b>	Physics and Materials
<b>300027.2</b>	Engineering Computing
<b>300674.2</b>	Engineering, Design and Construction Practice

**Spring session**

<b>200238.2</b>	Mathematics for Engineers 2
<b>300463.2</b>	Fundamentals of Mechanics
<b>300021.2</b>	Electrical Fundamentals
<b>300462.2</b>	Engineering and Design Concepts

**Year 2****Autumn session**

<b>300731.2</b>	Soil Engineering
<b>300040.2</b>	Mechanics of Materials
<b>300762.2</b>	Fluid Mechanics
<b>300469.2</b>	Introductory Chemistry

**Spring session**

<b>300733.2</b>	Introduction to Structural Engineering
<b>300738.3</b>	Surveying for Engineers
<b>300663.2</b>	Resource Sustainability
<b>300765.2</b>	Hydraulics

**Year 3****Autumn session**

<b>300633.1</b>	Management of Aquatic Environments
<b>300482.2</b>	Engineering Geology and Concrete Materials
<b>300766.2</b>	Hydrology
<b>300284.4</b>	Environmental Risk Management

**Spring session**

<b>300737.3</b>	Environmental Engineering
<b>300666.2</b>	Advanced Engineering Topic 1
<b>300053.3</b>	Professional Practice
<b>MG102A.3</b>	Management Foundations

**Industrial experience**

<b>300741.2</b>	Industrial Experience (Engineering)
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**Honours Stream**

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

**Year 4 (Honours stream)****Autumn session**

<b>300668.2</b>	Advanced Engineering Thesis
<b>300777.2</b>	Air Quality and Climate Change

**Spring session**

<b>300668.2</b>	Advanced Engineering Thesis
<b>300667.2</b>	Advanced Engineering Topic 2

**Key Program - Electrical****KT3088.1**

This program includes core subjects from all branches of electrical engineering. Graduates will work in the fields of electronic components, computers, electro-magnetics, power generation and distribution systems, power and control in public utilities, telecommunications, manufacturing, and electrical systems.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure****Full-time - Autumn intake****Year 2****Autumn session**

<b>200242.3</b>	Mathematics for Engineers 3
<b>300018.2</b>	Digital Systems 1
<b>300005.2</b>	Circuit Theory
<b>300025.3</b>	Electronics

**Spring session**

<b>300076.3</b>	Microprocessor Systems
<b>300057.3</b>	Signals and Systems
<b>300481.2</b>	Engineering Electromagnetics
<b>300052.2</b>	Power and Machines

**Year 3****Autumn session**

<b>300007.2</b>	Communication Systems
<b>300071.2</b>	Electrical Machines 1
<b>300009.3</b>	Control Systems

And one elective

**Spring session**

<b>300026.3</b>	Energy Systems
<b>300053.3</b>	Professional Practice
<b>300069.3</b>	Digital Signal Processing

And one elective

**Industrial Experience:**

<b>300741.2</b>	Industrial Experience (Engineering)
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**Year 4 (Non-honours stream)****Autumn session**

<b>300483.3</b>	Engineering Project
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**Please note: Students must enrol in 300483 Engineering Project in both Autumn and Spring sessions.**

<b>300075.4</b>	Instrumentation and Measurement
<b>300010.3</b>	Data Networks

Choose one of

<b>300019.3</b>	Digital Systems 2
<b>300024.1</b>	Electronic Systems Design

**Spring session**

<b>300483.3</b>	Engineering Project
<b>300070.4</b>	Electrical Drives

And two electives

**Honours Stream**

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

**Year 4 (Honours stream)****Autumn session**

<b>300675.2</b>	Honours Thesis
<b>300075.4</b>	Instrumentation and Measurement

And one elective

**Spring session**

<b>300675.2</b>	Honours Thesis
<b>300070.4</b>	Electrical Drives

And one elective

**Full-time - Spring intake****Year 1****Spring intake**

<b>200237.3</b>	Mathematics for Engineers 1
<b>300463.2</b>	Fundamentals of Mechanics
<b>300021.2</b>	Electrical Fundamentals
<b>300462.2</b>	Engineering and Design Concepts

**Autumn session**

<b>200238.2</b>	Mathematics for Engineers 2
<b>300464.2</b>	Physics and Materials
<b>300027.2</b>	Engineering Computing
<b>300005.2</b>	Circuit Theory

**Year 2****Spring session**

<b>200242.3</b>	Mathematics for Engineers 3
<b>300057.3</b>	Signals and Systems
<b>300481.2</b>	Engineering Electromagnetics
<b>300052.2</b>	Power and Machines

**Autumn session**

<b>300071.2</b>	Electrical Machines 1
<b>300018.2</b>	Digital Systems 1
<b>300674.2</b>	Engineering, Design and Construction Practice
<b>300025.3</b>	Electronics

**Year 3****Spring session**

<b>300026.3</b>	Energy Systems
<b>300053.3</b>	Professional Practice
<b>300069.3</b>	Digital Signal Processing
<b>300076.3</b>	Microprocessor Systems

**Autumn session**

<b>300007.2</b>	Communication Systems
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**300009.3** Control Systems

And two electives

**Industrial Experience****300741.2** Industrial Experience (Engineering)**Year 4 (Non-Honours stream)****Spring session****300483.3** Engineering Project

**Please note: Students must enrol in 300483 Engineering Project in both Spring and Autumn sessions.**

**300070.4** Electrical Drives

And two electives

**Autumn session**

**300483.3** Engineering Project  
**300075.4** Instrumentation and Measurement  
**300010.3** Data Networks

Choose one of

**300019.2** Digital Systems 2  
**300024.2** Electronic Systems Design

**Honours Stream**

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

**Year 4 (Honours stream)****Spring session**

**300675.2** Honours Thesis  
**300070.4** Electrical Drives

And one elective

**Autumn session**

**300675.2** Honours Thesis  
**300075.4** Instrumentation and Measurement

And one elective

**Sub-major elective spaces**

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

**Key Program - Environmental****KT3089.1**

This program provides an essential grounding in ecology, civil engineering and environmental management. Environmental engineers are concerned with ensuring a sustainable and better future for the community by developing and managing systems that integrate with and protect our environment. Graduates will work as environmental engineers in private, industrial, and mining companies; government departments; and city, municipal and shire councils.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure****Full-time - Autumn intake****Year 2****Autumn session**

**300731.2** Soil Engineering  
**300040.2** Mechanics of Materials  
**300762.2** Fluid Mechanics  
**300469.2** Introductory Chemistry

**Spring session**

**300733.2** Introduction to Structural Engineering  
**300738.3** Surveying for Engineers  
**300663.2** Resource Sustainability  
**300765.2** Hydraulics

**Year 3****Autumn session**

**300777.2** Air Quality and Climate Change  
**300482.2** Engineering Geology and Concrete Materials  
**300486.2** Infrastructure Engineering  
**300766.2** Hydrology

**Spring session**

**300737.3** Environmental Engineering  
**300053.3** Professional Practice

And two electives

Note: one of the Year 3 Electives must be at least a Level 3 unit.

**Industrial Experience****300741.2** Industrial Experience (Engineering)

**Year 4 (Non-Honours stream)****Autumn session****300483.3** Engineering Project

**Please note: Students must enrol in 300483 Engineering Project in both Autumn and Spring sessions.**

**300633.1** Management of Aquatic Environments  
**300284.4** Environmental Risk Management  
**300488.3** Numerical Methods in Engineering

**Spring session**

**300483.3** Engineering Project  
**MG102A.3** Management Foundations

And two electives

**Honours Stream**

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

**Year 4 (Honours stream)****Autumn session**

**300675.2** Honours Thesis  
**300633.1** Management of Aquatic Environments

And one elective

**Spring session**

**300675.2** Honours Thesis  
**MG102A.3** Management Foundations

And one elective

**Full-time - Spring Intake****Year 1****Spring session**

**200237.3** Mathematics for Engineers 1  
**300463.2** Fundamentals of Mechanics  
**300021.2** Electrical Fundamentals  
**300462.2** Engineering and Design Concepts

**Autumn session**

**200238.2** Mathematics for Engineers 2  
**300464.2** Physics and Materials  
**300040.2** Mechanics of Materials  
**300762.2** Fluid Mechanics

**Year 2****Spring session**

**300733.2** Introduction to Structural Engineering  
**300738.3** Surveying for Engineers  
**300663.2** Resource Sustainability  
**300765.2** Hydraulics

**Autumn session**

**300731.2** Soil Engineering  
**300027.2** Engineering Computing  
**300674.2** Engineering, Design and Construction Practice  
**300469.2** Introductory Chemistry

**Year 3****Spring session**

**300737.3** Environmental Engineering  
**300053.3** Professional Practice

And two electives

Note: one of the Year 3 Electives must be at least a Level 3 unit.

**Autumn session**

**300777.2** Air Quality and Climate Change  
**300482.2** Engineering Geology and Concrete Materials  
**300486.2** Infrastructure Engineering  
**300766.2** Hydrology

**Industrial Experience**

**300741.2** Industrial Experience (Engineering)

**Year 4 (Non-Honours stream)****Spring session**

**300483.3** Engineering Project

**Please note: Students must enrol in 300483 Engineering Project in both Spring and Autumn sessions.**

**MG102A.3** Management Foundations

And two electives

**Autumn session**

**300483.3** Engineering Project  
**300633.1** Management of Aquatic Environments  
**300284.4** Environmental Risk Management  
**300488.3** Numerical Methods in Engineering

**Honours Stream**

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

**Year 4 (Honours stream)**

**300675.2** Honours Thesis  
**MG102A.3** Management Foundations

And one elective

**Autumn session**

**300675.2** Honours Thesis  
**300633.1** Management of Aquatic Environments

And one elective

### Sub-major elective spaces

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

### Major - Religion, Anthropology and Philosophy

#### M1024.1

This multidisciplinary major pursues critical and rational analysis of questions about individuals and societies; about human knowledge, culture and existence. It inquires into issues about human nature; the scope and limits of knowledge and belief; God and ethics; conflict and violence; ritual and myth; and religion, politics and culture. The major provides students with rigorous training in analytic and creative thinking, intellectual independence and cultural and ethical awareness.

#### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal

#### Unit Set Structure

Students must complete the compulsory Level 1 unit

<b>101686.2</b>	Anthropology and Philosophy Look at Religion
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and seven units from the following pools with no less than three units at Level 3

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

#### Level 1 Unit Pool

<b>101462.2</b>	Understanding Islam and Muslim Societies
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#### Level 2 Unit Pool

<b>101882.1</b>	A History of Modern Global Buddhism
<b>100850.2</b>	Buddhism in the Contemporary World
<b>100852.2</b>	Classics of Modern Philosophy
<b>101856.1</b>	Film and Philosophy
<b>101464.3</b>	Great Texts of Islam: Qur'an and Hadith
<b>101843.2</b>	Philosophy and Environment
<b>101881.1</b>	Philosophy and the Good Life
<b>101867.1</b>	The Ethical Life
<b>101294.3</b>	The Western Philosophical Tradition

#### Level 3 Unit Pool

<b>101295.2</b>	Aesthetics
<b>101688.2</b>	Anthropology of Religion

<b>400087.5</b>	Applied Critical Methods
<b>100863.3</b>	Ethical Cultures
<b>100998.4</b>	Evolutionary Thinking
<b>100961.4</b>	Humanities Internship
<b>101463.4</b>	Islam in the Modern World
<b>101467.2</b>	Islam in Southeast Asia
<b>101465.2</b>	Islamic Law in a Changing World
<b>101724.2</b>	Literary Animals
<b>100875.4</b>	Literature and Philosophy
<b>100275.4</b>	Philosophies of Love and Death
<b>101761.2</b>	Philosophy and the Visual
<b>100879.2</b>	Philosophy Today
<b>101665.3</b>	Politics and Religion
<b>101003.2</b>	Religion and Culture
<b>101359.5</b>	Sociology of Religion
<b>100969.2</b>	Theories of Conflict and Violence
<b>101880.1</b>	The Space of Literature
<b>101798.2</b>	Understanding Freedom
<b>101010.3</b>	What is the Human?
<b>101471.2</b>	Women in Arabic and Islamic Literature

### Major - Media and Visual Cultures

#### M1025.1

The rapid flow of visual images with which we communicate today – on the internet, by web and moblogs – is a contemporary manifestation of the importance of visual cultures in everyday life. The Media and Visual Cultures major area equips students with multidisciplinary knowledge and skills in critical art history and theory, digital media, film and television studies, philosophy, and cultural studies. It aims to create career ready graduates with the skills necessary to interpret the production and dissemination of visual images and their meanings in a variety of media as well as cultural and institutional contexts.

#### Location

Campus	Mode
Bankstown Campus	Internal
Penrith Campus	Internal

#### Unit Set Structure

Students must complete the compulsory Level 1 unit

<b>101734.2</b>	Media and Visual Cultures: Case Studies
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and the Level 3 unit

<b>101295.2</b>	Aesthetics
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Students must also complete six of the Level 2/3 units from the following pools with no less than two at Level 3:

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

#### Level 2 Unit Pool

<b>100245.2</b>	Asian Cinema
<b>101248.3</b>	Australian Art 1
<b>101626.3</b>	Children's Literature: Image and Text
<b>101250.3</b>	Digital Futures
<b>101856.1</b>	Film and Philosophy



<b>10157.2</b>	History and Theory of the Avant-Garde
<b>100964.2</b>	Introduction to Film Studies
<b>101254.3</b>	The Animated Image: Histories and Theories
<b>10371.3</b>	The Art Museum - from the Prince to the Public
<b>100890.2</b>	The Art of Landscape
<b>101795.2</b>	The Musical
<b>10158.2</b>	Writings on Art

**Level 3 Unit Pool**

<b>400087.5</b>	Applied Critical Methods
<b>100959.2</b>	Australian Art II
<b>100989.2</b>	Cinema and Realism
<b>100990.2</b>	Cinema, Culture, Memory
<b>100256.4</b>	Film and Affect
<b>100866.3</b>	Film and Drama
<b>100961.4</b>	Humanities Internship
<b>101468.2</b>	Islam, Media and Conflict
<b>101732.2</b>	Media, The Everyday and Uneven Modernities
<b>101800.2</b>	Media, Violence, Protest, Terror
<b>101001.3</b>	Modernity and Cinema
<b>101761.2</b>	Philosophy and the Visual
<b>101253.3</b>	Public Memory and Commemoration
<b>101006.2</b>	Social Semiotics
<b>101738.2</b>	The Art Game: Fraud, Forgery, Theft and Perfidy
<b>101266.2</b>	The Art of Modern Life
<b>101717.2</b>	The Italian Renaissance Unpacked
<b>101668.2</b>	World Cinema

**Major - Arabic****M1026.1**

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

**Location**

Campus	Mode
Bankstown Campus	Internal

**Unit Set Structure**

A major in Arabic comprises a sequence of 80 credit points with 60 credit points at Level 2 and 3 (with no less than 30 credit points of these at Level 3), however students commencing at beginner's level, that is units 101 and 102, and who follow the recommended course structure, are only required to complete 20 credit points at Level 3.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or
- take a Level 2 unit after passing a Level 3 unit in the same language.

**Level 1 unit pool**

<b>100041.2</b>	Arabic 101
<b>100042.2</b>	Arabic 102

**Level 2 unit pool**

<b>101699.2</b>	Language and Communication Skills 2A: Arabic
<b>101704.2</b>	Language and Communication Skills 2B: Arabic

**Level 3 unit pool**

<b>100048.2</b>	Arabic 302 - Arabic Advanced Language and Grammar
<b>100049.2</b>	Arabic 303: Advanced Writing Skills
<b>100050.2</b>	Arabic 304: Arabic Advanced Speaking
<b>100052.2</b>	Arabic 306: Arabic Novel and Short Story
<b>100054.2</b>	Arabic 308: Language Past and Present
<b>101709.2</b>	Languages and Grammatical Concepts 3A: Arabic
<b>101792.2</b>	Texts in Contemporary Arab Society and Culture
<b>101454.2</b>	Intercultural Pragmatics
<b>101668.2</b>	World Cinema
<b>400087.5</b>	Applied Critical Methods
<b>100961.4</b>	Humanities Internship

**Major - Chinese****M1027.1**

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

**Location**

Campus	Mode
Bankstown Campus	Internal

**Unit Set Structure**

A major in Chinese comprises a sequence of 80 credit points with 60 credit points at Level 2 and 3 (with no less than 30 credit points of these at Level 3), however students commencing at beginner's level, that is units 101 and 102, and who follow the recommended course structure, are only required to complete 20 credit points at Level 3.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or
- take a Level 2 unit after passing a Level 3 unit in the same language.

#### Level 1 unit pool

- 100056.2** Chinese 101  
**100057.2** Chinese 102

#### Level 2 unit pool

- 101700.2** Language and Communication Skills 2A: Chinese  
**101705.2** Language and Communication Skills 2B: Chinese

#### Level 3 unit pool

- 100063.2** Chinese 302  
**100064.2** Chinese 303: Twentieth-Century Chinese Literature  
**100065.2** Chinese 304: Chinese Classical Literature  
**100066.2** Chinese 305: Chinese Cinema  
**100067.2** Chinese 307: The Cultural Context of China  
**101710.2** Languages and Grammatical Concepts 3A: Chinese  
**101454.2** Intercultural Pragmatics  
**400087.5** Applied Critical Methods  
**100961.4** Humanities Internship  
**101668.2** World Cinema

### Major - Japanese

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#### M1028.1

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

#### Location

Campus	Mode
Bankstown Campus	Internal

#### Unit Set Structure

A major in Japanese comprises a sequence of 80 credit points with 60 credit points at Level 2 and 3 (with no less than 30 credit points of these at Level 3), however students commencing at beginner's level, that is units 101 and 102, and who follow the recommended course structure, are only required to complete 20 credit points at Level 3.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or
- take a Level 2 unit after passing a Level 3 unit in the same language.

#### Level 1 unit pool

- 100085.2** Japanese 101  
**100086.2** Japanese 102

#### Level 2 unit pool

- 101702.2** Language and Communication Skills 2A: Japanese  
**101707.2** Language and Communication Skills 2B: Japanese

#### Level 3 unit pool

- 100092.2** Japanese 302  
**100093.2** Japanese 303: Contemporary Culture and Society  
**100094.1** Japanese 304: Discourse in Japanese  
**100096.2** Japanese 306: Japanese for Business  
**100098.1** Japanese 308: Japanese Textual Studies  
**101712.2** Languages and Grammatical Concepts 3A: Japanese  
**101454.2** Intercultural Pragmatics  
**101668.2** World Cinema  
**101669.2** World Literature in Translation  
**400087.5** Applied Critical Methods  
**100961.4** Humanities Internship

### Major - Italian

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#### M1029.1

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

#### Location

Campus	Mode
Bankstown Campus	Internal

#### Unit Set Structure

A major in Italian comprises a sequence of 80 credit points with 60 credit points at Level 2 and 3 (with no less than 30 credit points of these at Level 3), however students commencing at beginner's level, that is units 101 and 102, and who follow the recommended course structure, are only required to complete 20 credit points at Level 3.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or
- take a Level 2 unit after passing a Level 3 unit in the same language.

#### Level 1 unit pool

- 100130.2** Italian 101  
**100131.2** Italian 102

#### Level 2 unit pool

- 101701.2** Language and Communication Skills 2A: Italian  
**101706.2** Language and Communication Skills 2B: Italian

#### Level 3 unit pool

- 100138.2** Italian 303: Contemporary Italy in European and International Contexts  
**100140.1** Italian 305: Modern Literature  
**100141.2** Italian 306: Classical Literature  
**100143.2** Italian 308: Italian Cinema  
**101711.2** Languages and Grammatical Concepts 3A: Italian  
**101454.2** Intercultural Pragmatics  
**101668.2** World Cinema  
**101669.2** World Literature in Translation  
**400087.5** Applied Critical Methods  
**100961.4** Humanities Internship

### Major - Spanish

#### *M1030.1*

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

#### Location

Campus	Mode
Bankstown Campus	Internal

#### Unit Set Structure

A major in Spanish comprises a sequence of 80 credit points with 60 credit points at Level 2 and 3 (with no less than 30 credit points of these at Level 3), however students commencing at beginner's level, that is units 101 and 102, and who follow the recommended course structure, are only required to complete 20 credit points at Level 3.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or
- take a Level 2 unit after passing a Level 3 unit in the same language.

#### Level 1 unit pool

- 100145.2** Spanish 101  
**100146.2** Spanish 102

#### Level 2 unit pool

- 101703.2** Language and Communication Skills 2A: Spanish  
**101708.2** Language and Communication Skills 2B: Spanish

#### Level 3 unit pool

- 100153.2** Spanish 303: Advanced Writing Skills  
**100154.2** Spanish 304: Advanced Speaking Skills  
**100155.2** Spanish 305: Contemporary Literature  
**100156.2** Spanish 306: Contemporary History  
**100157.2** Spanish 307: Classical Literature  
**100158.2** Spanish 308: Spanish Sociolinguistics  
**101454.2** Intercultural Pragmatics  
**101669.2** World Literature in Translation  
**101668.2** World Cinema  
**101713.2** Languages and Grammatical Concepts 3A: Spanish  
**400087.5** Applied Critical Methods  
**100961.4** Humanities Internship  
**101791.2** Short Fiction in the Americas

### Major - Global Studies

#### *M1031.1*

What does it mean to live in an increasingly globalised world? Global Studies offers students the opportunity to acquire key competencies in cross-cultural communication and global issues to act as socially aware global citizens in international settings. Global Studies addresses issues such as consumer and popular culture, global histories of food and technology, the interconnection of race, identity and transnational migration and intercultural pragmatics. Students have the opportunity to complete a semester of study abroad.

#### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal

#### Unit Set Structure

Students must complete the Level 1 unit

- 101673.2** The First Globalisation

And seven units from the following pools with no less than three Level 3 units in order to complete the major.

**Note: Not all units will be offered each year. Units will be offered on a rotational basis.**

#### Level 1 unit pool

**101737.2** World Politics: An Introduction

#### Level 2 unit pool

**101857.1** Doing Business in China  
**101543.2** India: Global Contexts  
**100871.3** International Texts and Contexts  
**101797.2** Political Terror

#### Level 3 unit pool

**400087.5** Applied Critical Methods  
**101870.1** Climate Change and Culture  
**100992.3** Communication: Power and Practice  
**100994.2** Consumer Culture  
**100858.3** Culture and Globalisation  
**101674.2** Global Histories of Food  
**101735.2** Global Politics  
**101736.2** Governing the Globe  
**100961.4** Humanities Internship  
**101454.2** Intercultural Pragmatics  
**101468.2** Islam, Media and Conflict  
**101733.2** Looking at Global Politics Through Film  
**101732.2** Media, The Everyday and Uneven Modernities  
**101666.2** Race, Identity and Globalisation  
**101717.2** The Italian Renaissance Unpacked  
**101848.1** Transnationalism and Migration  
**101831.2** Transport and the Making of the Modern World  
**101668.2** World Cinema  
**101669.2** World Literature in Translation  
**101830.2** WWII in Asia and the Pacific

### Major - Asian Studies and International Relations

#### *M1032.1*

This major has been designed to meet the needs of Australian government, business and society to engage the states and peoples of Asia at all levels in pursuit of national interests and as part of the globalisation process. It provides students with the opportunity to study modern and contemporary Asia, the rich and diverse histories, politics, cultures and languages of Asian countries and the international issues affecting Australia's interests and role in the region and in the world at large. The major area includes a range of units concerned with the United States, Europe and Australia as well as with Asia itself, and units in international relations. It seeks to produce graduates with a broad, liberal education with the skills to mediate between Australia and the world in general and Asia in particular through political, economic, commercial, cultural, diplomatic and strategic links. Students are encouraged to undertake a submajor in an Asian language in conjunction with the major. Employment opportunities may be found in the State

and Commonwealth public service, overseas organisations, trade and tourist organisations, business and industry, education and research.

#### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal

#### Unit Set Structure

Students must complete the compulsory Level 1 unit

**101442.2** Asia in the World

and seven units from the following pools with no less than three Level 3 units in order to pass the major:

#### Level 1 Unit Pool

**101737.2** World Politics: An Introduction

#### Level 2 Unit Pool

**101882.1** A History of Modern Global Buddhism  
**100245.2** Asian Cinema  
**100847.2** Asia and the West: The Imperial Encounter  
**100850.2** Buddhism in the Contemporary World  
**100855.2** Contemporary Japan: Culture and Society  
**101857.1** Doing Business in China  
**100861.3** Empire: European Colonial Rule and its Subjects, 1750-1920  
**101543.2** India: Global Contexts  
**100872.2** International Politics of North Asia  
**100904.2** Politics and Business in Asia  
**100277.3** Politics of Australia and Asia Relations  
**63111.3** Special Topics in Asian and International Studies  
**101404.3** The History of Modern Indonesia  
**101871.1** War

#### Level 3 Unit Pool

**100985.2** American Foreign Policy Since 1945  
**400087.5** Applied Critical Methods  
**101249.2** Culture and Thought in Twentieth-Century China  
**100903.2** Democracy in Asia  
**100507.4** History of Modern China to 1949  
**100961.4** Humanities Internship  
**100962.2** International Politics of the Southeast Asian Region  
**101467.2** Islam in Southeast Asia  
**101733.2** Looking at Global Politics Through Film  
**100271.3** Modern Japanese History  
**100278.2** Politics of Post-War Japan  
**63178.2** Social and Political Developments in Contemporary China  
**101667.3** The External Relations of the European Union  
**101782.2** The History and Politics of Contemporary Central Asia  
**101783.2** The International Relations of the Middle East Since 1945  
**101405.2** The Politics of Contemporary Indonesia  
**101866.1** United States Government and Politics

<b>101375.3</b>	War and Peace
<b>100294.3</b>	Warlords, Artists and Emperors: Power and Authority in Premodern Japan
<b>100971.2</b>	Which New World Order?
<b>101830.2</b>	WWII in Asia and the Pacific

## Major - History and Political Thought

### M1033.1

Since the revival of humanist studies in Renaissance Europe in the 15th century, universities have placed history and political thought at the heart of studies in the humanities. Through study of the political thought and social, political and cultural history of Australian, Asian and European societies, students gain knowledge and critical skills relevant to a variety of careers in education, government and non-governmental organizations. Study of the writings of political thinkers from ancient Greece and Rome, such as Plato and Cicero, and the early modern period, such as Hobbes and Machiavelli, to noted 19th century figures, such as Hegel and Marx, prepare students to engage with contemporary issues of governance, such as sovereignty, power, opportunity, property, civic freedom and social justice.

### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

### Unit Set Structure

Students would be eligible for this major having successfully completed 80 credit points with no less than three Level 3 units.

Students must complete the compulsory Level 1 unit

<b>100873.3</b>	Inventing Modernity
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**Note: Not all units will be offered each year. Units will be offered on a rotational basis.**

### Level 1 unit pool

<b>100848.2</b>	Australian Politics
<b>100868.2</b>	Foundations of Modern Australia
<b>101737.2</b>	World Politics: An Introduction

### Level 2 unit pool

<b>101882.1</b>	A History of Modern Global Buddhism
<b>100244.2</b>	Ancient Western Culture: Periclean Athens
<b>100861.3</b>	Empire: European Colonial Rule and its Subjects, 1750-1920
<b>100254.3</b>	Exploring Local History
<b>100869.2</b>	Foundations of Modern Europe 1500-1800
<b>101543.2</b>	India: Global Contexts
<b>100001.3</b>	Keeping the Past
<b>101843.2</b>	Philosophy and Environment
<b>101797.2</b>	Political Terror

<b>100904.2</b>	Politics and Business in Asia
<b>100277.3</b>	Politics of Australia and Asia Relations
<b>100882.2</b>	Politics of Sex and Gender
<b>63111.3</b>	Special Topics in Asian and International Studies
<b>101867.1</b>	The Ethical Life
<b>101404.3</b>	The History of Modern Indonesia
<b>101294.3</b>	The Western Philosophical Tradition
<b>101871.1</b>	War
<b>100293.3</b>	War and Society: 20th Century Australia

### Level 3 unit pool

<b>400087.5</b>	Applied Critical Methods
<b>100966.3</b>	American History, 1898-1945
<b>100986.2</b>	Australian History 1860-1920
<b>100987.3</b>	Australian History Since 1920
<b>101685.3</b>	Australian Indigenous History
<b>101872.1</b>	Australian Indigenous History from Federation to Reconciliation
<b>100991.2</b>	Citizenship Ancient and Modern
<b>100852.2</b>	Classics of Modern Philosophy
<b>101799.2</b>	Convicts and Settlers - Australian History 1788 - 1840
<b>101249.2</b>	Culture and Thought in Twentieth-Century China
<b>100903.2</b>	Democracy in Asia
<b>100863.3</b>	Ethical Cultures
<b>100864.2</b>	Europe in the Twentieth Century
<b>101844.2</b>	Feminist Theories
<b>101674.2</b>	Global Histories of Food
<b>101735.2</b>	Global Politics
<b>100507.4</b>	History of Modern China to 1949
<b>100961.4</b>	Humanities Internship
<b>100963.3</b>	Interpreting Australia: Australian Historians and Historiography
<b>101801.2</b>	Interpreting Fascism
<b>101823.2</b>	Lay Participation in Justice Processes
<b>100875.4</b>	Literature and Philosophy
<b>101733.2</b>	Looking at Global Politics Through Film
<b>100271.3</b>	Modern Japanese History
<b>101665.3</b>	Politics and Religion
<b>100278.2</b>	Politics of Post-War Japan
<b>100908.2</b>	Race Politics
<b>63178.2</b>	Social and Political Developments in Contemporary China
<b>101667.3</b>	The External Relations of the European Union
<b>101782.2</b>	The History and Politics of Contemporary Central Asia
<b>101783.2</b>	The International Relations of the Middle East Since 1945
<b>101405.2</b>	The Politics of Contemporary Indonesia
<b>100969.2</b>	Theories of Conflict and Violence
<b>101831.2</b>	Transport and the Making of the Modern World
<b>101798.2</b>	Understanding Freedom
<b>101731.2</b>	Understanding Power
<b>101866.1</b>	United States Government and Politics
<b>101375.3</b>	War and Peace
<b>100294.3</b>	Warlords, Artists and Emperors: Power and Authority in Premodern Japan
<b>100971.2</b>	Which New World Order?
<b>101830.2</b>	WWII in Asia and the Pacific

## Major - Cultural and Social Analysis

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### M1034.1

Cultural and Social Analysis is an interdisciplinary major developing knowledge, research skills and analytic capacities relevant to understanding and interpreting landscapes of cultural diversity and social difference in our contemporary world, both in terms of the broad contours, as well as specific micro-social environments. This major provides grounding in contemporary debates and methodologies in cultural studies and social theory, and draws on various disciplines including history, sociology, communications, and linguistics. Topics include popular culture, everyday urban life, cultural and social impacts of scientific theories and new technologies, multiculturalism, and contemporary spirituality. Study in this area is relevant for work involving commentary and analysis of contemporary social issues and cultural practices (e.g. journalism, teaching, activism) and fields concerned with designing, delivering and evaluating cultural and artistic productions, and education, communication, welfare or health services, in culturally diverse communities.

### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

### Unit Set Structure

Students must complete the compulsory Level 1 unit

**100897.2** Everyday Life

and seven units from the following pools with no less than three Level 3 units in order to complete the major.

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

#### Level 2 Unit Pool

<b>101409.2</b>	Aboriginal Cultural Texts
<b>100854.3</b>	Contemporary Popular Cultures
<b>100871.3</b>	International Texts and Contexts
<b>101251.2</b>	Introduction to Psychoanalysis
<b>100273.3</b>	New Ethnicities, Old Racisms
<b>100882.2</b>	Politics of Sex and Gender
<b>100281.3</b>	Sexual Culture/s
<b>100884.2</b>	Social Inequalities
<b>100886.2</b>	Special Topics in Cultural and Social Analysis
<b>100889.2</b>	Technocultures
<b>101867.1</b>	The Ethical Life
<b>100291.4</b>	Urban Life/Urban Culture
<b>100298.2</b>	Youth Cultures and Moral Panics
<b>101879.1</b>	Women with Muslim Identity

#### Level 3 Unit Pool

<b>400087.5</b>	Applied Critical Methods
<b>101265.2</b>	Children's Culture

<b>100990.2</b>	Cinema, Culture, Memory
<b>101870.1</b>	Climate Change and Culture
<b>100992.3</b>	Communication: Power and Practice
<b>100858.3</b>	Culture and Globalisation
<b>100996.3</b>	Death and Culture
<b>100860.3</b>	Emotions, Culture and Community
<b>100998.4</b>	Evolutionary Thinking
<b>101844.2</b>	Feminist Theories
<b>101716.3</b>	Healing and Culture
<b>100961.4</b>	Humanities Internship
<b>101468.2</b>	Islam, Media and Conflict
<b>101739.3</b>	Literature and Trauma
<b>101732.2</b>	Media, The Everyday and Uneven Modernities
<b>101800.2</b>	Media, Violence, Protest, Terror
<b>100877.3</b>	Multicultural Studies
<b>101252.2</b>	Psychoanalytic Criticism
<b>101253.3</b>	Public Memory and Commemoration
<b>101003.2</b>	Religion and Culture
<b>101005.4</b>	Representing Crime
<b>101006.2</b>	Social Semiotics
<b>101832.2</b>	Talking Normal: Sociolinguistics and Modern Literature
<b>101008.2</b>	Technologies of Racism
<b>101009.3</b>	The Body in Culture
<b>101848.1</b>	Transnationalism and Migration
<b>101798.2</b>	Understanding Freedom
<b>101731.2</b>	Understanding Power
<b>101010.3</b>	What is the Human?

## Major - English, Text and Writing

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### M1035.1

The English, Text and Writing major invites students to explore contemporary approaches to language, literary study and writing, including literary criticism and theory, linguistic analysis, genre and textual study, and creative writing. English, Text and Writing focuses on the imaginative workings of language, and students can study a wide selection of modern and classic literature, as well as the relationships between written texts and other media such as film and information technology. Students also have the opportunity to produce their own creative writing and to edit and publish their work. Career prospects include publishing, editing, teaching, writing and advertising.

### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

### Unit Set Structure

Students must complete 80 credit points with no less than three Level 3 units.

Students must complete the compulsory Level 1 unit

**100862.2** English, Text & Writing

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

### Level 1 unit pool

**100641.3** Approaches to Text

### Level 2 unit pool

**101626.3** Children's Literature: Image and Text  
**100900.3** Comedy and Tragedy  
**101408.2** Critical Discourse Analysis  
**101452.2** History of the English Language  
**100870.2** Hypertext Fictions  
**100871.3** International Texts and Contexts  
**100964.2** Introduction to Film Studies  
**100505.2** Special Topics in English, Text and Writing  
**101795.2** The Musical  
**100893.3** The Novel  
**101455.3** The Structure of English  
**100896.3** Writing Fiction  
**101869.1** Studies in Postcolonial Literature  
**101873.1** The Sound of Language

### Level 3 unit pool

**400087.5** Applied Critical Methods  
**100845.3** American Literature  
**100849.4** Australian Textual Studies  
**101242.3** Children's Literature  
**100856.4** Creative Non-Fiction  
**100859.3** Creative Writing Project  
**100256.4** Film and Affect  
**100866.3** Film and Drama  
**100961.4** Humanities Internship  
**101724.2** Literary Animals  
**100875.4** Literature and Philosophy  
**101739.3** Literature and Trauma  
**100874.4** Literature, History and Culture  
**101033.4** Modernism  
**101001.3** Modernity and Cinema  
**101406.2** Queering Text  
**101650.3** Race in Literature  
**101005.4** Representing Crime  
**101791.2** Short Fiction in the Americas  
**101832.2** Talking Normal: Sociolinguistics and Modern Literature  
**101453.2** Text and Discourse in English  
**101471.2** Women in Arabic and Islamic Literature  
**101668.2** World Cinema  
**101669.2** World Literature in Translation  
**101670.3** Writing and Society  
**100895.4** Writing For Performance  
**101011.3** Writing Poetry  
**100582.2** Writing Portfolio  
**101796.1** 19th Century American Literature  
**101880.1** The Space of Literature

## Major - Islamic Studies

### **M1036.1**

Students engage in interdisciplinary study essential to an understanding of Islam, past and present. The area of

study balances historical and modern Islamic studies and research methods. One of the keys to Islamic Studies is 'relevance' to contemporary Australian society but relevance can only come from a sound comprehension of past traditions in Islamic scholarship and their socio-historical contexts. Preparation for graduate study is also a key objective of this program, with its focus on developing critical and interdisciplinary research skills through a combination of approaches. Students are encouraged to undertake a sub-major in Arabic to complement the Islamic Studies major.

### Location

Campus	Mode
Bankstown Campus	Internal

### Unit Set Structure

Students must complete 80 credit points as follows

An Islamic Studies major must include the following Level 1 unit

**101462.2** Understanding Islam and Muslim Societies

The remaining seven units must include at least three Level 3 units drawn from the following pools:

### Level 2 unit pool

**101464.3** Great Texts of Islam: Qur'an and Hadith  
**100273.3** New Ethnicities, Old Racisms

### Level 3 unit pool

**101688.2** Anthropology of Religion  
**400087.5** Applied Critical Methods  
**101466.2** Ethical Traditions in Islam  
**100961.4** Humanities Internship  
**101822.2** Islam in the West  
**101463.4** Islam in the Modern World  
**101467.2** Islam in Southeast Asia  
**101468.2** Islam, Media and Conflict  
**101465.2** Islamic Law in a Changing World  
**100877.3** Multicultural Studies  
**101359.5** Sociology of Religion  
**101792.2** Texts in Contemporary Arab Society and Culture  
**101783.2** The International Relations of the Middle East Since 1945  
**101471.2** Women in Arabic and Islamic Literature

## Major - Linguistics

### **M1037.1**

Through study of what language is and how it works, students gain conceptual tools and knowledge relevant to the relationship of language and society as well linguistics-related disciplines, such as Sociolinguistics, Psycholinguistics, Developmental Linguistics, Bilingualism, and other applied linguistics areas. Understanding of the relationship between language learning, communicative competence and cultural practices, both in the Australian context and in a global context, provides a foundation for

many careers including primary and secondary teaching, policy analysis, communication, social and welfare services in culturally diverse communities.

### Location

Campus	Mode
Bankstown Campus	Internal

### Unit Set Structure

Students must complete eight units from the following pools, with no less than three units at Level 3.

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

#### Level 1 unit pool

<b>100194.2</b>	Introduction to Interpreting
<b>100195.2</b>	Introduction to Translation

#### Level 2 unit pool

<b>101452.2</b>	History of the English Language
<b>100928.3</b>	Linguistics
<b>101873.1</b>	The Sound of Language
<b>101302.2</b>	Translation Technologies

#### Level 3 unit pool

<b>400087.5</b>	Applied Critical Methods
<b>101449.2</b>	Bilingualism and Biculturalism
<b>101441.2</b>	English Semantics and Pragmatics
<b>101454.2</b>	Intercultural Pragmatics
<b>101709.2</b>	Languages and Grammatical Concepts 3A: Arabic
<b>101710.2</b>	Languages and Grammatical Concepts 3A: Chinese
<b>101711.2</b>	Languages and Grammatical Concepts 3A: Italian
<b>101712.2</b>	Languages and Grammatical Concepts 3A: Japanese
<b>101713.2</b>	Languages and Grammatical Concepts 3A: Spanish
<b>101451.2</b>	Second Language Acquisition
<b>101721.2</b>	Second Language Learning and Teaching
<b>101450.2</b>	Sociolinguistics
<b>100201.2</b>	Special Study in Languages and Linguistics
<b>101832.2</b>	Talking Normal: Sociolinguistics and Modern Literature
<b>101453.2</b>	Text and Discourse in English

## Major - Indigenous Australian Studies

### M1041.1

What does it mean to live in Indigenous Australia? The Indigenous Australian Studies Major offers students the exciting opportunity to acquire key cultural competencies that will enable them to understand and work more effectively with Indigenous Australians in professions such as the arts, communications, media industries; education; government and non-government; policy; health; sciences; and community services. The Indigenous Australian

Studies Major addresses the cultural, historical, social and economic issues affecting Indigenous and Non-Indigenous Australians and relationships.

### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

### Unit Set Structure

Students must complete 80 credit points as follows

Students must complete the following level one unit:

<b>101751.2</b>	Contextualising Indigenous Australia (Day Mode)
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Choose seven of the following units including three Level 3 units

#### Level 1 units:

<b>101762.1</b>	Who do you think you are? (Day Mode)
<b>101878.1</b>	Indigenous Landscapes

#### Level 2 units:

<b>101752.1</b>	Pigments of the Imagination
<b>101753.2</b>	Revaluing Indigenous Economics (Day Mode)
<b>101754.2</b>	From Corroborees to Curtain Raisers (Day Mode)
<b>101755.1</b>	From Ochre to Acrylics to New Technologies

#### Level 3 units:

<b>101756.1</b>	Bridging the Gap: Re-engaging Indigenous Learners
<b>101757.1</b>	The Making of the 'Aborigines'
<b>101758.1</b>	Learning through Indigenous Australian Community Service (Day Mode)

or

<b>101759.1</b>	Rethinking Research with Indigenous Australians: Independent Study Project (Day Mode)
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## Major - Psychological Studies

### M1050.1

The Psychological Studies major comprises units in the discipline of psychology that focus on the field of inquiry that uses scientific techniques and methods to understand and explain behaviour and experience. Units in the program are drawn from the following core areas of psychology: brain and behaviour, learning, motivation and emotion, social psychology, lifespan development, perception, and cognitive processes. A Psychological Studies major does not meet APAC requirements for an accredited sequence in Psychology. Students wishing to enrol in an accredited



Psychology sequence need to complete the Psychology key program of 200 credit points.

### Location

Campus	Mode
Bankstown Campus	Internal
Penrith Campus	Internal

### Unit Set Structure

Students must complete the following eight units:

<b>101184.2</b>	Psychology: Human Behaviour
<b>101183.2</b>	Psychology: Behavioural Science
<b>100013.3</b>	Experimental Design and Analysis
<b>101680.3</b>	Perception
<b>101684.3</b>	Brain and Behaviour
<b>101676.2</b>	Human Learning
<b>101677.3</b>	Cognitive Processes
<b>101682.4</b>	Developmental Psychology

### Major - Computer Systems

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#### **M3000.1**

This major is only available to students enrolled in the Bachelor of Computing or Bachelor of Information and Communications Technology courses.

### Location

Campus	Mode
Penrith Campus	Internal

### Unit Set Structure

Students must complete 80 credit points as follows

<b>300103.2</b>	Data Structures and Algorithms
<b>300096.5</b>	Computer Organisation
<b>300092.1</b>	Computer Architecture
<b>300167.3</b>	Systems Programming 1
<b>300149.2</b>	Operating Systems
<b>300121.2</b>	Formal Languages and Automata

And choose two of

<b>300128.3</b>	Information Security
<b>300165.3</b>	Systems Administration Programming
<b>300368.2</b>	Intelligent Systems
<b>300093.3</b>	Computer Graphics

### Major - Advanced Programming

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#### **M3001.1**

This major is only available to students enrolled in the Bachelor of Computing or Bachelor of Information and Communications Technology courses.

### Location

Campus	Mode
Penrith Campus	Internal

### Unit Set Structure

Students must complete 80 credit points as follows

<b>300103.2</b>	Data Structures and Algorithms
<b>300167.3</b>	Systems Programming 1
<b>300404.2</b>	Formal Software Engineering
<b>300168.2</b>	Systems Programming 2
<b>300149.2</b>	Operating Systems
<b>300096.5</b>	Computer Organisation

And choose two of

<b>300130.2</b>	Internet Programming
<b>300115.2</b>	Distributed Systems and Programming
<b>300165.3</b>	Systems Administration Programming

### Major - Information Technology

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#### **M3002.1**

This major is available to all students except those enrolled in the Networks or Information Systems Key Programs within the Bachelor of Computing course, and the Bachelor of Information and Communications Technology course.

### Location

Campus	Mode
Penrith Campus	Internal

### Unit Set Structure

Students must complete 80 credit points as follows

<b>300580.2</b>	Programming Fundamentals
<b>300585.2</b>	Systems Analysis and Design
<b>300582.2</b>	Technologies for Web Applications
<b>300583.2</b>	Web Systems Development
<b>300565.2</b>	Computer Networking
<b>300095.4</b>	Computer Networks and Internets

And choose one of

<b>300575.2</b>	Networked Systems Design
<b>300166.2</b>	Systems and Network Management

And choose one of

<b>300104.4</b>	Database Design and Development
<b>300570.3</b>	Human-Computer Interaction
<b>300569.2</b>	Computer Security

### Major - Web Systems Development

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#### **M3003.1**

This major is available to all students except those enrolled in the Bachelor of Computing, Bachelor of Computer

Science or the Bachelor of Information and Communications Technology courses.

### Location

Campus	Mode
Penrith Campus	Internal

### Unit Set Structure

Students must complete the following eight units

<b>300580.2</b>	Programming Fundamentals
<b>300585.2</b>	Systems Analysis and Design
<b>300582.2</b>	Technologies for Web Applications
<b>300104.4</b>	Database Design and Development
<b>300570.3</b>	Human-Computer Interaction
<b>300583.2</b>	Web Systems Development
<b>300111.2</b>	Developing Web Applications with XML
<b>300572.2</b>	Information Systems Deployment and Management

### Major - Health Informatics

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#### M3004.1

This major is available to all students except those enrolled in the Health Informatics key program within the Bachelor of Computing course.

### Location

Campus	Mode
Penrith Campus	Internal

### Unit Set Structure

Students must complete 80 credit points as follows

<b>300566.2</b>	Introduction to Health Informatics
<b>300580.2</b>	Programming Fundamentals
<b>300104.4</b>	Database Design and Development
<b>300582.2</b>	Technologies for Web Applications
<b>300567.3</b>	e-Health
<b>300568.2</b>	Services Computing in Healthcare

And choose one of

<b>300700.5</b>	Statistical Decision Making
<b>300585.2</b>	Systems Analysis and Design

And choose one of

<b>200036.3</b>	Data Mining and Visualisation
<b>300570.3</b>	Human-Computer Interaction

Note: Students in the Bachelor of Computing (Information Systems) are required to select 300585 Systems Analysis and Design in order to comply with course major guidelines.

### Major - Entertainment Computing

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#### M3005.1

This major is available to all students

### Location

Campus	Mode
Penrith Campus	Internal

### Unit Set Structure

Students must complete 80 credit points as follows

<b>300580.2</b>	Programming Fundamentals
<b>300585.2</b>	Systems Analysis and Design
<b>300491.2</b>	Games Technology
<b>300578.3</b>	Professional Development
<b>300565.2</b>	Computer Networking
<b>300104.4</b>	Database Design and Development
<b>300093.3</b>	Computer Graphics

Choose one of

<b>300492.2</b>	Games Theory and Design
<b>300862.1</b>	Video Games Development

Please note 300492 Games Theory and Design will be replaced by 300862 Video Games Development from 2012.

### Major - Mathematics

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#### M3021.1

This major is available to all students. This major may meet the NSW Institute of Teachers accreditation requirements for teaching Mathematics as a first subject in NSW state high schools.

### Location

Campus	Mode
Penrith Campus	Internal

### Unit Set Structure

Students must complete 80 credit points as follows

<b>300672.2</b>	Mathematics 1A
<b>300673.2</b>	Mathematics 1B
<b>200025.2</b>	Discrete Mathematics
<b>200028.3</b>	Advanced Calculus

Choose two of

<b>200027.2</b>	Linear Algebra
<b>200030.3</b>	Differential Equations
<b>200029.2</b>	Numerical Analysis

Choose two of

<b>200193.2</b>	Abstract Algebra
<b>200023.3</b>	Analysis

**200022.3** Mathematical Modelling

Students enrolled in the Bachelor of Information and Communications Technology may replace 200025 Discrete Mathematics with Discrete Structures and Complexity.

Note: For students who want to complete the Mathematics Major but may not necessarily want to qualify for NSW Institute of Teachers accreditation, 200024 Mathematical Finance would be added to the list of Level 3 units.

**Major - Statistics****M3022.1**

This major is available to all UWS students.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Students must complete 80 credit points as follows

<b>200033.4</b>	Applied Statistics
<b>300606.2</b>	Foundations of Statistical Modelling and Decision Making
<b>300104.4</b>	Database Design and Development
<b>200037.4</b>	Regression Analysis & Experimental Design
<b>200038.3</b>	Time Series and Forecasting
<b>200036.3</b>	Data Mining and Visualisation
<b>200039.2</b>	Surveys and Multivariate Analysis

Choose one of

<b>300700.5</b>	Statistical Decision Making
<b>200263.4</b>	Biometry
<b>200032.5</b>	Statistics for Business
<b>300700.5</b>	Statistical Decision Making

**Major - Computational Decision Making****M3023.1**

This major is available to all students.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Students must complete 80 credit points as follows

<b>300606.2</b>	Foundations of Statistical Modelling and Decision Making
<b>200042.3</b>	Introduction to Operations Research
<b>200027.2</b>	Linear Algebra
<b>300670.2</b>	Optimisation Techniques
<b>300671.2</b>	Principles and Practice of Decision Making
<b>200044.1</b>	Simulation Techniques

Choose one of

<b>300700.5</b>	Statistical Decision Making
<b>200263.3</b>	Biometry
<b>200032.5</b>	Statistics for Business
<b>300700.5</b>	Statistical Decision Making

And choose one of

<b>200025.2</b>	Discrete Mathematics
<b>300672.2</b>	Mathematics 1A

**Major - Knowledge Discovery and Data Mining****M3024.1**

This major is available to all students.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Students must complete 80 credit points as follows

<b>300585.2</b>	Systems Analysis and Design
<b>200033.4</b>	Applied Statistics
<b>300606.2</b>	Foundations of Statistical Modelling and Decision Making
<b>300104.4</b>	Database Design and Development
<b>200036.3</b>	Data Mining and Visualisation
<b>300117.3</b>	Enterprise Database

Choose one of

<b>300700.5</b>	Statistical Decision Making
<b>200263.4</b>	Biometry
<b>200032.5</b>	Statistics for Business
<b>300700.5</b>	Statistical Decision Making

Choose one of

<b>200037.4</b>	Regression Analysis & Experimental Design
<b>200038.3</b>	Time Series and Forecasting
<b>200039.2</b>	Surveys and Multivariate Analysis
<b>200042.3</b>	Introduction to Operations Research
<b>300670.2</b>	Optimisation Techniques
<b>300671.2</b>	Principles and Practice of Decision Making

**Major - Networking****M3025.1**

This major is only available to students enrolled in 3639 Bachelor of Information and Communications Technology course.

**Location**

Campus	Mode
Campbelltown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

**Unit Set Structure**

Students must complete 80 credit points as follows

<b>300565.2</b>	Computer Networking
<b>300576.2</b>	Networking Workshop
<b>300582.2</b>	Technologies for Web Applications
<b>300095.4</b>	Computer Networks and Internets
<b>300143.3</b>	Network Security
<b>300575.2</b>	Networked Systems Design
<b>300166.2</b>	Systems and Network Management

Choose one of

<b>300583.2</b>	Web Systems Development
<b>300112.1</b>	Digital Communication Technology
<b>300088.1</b>	Broadband Networking

**Major - Systems Programming****M3043.1**

This major aims to develop graduates with sound skills in the discipline of programming. The focus is on programming at the level of system calls to the underlying operating system and many of the units use the industry standard language for systems programming, namely C/C++, as the vehicle of instruction. There is a strong emphasis on the development of highly efficient and reliable code that can provide support services for higher level application oriented programs, as well as the development of programs suitable for systems administration and management. Practical work utilises the Unix environment. This major is appropriate where a career in systems programming or systems administration is planned, or where the student wishes to develop advanced systems programming skills.

**Unit Set Structure**

Students must complete the following eight units

<b>300128.3</b>	Information Security
<b>300368.2</b>	Intelligent Systems
<b>300149.2</b>	Operating Systems
<b>300115.2</b>	Distributed Systems and Programming
<b>300165.3</b>	Systems Administration Programming
<b>300130.2</b>	Internet Programming
<b>300143.3</b>	Network Security
<b>300569.2</b>	Computer Security

**Major - Networked Systems****M3044.1**

This major aims to develop graduates with sound skills in the discipline of networked computer systems. Recent advances in computer and telecommunications networked systems, particularly those based on TCP/IP, have increased the importance of network technologies in the discipline of computer science. This major covers a wide range of topics including computer communication network concepts and protocols, multimedia systems, Internet standards and technologies, network security, wireless and mobile computing, and distributed systems. The candidates are also introduced to some of the relevant current key research issues of the field.

**Unit Set Structure**

Students must complete the following eight units

<b>300128.3</b>	Information Security
<b>300095.4</b>	Computer Networks and Internets
<b>300166.2</b>	Systems and Network Management
<b>300575.2</b>	Networked Systems Design
<b>300143.3</b>	Network Security
<b>300149.2</b>	Operating Systems
<b>300115.2</b>	Distributed Systems and Programming
<b>300138.3</b>	LAN Workshop

**Major - Computer Forensics****M31015V2.1**

Computer forensics focuses on the gathering of evidence (often as part of an investigation) from computers and computer networks. Such evidence may consist of actual files (e.g. an image) or the traces of a user's activities that are left in the activity logs of operating systems, browsers, databases, web proxies, or network firewalls, etc. Identifying such evidence requires in-depth technical knowledge of the interactions between hardware, the operating system, programs, and the network. Similarly, knowledge of cryptographic techniques is required where data has been encrypted and/or obfuscated. This major develops this requisite knowledge; it also develops the skills necessary to ensure that evidence is not corrupted, and can be documented and presented in an intelligible manner.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Students must complete 80 credit points as follows

<b>300447.2</b>	Computer Forensics Workshop
<b>CP308A.2</b>	Information Systems Ethics and Law

Please note that unit CP308A Information Systems Ethics and Law is only offered every second year in odd years, eg. 2013, 2015, 2017

300149.2	Operating Systems
300165.3	Systems Administration Programming
300128.3	Information Security
300143.3	Network Security
300095.4	Computer Networks and Internets
300569.2	Computer Security

## Major - Innovation Design Management

### M3503IDM.1

#### Location

Campus	Mode
Penrith Campus	Internal

#### Unit Set Structure

Students must complete 80 credit points as follows  
The following are core units.

200083.2	Marketing Principles
300014.3	Design Management 3: Organisational Skills for Designers

The following are drawn from alternate Industrial Design units.

300012.3	Design Management 1: Product Design Audit
300013.3	Design Management 2: Corporate Image and Identity
300015.3	Design Management 4: Design Process
200163.1	Innovation and Product Development
100800.2	Consumer Psychology
200154.3	Entrepreneurial Management and Innovation

## Major - Interactive Industrial Graphics

### M3503IIG2.1

#### Location

Campus	Mode
Penrith Campus	Internal

#### Unit Set Structure

Students must complete the following eight units  
The following are core units.

300302.2	Industrial Graphics 1: Presentation
300282.2	Industrial Graphics 2: Transition
300310.3	Industrial Graphics 3: 3D Solids

The following are drawn from alternative/elective units

300312.3	Industrial Graphics 4: Surface
300315.3	Industrial Graphics 5: Integrated
101180.2	Web and Time Based Design
100789.3	Interactive Design I

100949.3 Interactive Design II

## Major - International Design Management

### M3503INTDM.1

#### Location

Campus	Mode
Penrith Campus	Internal

#### Unit Set Structure

Students must complete the following eight units.  
The following are core units.

200083.2	Marketing Principles
300014.3	Design Management 3: Organisational Skills for Designers

The following are drawn from alternate Industrial Design units.

300012.3	Design Management 1: Product Design Audit
300013.3	Design Management 2: Corporate Image and Identity
300015.3	Design Management 4: Design Process
200088.2	Brand and Product Management
61671.1	International Management
200154.3	Entrepreneurial Management and Innovation

## Sub-major - Design Management

### S3502DM.1

#### Location

Campus	Mode
Penrith Campus	Internal

#### Unit Set Structure

Students must complete the following four units.  
The following is a core unit.

300014.3	Design Management 3: Organisational Skills for Designers
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The following are drawn from alternate Industrial Design units.

300012.3	Design Management 1: Product Design Audit
300013.3	Design Management 2: Corporate Image and Identity
300015.3	Design Management 4: Design Process

## Sub-major - Industrial Graphics

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### S3502IG.1

#### Location

Campus	Mode
Penrith Campus	Internal

#### Unit Set Structure

Students must complete the following five units  
The following are core units.

<b>300302.2</b>	Industrial Graphics 1: Presentation
<b>300282.2</b>	Industrial Graphics 2: Transition
<b>300310.3</b>	Industrial Graphics 3: 3D Solids

The following are drawn from alternate Industrial Design units.

<b>300312.3</b>	Industrial Graphics 4: Surface
<b>300315.3</b>	Industrial Graphics 5: Integrated

## Sub-major - Sustainable Design

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### S3502SD.1

#### Location

Campus	Mode
Penrith Campus	Internal

#### Unit Set Structure

Students must complete the following four units.  
The following are core units.

<b>300304.3</b>	Sustainable Design: Materials Technology
<b>300309.3</b>	Sustainable Design: Life Cycle Analysis
<b>300306.3</b>	Sustainable Design: Sustainable Futures

The following unit is drawn from alternate Industrial Design units.

<b>300735.2</b>	Automated Manufacturing
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## Sub-major - Religion, Anthropology and Philosophy

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### SM1032.1

This multidisciplinary sub-major pursues critical and rational analysis of questions about individuals and societies; about human knowledge, culture and existence. It inquires into issues about human nature; the scope and limits of knowledge and belief; God and ethics; conflict and violence; ritual and myth; and religion, politics and culture. The sub-major provides students with rigorous training in

analytic and creative thinking, intellectual independence and cultural and ethical awareness.

#### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal

#### Unit Set Structure

Students must complete 40 credit points from the following pool with no more than one unit at Level 1

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

##### Level 1 Unit Pool

<b>101462.2</b>	Understanding Islam and Muslim Societies
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##### Level 2 Unit Pool

<b>101882.1</b>	A History of Modern Global Buddhism
<b>100850.2</b>	Buddhism in the Contemporary World
<b>100852.2</b>	Classics of Modern Philosophy
<b>101856.1</b>	Film and Philosophy
<b>101464.3</b>	Great Texts of Islam: Qur'an and Hadith
<b>101843.2</b>	Philosophy and Environment
<b>101881.1</b>	Philosophy and the Good Life
<b>101867.1</b>	The Ethical Life
<b>101294.3</b>	The Western Philosophical Tradition

##### Level 3 Unit Pool

<b>101295.2</b>	Aesthetics
<b>101688.2</b>	Anthropology of Religion
<b>400087.5</b>	Applied Critical Methods
<b>100863.3</b>	Ethical Cultures
<b>100998.4</b>	Evolutionary Thinking
<b>100961.4</b>	Humanities Internship
<b>101463.4</b>	Islam in the Modern World
<b>101467.2</b>	Islam in Southeast Asia
<b>101465.2</b>	Islamic Law in a Changing World
<b>101724.2</b>	Literary Animals
<b>100875.4</b>	Literature and Philosophy
<b>100275.4</b>	Philosophies of Love and Death
<b>101761.2</b>	Philosophy and the Visual
<b>100879.2</b>	Philosophy Today
<b>101665.3</b>	Politics and Religion
<b>101003.2</b>	Religion and Culture
<b>101359.5</b>	Sociology of Religion
<b>100969.2</b>	Theories of Conflict and Violence
<b>101880.1</b>	The Space of Literature
<b>101798.2</b>	Understanding Freedom
<b>101010.3</b>	What is the Human?
<b>101471.2</b>	Women in Arabic and Islamic Literature

## Sub-major - Media and Visual Cultures

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### SM1033.1

The rapid flow of visual images with which we communicate today – on the internet, by web and moblogs – is a contemporary manifestation of the importance of

visual cultures in everyday life. The Media and Visual Cultures sub-major area equips students with multidisciplinary knowledge and skills in critical art history and theory, digital media, film and television studies, philosophy, and cultural studies. It aims to create career ready graduates with the skills necessary to interpret the production and dissemination of visual images and their meanings in a variety of media as well as cultural and institutional contexts.

## Location

Campus	Mode
Bankstown Campus	Internal
Penrith Campus	Internal

## Unit Set Structure

Students must complete 40 credit points from the following pools

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

### Level 2 Unit Pool

<b>100245.2</b>	Asian Cinema
<b>101248.3</b>	Australian Art 1
<b>101626.3</b>	Children's Literature: Image and Text
<b>101250.3</b>	Digital Futures
<b>101856.1</b>	Film and Philosophy
<b>10157.2</b>	History and Theory of the Avant-Garde
<b>100964.2</b>	Introduction to Film Studies
<b>101254.3</b>	The Animated Image: Histories and Theories
<b>10371.3</b>	The Art Museum - from the Prince to the Public
<b>100890.2</b>	The Art of Landscape
<b>101795.2</b>	The Musical
<b>10158.2</b>	Writings on Art

### Level 3 Unit Pool

<b>400087.5</b>	Applied Critical Methods
<b>100959.2</b>	Australian Art II
<b>100989.2</b>	Cinema and Realism
<b>100990.2</b>	Cinema, Culture, Memory
<b>100256.4</b>	Film and Affect
<b>100866.3</b>	Film and Drama
<b>100961.4</b>	Humanities Internship
<b>101468.2</b>	Islam, Media and Conflict
<b>101732.2</b>	Media, The Everyday and Uneven Modernities
<b>101800.2</b>	Media, Violence, Protest, Terror
<b>101001.3</b>	Modernity and Cinema
<b>101761.2</b>	Philosophy and the Visual
<b>101253.3</b>	Public Memory and Commemoration
<b>101006.2</b>	Social Semiotics
<b>101738.2</b>	The Art Game: Fraud, Forgery, Theft and Perfidy
<b>101266.2</b>	The Art of Modern Life
<b>101717.2</b>	The Italian Renaissance Unpacked
<b>101668.2</b>	World Cinema

## Sub-major - Chinese

### SM1035.1

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

## Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal

## Unit Set Structure

A sub-major in Chinese is any sequence of 40 credit points with no more than 20 credit points at Level 1.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or
- take a Level 2 unit after passing a Level 3 unit in the same language.

### Level 1 unit pool

<b>100056.2</b>	Chinese 101
<b>100057.2</b>	Chinese 102

### Level 2 unit pool

<b>101700.2</b>	Language and Communication Skills 2A: Chinese
<b>101705.2</b>	Language and Communication Skills 2B: Chinese

### Level 3 unit pool

<b>100063.2</b>	Chinese 302
<b>100064.2</b>	Chinese 303: Twentieth-Century Chinese Literature
<b>100065.2</b>	Chinese 304: Chinese Classical Literature
<b>100066.2</b>	Chinese 305: Chinese Cinema
<b>100067.2</b>	Chinese 307: The Cultural Context of China
<b>101710.2</b>	Languages and Grammatical Concepts 3A: Chinese
<b>101454.2</b>	Intercultural Pragmatics
<b>101668.2</b>	World Cinema

**Sub-major - Italian****SM1036.1**

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

**Location**

Campus	Mode
Bankstown Campus	Internal

**Unit Set Structure**

A sub-major in Italian is any sequence of 40 credit points with no more than 20 credit points at Level 1.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or
- take a Level 2 unit after passing a Level 3 unit in the same language.

**Level 1 unit pool**

<b>100130.2</b>	Italian 101
<b>100131.2</b>	Italian 102

**Level 2 unit pool**

<b>101701.2</b>	Language and Communication Skills 2A: Italian
<b>101706.2</b>	Language and Communication Skills 2B: Italian

**Level 3 unit pool**

<b>100138.2</b>	Italian 303: Contemporary Italy in European and International Contexts
<b>100140.1</b>	Italian 305: Modern Literature
<b>100141.2</b>	Italian 306: Classical Literature
<b>100143.2</b>	Italian 308: Italian Cinema
<b>101711.2</b>	Languages and Grammatical Concepts 3A: Italian
<b>101454.2</b>	Intercultural Pragmatics
<b>101668.2</b>	World Cinema
<b>101669.2</b>	World Literature in Translation

**Sub-major - Japanese****SM1037.1**

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

**Location**

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal

**Unit Set Structure**

A sub-major in Japanese is any sequence of 40 credit points with no more than 20 credit points at Level 1.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or
- take a Level 2 unit after passing a Level 3 unit in the same language.

**Level 1 unit pool**

<b>100085.2</b>	Japanese 101
<b>100086.2</b>	Japanese 102

**Level 2 unit pool**

<b>101702.2</b>	Language and Communication Skills 2A: Japanese
<b>101707.2</b>	Language and Communication Skills 2B: Japanese

**Level 3 unit pool**

<b>100093.2</b>	Japanese 303: Contemporary Culture and Society
<b>100094.1</b>	Japanese 304: Discourse in Japanese
<b>100096.2</b>	Japanese 306: Japanese for Business
<b>100098.1</b>	Japanese 308: Japanese Textual Studies
<b>101712.2</b>	Languages and Grammatical Concepts 3A: Japanese
<b>101454.2</b>	Intercultural Pragmatics
<b>101668.2</b>	World Cinema
<b>101669.2</b>	World Literature in Translation



**Sub-major - Spanish****SM1038.1**

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

**Location**

Campus	Mode
Bankstown Campus	Internal

**Unit Set Structure**

A sub-major in Spanish is any sequence of 40 credit points with no more than 20 credit points at Level 1.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or
- take a Level 2 unit after passing a Level 3 unit in the same language.

**Level 1 unit pool**

<b>100145.2</b>	Spanish 101
<b>100146.2</b>	Spanish 102

**Level 2 unit pool**

<b>101703.2</b>	Language and Communication Skills 2A: Spanish
<b>101708.2</b>	Language and Communication Skills 2B: Spanish

**Level 3 unit pool**

<b>100153.2</b>	Spanish 303: Advanced Writing Skills
<b>100154.2</b>	Spanish 304: Advanced Speaking Skills
<b>100155.2</b>	Spanish 305: Contemporary Literature
<b>100156.2</b>	Spanish 306: Contemporary History
<b>100157.2</b>	Spanish 307: Classical Literature
<b>100158.2</b>	Spanish 308: Spanish Sociolinguistics
<b>101713.2</b>	Languages and Grammatical Concepts 3A: Spanish
<b>101454.2</b>	Intercultural Pragmatics
<b>101668.2</b>	World Cinema
<b>101669.2</b>	World Literature in Translation
<b>400087.5</b>	Applied Critical Methods
<b>100961.4</b>	Humanities Internship
<b>101791.2</b>	Short Fiction in the Americas

**Sub-major - Global Studies****SM1040.1**

What does it mean to live in an increasingly globalised world? Global Studies offers students the opportunity to acquire key competencies in cross-cultural communication and global issues to act as socially aware global citizens in international settings. Global Studies addresses issues such as consumer and popular culture, global histories of food and technology, the interconnection of race, identity and transnational migration and intercultural pragmatics. Students have the opportunity to complete a semester of study abroad.

**Location**

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal

**Unit Set Structure**

Students must complete 40 credit points from the following pools with no more than one unit at Level 1.

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

**Level 1 unit pool**

<b>101737.2</b>	World Politics: An Introduction
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**Level 2 unit pool**

<b>101857.1</b>	Doing Business in China
<b>101543.2</b>	India: Global Contexts
<b>100871.3</b>	International Texts and Contexts
<b>101797.2</b>	Political Terror

**Level 3 unit pool**

<b>400087.5</b>	Applied Critical Methods
<b>100992.3</b>	Communication: Power and Practice
<b>101870.1</b>	Climate Change and Culture
<b>100994.2</b>	Consumer Culture
<b>100858.3</b>	Culture and Globalisation
<b>101674.2</b>	Global Histories of Food
<b>101735.2</b>	Global Politics
<b>101736.2</b>	Governing the Globe
<b>100961.4</b>	Humanities Internship
<b>101454.2</b>	Intercultural Pragmatics
<b>101468.2</b>	Islam, Media and Conflict
<b>101733.2</b>	Looking at Global Politics Through Film
<b>101732.2</b>	Media, The Everyday and Uneven Modernities
<b>101666.2</b>	Race, Identity and Globalisation
<b>101717.2</b>	The Italian Renaissance Unpacked
<b>101848.1</b>	Transnationalism and Migration
<b>101831.2</b>	Transport and the Making of the Modern World
<b>101668.2</b>	World Cinema
<b>101669.2</b>	World Literature in Translation
<b>101830.2</b>	WWII in Asia and the Pacific

**Sub-major - History and Political Thought****SM1041.1**

Since the revival of humanist studies in Renaissance Europe in the 15th century, universities have placed history and political thought at the heart of studies in the humanities. Through study of the political thought and social, political and cultural history of Australian, Asian and European societies, students gain knowledge and critical skills relevant to a variety of careers in education, government and non-governmental organizations. Study of the writings of political thinkers from ancient Greece and Rome, such as Plato and Cicero, and the early modern period, such as Hobbes and Machiavelli, to noted 19th century figures, such as Hegel and Marx, prepare students to engage with contemporary issues of governance, such as sovereignty, power, opportunity, property, civic freedom and social justice.

**Location**

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

**Unit Set Structure**

Students must complete 40 credit points from the following pools:

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

**Level 1 unit pool**

<b>100848.2</b>	Australian Politics
<b>100868.2</b>	Foundations of Modern Australia
<b>100873.3</b>	Inventing Modernity
<b>101737.2</b>	World Politics: An Introduction

**Level 2 unit pool**

<b>101882.1</b>	A History of Modern Global Buddhism
<b>100244.2</b>	Ancient Western Culture: Periclean Athens
<b>100861.3</b>	Empire: European Colonial Rule and its Subjects, 1750-1920
<b>100254.3</b>	Exploring Local History
<b>100869.2</b>	Foundations of Modern Europe 1500-1800
<b>101543.2</b>	India: Global Contexts
<b>100001.3</b>	Keeping the Past
<b>101843.2</b>	Philosophy and Environment
<b>101797.2</b>	Political Terror
<b>100904.2</b>	Politics and Business in Asia
<b>100277.3</b>	Politics of Australia and Asia Relations
<b>100882.2</b>	Politics of Sex and Gender
<b>63111.3</b>	Special Topics in Asian and International Studies
<b>101867.1</b>	The Ethical Life
<b>101404.3</b>	The History of Modern Indonesia
<b>101294.3</b>	The Western Philosophical Tradition
<b>101871.1</b>	War
<b>100293.3</b>	War and Society: 20th Century Australia

**Level 3 unit pool**

<b>400087.5</b>	Applied Critical Methods
<b>100966.3</b>	American History, 1898-1945
<b>100986.2</b>	Australian History 1860-1920
<b>100987.3</b>	Australian History Since 1920
<b>101685.3</b>	Australian Indigenous History
<b>101872.1</b>	Australian Indigenous History from Federation to Reconciliation
<b>100991.2</b>	Citizenship Ancient and Modern
<b>100852.2</b>	Classics of Modern Philosophy
<b>101799.2</b>	Convicts and Settlers - Australian History 1788 - 1840
<b>101249.2</b>	Culture and Thought in Twentieth-Century China
<b>100903.2</b>	Democracy in Asia
<b>100863.3</b>	Ethical Cultures
<b>100864.2</b>	Europe in the Twentieth Century
<b>101844.2</b>	Feminist Theories
<b>101674.2</b>	Global Histories of Food
<b>101735.2</b>	Global Politics
<b>100507.4</b>	History of Modern China to 1949
<b>100961.4</b>	Humanities Internship
<b>100963.3</b>	Interpreting Australia: Australian Historians and Historiography
<b>101801.2</b>	Interpreting Fascism
<b>101823.2</b>	Lay Participation in Justice Processes
<b>100875.4</b>	Literature and Philosophy
<b>101733.2</b>	Looking at Global Politics Through Film
<b>100271.3</b>	Modern Japanese History
<b>101665.3</b>	Politics and Religion
<b>100278.2</b>	Politics of Post-War Japan
<b>100908.2</b>	Race Politics
<b>63178.2</b>	Social and Political Developments in Contemporary China
<b>101667.3</b>	The External Relations of the European Union
<b>101782.2</b>	The History and Politics of Contemporary Central Asia
<b>101783.2</b>	The International Relations of the Middle East Since 1945
<b>101405.2</b>	The Politics of Contemporary Indonesia
<b>100969.2</b>	Theories of Conflict and Violence
<b>101831.2</b>	Transport and the Making of the Modern World
<b>101798.2</b>	Understanding Freedom
<b>101731.2</b>	Understanding Power
<b>101866.1</b>	United States Government and Politics
<b>101375.3</b>	War and Peace
<b>100294.3</b>	Warlords, Artists and Emperors: Power and Authority in Premodern Japan
<b>100971.2</b>	Which New World Order?
<b>101830.2</b>	WWII in Asia and the Pacific

**Sub-major - Asian Studies and International Relations****SM1042.1**

This sub-major has been designed to meet the needs of Australian government, business and society to engage the states and peoples of Asia at all levels in pursuit of national interests and as part of the globalisation process. It

provides students with the opportunity to study modern and contemporary Asia, the rich and diverse histories, politics, cultures and languages of Asian countries and the international issues affecting Australia's interests and role in the region and in the world at large. The sub-major area includes a range of units concerned with the United States, Europe and Australia as well as with Asia itself, and units in international relations. It seeks to produce graduates with a broad, liberal education with the skills to mediate between Australia and the world in general and Asia in particular through political, economic, commercial, cultural, diplomatic and strategic links. Students are encouraged to undertake a sub-major in an Asian language in conjunction with the major. Employment opportunities may be found in the State and Commonwealth public service, overseas organisations, trade and tourist organisations, business and industry, education and research

### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal

### Unit Set Structure

Students must complete 40 credit points from the following pools:

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

#### Level 1 Unit Pool

**101737.2** World Politics: An Introduction

#### Level 2 Unit Pool

<b>101882.1</b>	A History of Modern Global Buddhism
<b>100245.2</b>	Asian Cinema
<b>100847.2</b>	Asia and the West: The Imperial Encounter
<b>100850.2</b>	Buddhism in the Contemporary World
<b>100855.2</b>	Contemporary Japan: Culture and Society
<b>101857.1</b>	Doing Business in China
<b>100861.3</b>	Empire: European Colonial Rule and its Subjects, 1750-1920
<b>101543.2</b>	India: Global Contexts
<b>100872.2</b>	International Politics of North Asia
<b>100904.2</b>	Politics and Business in Asia
<b>100277.3</b>	Politics of Australia and Asia Relations
<b>63111.3</b>	Special Topics in Asian and International Studies
<b>101404.3</b>	The History of Modern Indonesia
<b>101871.1</b>	War

#### Level 3 Unit Pool

<b>100985.2</b>	American Foreign Policy Since 1945
<b>400087.5</b>	Applied Critical Methods
<b>101249.2</b>	Culture and Thought in Twentieth-Century China
<b>100903.2</b>	Democracy in Asia
<b>100507.4</b>	History of Modern China to 1949
<b>100961.4</b>	Humanities Internship
<b>100962.2</b>	International Politics of the Southeast Asian Region
<b>101467.2</b>	Islam in Southeast Asia

<b>101733.2</b>	Looking at Global Politics Through Film
<b>100271.3</b>	Modern Japanese History
<b>100278.2</b>	Politics of Post-War Japan
<b>63178.2</b>	Social and Political Developments in Contemporary China
<b>101667.3</b>	The External Relations of the European Union
<b>101782.2</b>	The History and Politics of Contemporary Central Asia
<b>101783.2</b>	The International Relations of the Middle East Since 1945
<b>101405.2</b>	The Politics of Contemporary Indonesia
<b>101866.1</b>	United States Government and Politics
<b>101375.3</b>	War and Peace
<b>100294.3</b>	Warlords, Artists and Emperors: Power and Authority in Premodern Japan
<b>100971.2</b>	Which New World Order?
<b>101830.2</b>	WWII in Asia and the Pacific

### Sub-major - Cultural and Social Analysis

#### SM1043.1

Cultural and Social Analysis is an interdisciplinary sub-major developing knowledge, research skills and analytic capacities relevant to understanding and interpreting landscapes of cultural diversity and social difference in our contemporary world, both in terms of the broad contours, as well as specific micro-social environments. This sub-major provides grounding in contemporary debates and methodologies in cultural studies and social theory, and draws on various disciplines including history, sociology, communications, and linguistics. Topics include popular culture, everyday urban life, cultural and social impacts of scientific theories and new technologies, multiculturalism, and contemporary spirituality. Study in this area is relevant for work involving commentary and analysis of contemporary social issues and cultural practices (e.g. journalism, teaching, activism) and fields concerned with designing, delivering and evaluating cultural and artistic productions, and education, communication, welfare or health services, in culturally diverse communities.

### Location

Campus	Mode
Bankstown Campus	Internal
Penrith Campus	Internal

### Unit Set Structure

Students must complete 40 credit points from the Level 2/3 units from the following pools

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

#### Level 2 Unit Pool

<b>101409.2</b>	Aboriginal Cultural Texts
<b>100854.3</b>	Contemporary Popular Cultures
<b>100871.3</b>	International Texts and Contexts
<b>101251.2</b>	Introduction to Psychoanalysis
<b>100273.3</b>	New Ethnicities, Old Racisms
<b>100882.2</b>	Politics of Sex and Gender

100281.3	Sexual Culture/s
100884.2	Social Inequalities
100886.2	Special Topics in Cultural and Social Analysis
100889.2	Technocultures
101867.1	The Ethical Life
100291.4	Urban Life/Urban Culture
101879.1	Women with Muslim Identity
100298.2	Youth Cultures and Moral Panics

**Location**

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

**Level 3 Unit Pool**

400087.5	Applied Critical Methods
101265.2	Children's Culture
100990.2	Cinema, Culture, Memory
101870.1	Climate Change and Culture
100992.3	Communication: Power and Practice
100858.3	Culture and Globalisation
100996.3	Death and Culture
100860.3	Emotions, Culture and Community
100998.4	Evolutionary Thinking
101844.2	Feminist Theories
101716.3	Healing and Culture
100961.4	Humanities Internship
101468.2	Islam, Media and Conflict
101739.3	Literature and Trauma
101732.2	Media, The Everyday and Uneven Modernities
101800.2	Media, Violence, Protest, Terror
100877.3	Multicultural Studies
101252.2	Psychoanalytic Criticism
101253.3	Public Memory and Commemoration
101003.2	Religion and Culture
101005.4	Representing Crime
101006.2	Social Semiotics
101832.2	Talking Normal: Sociolinguistics and Modern Literature
101008.2	Technologies of Racism
101009.3	The Body in Culture
101848.1	Transnationalism and Migration
101798.2	Understanding Freedom
101731.2	Understanding Power
101010.3	What is the Human?

**Sub-major - English, Text and Writing****SM1044.1**

The English, Text and Writing sub-major invites students to explore contemporary approaches to language, literary study and writing, including literary criticism and theory, linguistic analysis, genre and textual study, and creative writing. English, Text and Writing focuses on the imaginative workings of language, and students can study a wide selection of modern and classic literature, as well as the relationships between written texts and other media such as film and information technology. Students also have the opportunity to produce their own creative writing and to edit and publish their work. Career prospects include publishing, editing, teaching, writing and advertising.

**Unit Set Structure**

Students would be eligible for this sub-major having successfully completed 40 credit points.

Students must complete 40 credit points from the following pools with no more than one unit at Level 1.

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

**Level 1 unit pool**

100641.3	Approaches to Text
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**Level 2 unit pool**

101626.3	Children's Literature: Image and Text
100900.3	Comedy and Tragedy
101408.2	Critical Discourse Analysis
101452.2	History of the English Language
100870.2	Hypertext Fictions
100871.3	International Texts and Contexts
100964.2	Introduction to Film Studies
100505.2	Special Topics in English, Text and Writing
101795.2	The Musical
100893.3	The Novel
101455.3	The Structure of English
100896.3	Writing Fiction
101869.1	Studies in Postcolonial Literature
101873.1	The Sound of Language

**Level 3 unit pool**

400087.5	Applied Critical Methods
100845.3	American Literature
100849.4	Australian Textual Studies
101242.3	Children's Literature
100856.4	Creative Non-Fiction
100859.3	Creative Writing Project
100256.4	Film and Affect
100866.3	Film and Drama
100961.4	Humanities Internship
101724.2	Literary Animals
100875.4	Literature and Philosophy
101739.3	Literature and Trauma
100874.4	Literature, History and Culture
101033.4	Modernism
101001.3	Modernity and Cinema
101406.2	Queering Text
101650.3	Race in Literature
101005.4	Representing Crime
101791.2	Short Fiction in the Americas
101832.2	Talking Normal: Sociolinguistics and Modern Literature
101453.2	Text and Discourse in English
101471.2	Women in Arabic and Islamic Literature
101668.2	World Cinema
101669.2	World Literature in Translation
101670.3	Writing and Society

<b>100895.4</b>	Writing For Performance
<b>101011.3</b>	Writing Poetry
<b>100582.2</b>	Writing Portfolio
<b>101796.1</b>	19th Century American Literature
<b>101880.1</b>	The Space of Literature

## Sub-major - Islamic Studies

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### SM1045.1

Students engage in interdisciplinary study essential to an understanding of Islam, past and present. The area of study balances historical and modern Islamic studies and research methods. One of the keys to Islamic Studies is 'relevance' to contemporary Australian society but relevance can only come from a sound comprehension of past traditions in Islamic scholarship and their socio-historical contexts. Preparation for graduate study is also a key objective of this program, with its focus on developing critical and interdisciplinary research skills through a combination of approaches.

#### Location

Campus	Mode
Bankstown Campus	Internal

#### Unit Set Structure

Students must complete 40 credit points from the following pools with no more than one unit at level 1

##### Level 2 unit pool

<b>101464.3</b>	Great Texts of Islam: Qur'an and Hadith
<b>100273.3</b>	New Ethnicities, Old Racisms

##### Level 3 unit pool

<b>101688.2</b>	Anthropology of Religion
<b>400087.5</b>	Applied Critical Methods
<b>101466.2</b>	Ethical Traditions in Islam
<b>100961.4</b>	Humanities Internship
<b>101822.2</b>	Islam in the West
<b>101463.4</b>	Islam in the Modern World
<b>101467.2</b>	Islam in Southeast Asia
<b>101468.2</b>	Islam, Media and Conflict
<b>101465.2</b>	Islamic Law in a Changing World
<b>100877.3</b>	Multicultural Studies
<b>101359.5</b>	Sociology of Religion
<b>101792.2</b>	Texts in Contemporary Arab Society and Culture
<b>101783.2</b>	The International Relations of the Middle East Since 1945
<b>101471.2</b>	Women in Arabic and Islamic Literature

## Sub-major - Linguistics

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### SM1046.1

Through study of what language is and how it works, students gain conceptual tools and knowledge relevant to

the relationship of language and society as well linguistics-related disciplines, such as Sociolinguistics, Psycholinguistics, Developmental Linguistics, Bilingualism, and other applied linguistics areas. Understanding of the relationship between language learning, communicative competence and cultural practices, both in the Australian context and in a global context, provides a foundation for many careers including primary and secondary teaching, policy analysis, communication, social and welfare services in culturally diverse communities.

#### Location

Campus	Mode
Bankstown Campus	External

#### Unit Set Structure

Students must complete 40 credit points from the following pools with no more than one unit at level 1.

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

##### Level 1 unit pool

<b>100194.2</b>	Introduction to Interpreting
<b>100195.2</b>	Introduction to Translation

##### Level 2 unit pool

<b>101452.2</b>	History of the English Language
<b>100928.3</b>	Linguistics
<b>101873.1</b>	The Sound of Language
<b>101302.2</b>	Translation Technologies

##### Level 3 unit pool

<b>400087.5</b>	Applied Critical Methods
<b>101449.2</b>	Bilingualism and Biculturalism
<b>101441.2</b>	English Semantics and Pragmatics
<b>101454.2</b>	Intercultural Pragmatics
<b>101709.2</b>	Languages and Grammatical Concepts 3A: Arabic
<b>101710.2</b>	Languages and Grammatical Concepts 3A: Chinese
<b>101711.2</b>	Languages and Grammatical Concepts 3A: Italian
<b>101712.2</b>	Languages and Grammatical Concepts 3A: Japanese
<b>101713.2</b>	Languages and Grammatical Concepts 3A: Spanish
<b>101451.2</b>	Second Language Acquisition
<b>101721.2</b>	Second Language Learning and Teaching
<b>101450.2</b>	Sociolinguistics
<b>100201.2</b>	Special Study in Languages and Linguistics
<b>101832.2</b>	Talking Normal: Sociolinguistics and Modern Literature
<b>101453.2</b>	Text and Discourse in English

## Sub-major - Indigenous Australian Studies

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### SM1049.1

What does it mean to live in Indigenous Australia? The Indigenous Australian Studies Major and sub-majors offers students the exciting opportunity to acquire key cultural competencies that will enable them to understand and work more effectively with Indigenous Australians in professions such as the arts, communications, media industries; education; government and non-government; policy; health; sciences; and community services. The Indigenous Australian Studies Major and sub-majors addresses the cultural, historical, social and economic issues affecting Indigenous and Non-Indigenous Australians and relationships.

#### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

#### Unit Set Structure

Students must complete 40 credit points as follows

<b>101751.2</b>	Contextualising Indigenous Australia (Day Mode)
<b>101752.1</b>	Pigments of the Imagination
<b>101756.1</b>	Bridging the Gap: Re-engaging Indigenous Learners

Choose one of

<b>101757.1</b>	The Making of the 'Aborigines'
<b>101758.1</b>	Learning through Indigenous Australian Community Service (Day Mode)
<b>101759.1</b>	Rethinking Research with Indigenous Australians: Independent Study Project (Day Mode)

## Sub-major - Indigenous Economics

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### SM1050.1

What does it mean to live in Indigenous Australia? The Indigenous Australian Studies Major and sub-majors offers students the exciting opportunity to acquire key cultural competencies that will enable them to understand and work more effectively with Indigenous Australians in professions such as the arts, communications, media industries; education; government and non-government; policy; health; sciences; and community services. The Indigenous Australian Studies Major and sub-majors addresses the cultural, historical, social and economic issues affecting Indigenous and Non-Indigenous Australians and relationships.

#### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

#### Unit Set Structure

Students must complete 40 credit points as follows

<b>101751.2</b>	Contextualising Indigenous Australia (Day Mode)
<b>101753.2</b>	Revaluing Indigenous Economics (Day Mode)
<b>101757.1</b>	The Making of the 'Aborigines'

Choose one of

<b>101758.1</b>	Learning through Indigenous Australian Community Service (Day Mode)
<b>101759.1</b>	Rethinking Research with Indigenous Australians: Independent Study Project (Day Mode)

## Sub-major - Indigenous Australian Creative Expressions

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### SM1051.1

What does it mean to live in Indigenous Australia? The Indigenous Australian Studies Major and sub-majors offers students the exciting opportunity to acquire key cultural competencies that will enable them to understand and work more effectively with Indigenous Australians in professions such as the arts, communications, media industries; education; government and non-government; policy; health; sciences; and community services. The Indigenous Australian Studies Major and sub-majors addresses the cultural, historical, social and economic issues affecting Indigenous and Non-Indigenous Australians and relationships.

#### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

#### Unit Set Structure

Students must complete 40 credit points as follows

<b>101751.2</b>	Contextualising Indigenous Australia (Day Mode)
<b>101754.2</b>	From Corroborees to Curtain Raisers (Day Mode)
<b>101755.1</b>	From Ochre to Acrylics to New Technologies

Choose one of

- 101758.1** Learning through Indigenous Australian Community Service (Day Mode)  
**101759.1** Rethinking Research with Indigenous Australians: Independent Study Project (Day Mode)

### Sub-major - Psychological Studies

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#### SM1069.1

The Psychological Studies sub-major comprises units in the discipline of psychology that focus on the field of inquiry that uses scientific techniques and methods to understand and explain behaviour and experience. Units in the program are drawn from the following core areas of psychology: brain and behaviour, learning, motivation and emotion, social psychology, lifespan development, perception, and cognitive processes. A Psychological Studies sub-major does not meet APAC requirements for an accredited sequence in Psychology. Students wishing to enrol in an accredited Psychology sequence need to complete the Psychology key program of 200 credit points.

#### Location

Campus	Mode
Bankstown Campus	Internal
Penrith Campus	Internal

#### Unit Set Structure

This sub-major is restricted to students enrolled in 1604 - Bachelor of Arts, 1652 - Bachelor of Arts (Pathway to Teaching Secondary) or 1655 - Bachelor of Arts (Dean's Scholars).

Students must complete 40 credit points as follows

- 101184.2** Psychology: Human Behaviour  
**101183.2** Psychology: Behavioural Science  
**100013.3** Experimental Design and Analysis

Choose one of

- 101680.3** Perception  
**101684.3** Brain and Behaviour  
**101676.2** Human Learning  
**101677.3** Cognitive Processes  
**101682.4** Developmental Psychology

### Sub-major - Computer Systems

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#### SM3000.1

This sub-major is only available to students enrolled in the Bachelor of Computing or Bachelor of Information and Communications Technology courses.

#### Location

Campus	Mode
Penrith Campus	Internal

### Unit Set Structure

Students must complete the following four units

- 300096.5** Computer Organisation  
**300167.3** Systems Programming 1  
**300092.1** Computer Architecture  
**300149.2** Operating Systems

### Sub-major - Systems Administration

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#### SM3001.1

This sub-major is only available to students enrolled in the Bachelor of Computing or Bachelor of Information and Communications Technology courses.

#### Location

Campus	Mode
Penrith Campus	Internal

#### Unit Set Structure

Students must complete the following four units

- 300167.3** Systems Programming 1  
**300103.2** Data Structures and Algorithms  
**300149.2** Operating Systems  
**300165.3** Systems Administration Programming

### Sub-major - Systems Security

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#### SM3002.1

This sub-major is only available to students enrolled in the Bachelor of Computing or Bachelor of Information and Communications Technology courses.

#### Location

Campus	Mode
Penrith Campus	Internal

#### Unit Set Structure

Students must complete the following four units

- 300167.3** Systems Programming 1  
**300128.3** Information Security  
**300143.3** Network Security  
**300149.2** Operating Systems

**Sub-major - Systems Programming**

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**SM3003.1**

This sub-major is only available to students enrolled in the Bachelor of Computing or Bachelor of Information and Communications Technology courses.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Student must complete 40 credit points as follows

<b>300167.3</b>	Systems Programming 1
<b>300103.2</b>	Data Structures and Algorithms
<b>300149.2</b>	Operating Systems

And choose one of

<b>300115.2</b>	Distributed Systems and Programming
<b>300168.2</b>	Systems Programming 2

**Sub-major - Formal Systems**

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**SM3004.1**

This sub-major is only available to students enrolled in the Bachelor of Computing or Bachelor of Information and Communications Technology courses.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Student must complete 40 credit points as follows

<b>300103.2</b>	Data Structures and Algorithms
<b>300121.2</b>	Formal Languages and Automata
<b>300404.2</b>	Formal Software Engineering

And choose one of

<b>300368.2</b>	Intelligent Systems
<b>300093.3</b>	Computer Graphics
<b>200237.3</b>	Mathematics for Engineers 1
<b>200193.2</b>	Abstract Algebra
<b>200033.4</b>	Applied Statistics
<b>200042.3</b>	Introduction to Operations Research

**Sub-major - Applied Mathematics**

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**SM3005.1**

This sub-major is only available to students enrolled in the Bachelor of Computing or Bachelor of Information and Communications Technology courses.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Student must complete 40 credit points as follows

<b>200237.3</b>	Mathematics for Engineers 1
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And choose three of

<b>200238.2</b>	Mathematics for Engineers 2
<b>200242.3</b>	Mathematics for Engineers 3
<b>200023.3</b>	Analysis
<b>200193.2</b>	Abstract Algebra
<b>200033.4</b>	Applied Statistics
<b>200042.3</b>	Introduction to Operations Research
<b>200027.2</b>	Linear Algebra

**Sub-major - Web Application Development  
(for Computing Students)**

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**SM3006.1**

This sub-major is only available to students enrolled in the Bachelor of Computing or Bachelor of Information and Communications Technology courses.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Students must complete the following four units

<b>300582.2</b>	Technologies for Web Applications
<b>300583.2</b>	Web Systems Development
<b>300111.2</b>	Developing Web Applications with XML
<b>300574.2</b>	Internet Structures and Web Servers



**Sub-major - Web Application Development  
(for Non-Computing Students)**

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**SM3007.1**

This sub-major is available to all UWS students except those enrolled in the Bachelor of Computing or Bachelor of Information and Communications Technology courses.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Student must complete 40 credit points as follows

<b>300580.2</b>	Programming Fundamentals
<b>300582.2</b>	Technologies for Web Applications
<b>300583.2</b>	Web Systems Development

And choose one of

<b>300104.4</b>	Database Design and Development
<b>300570.3</b>	Human-Computer Interaction
<b>300569.2</b>	Computer Security
<b>300111.2</b>	Developing Web Applications with XML
<b>300574.2</b>	Internet Structures and Web Servers

**Sub-major - Networking**

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**SM3008.1**

This sub-major is available to all students except those enrolled in the Bachelor of Computing (Networks).

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Student must complete 40 credit points as follows

<b>300565.2</b>	Computer Networking
<b>300095.4</b>	Computer Networks and Internets
<b>300575.2</b>	Networked Systems Design

And choose one of

<b>300143.3</b>	Network Security
<b>300166.2</b>	Systems and Network Management
<b>300088.1</b>	Broadband Networking

**Sub-major - Health Information Management**

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**SM3009.1**

This sub-major deals with the management of Health Information and the management and analysis of that data via databases. This sub-major is available to all students except those enrolled in the Health Informatics key program within the Bachelor of Computing course.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Students must complete the following four units

<b>300566.2</b>	Introduction to Health Informatics
<b>300104.4</b>	Database Design and Development
<b>300567.3</b>	e-Health
<b>200036.3</b>	Data Mining and Visualisation

**Sub-major - Health Information Applications**

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**SM3010.1**

This sub-major will deal with the application of approaches, tools and techniques and the development of programs appropriate for Health Information systems. This sub-major is available to all students except those enrolled in the Health Informatics key program within the Bachelor of Computing course.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Students must complete the following four units

<b>300566.2</b>	Introduction to Health Informatics
<b>300582.2</b>	Technologies for Web Applications
<b>300567.3</b>	e-Health
<b>300568.2</b>	Services Computing in Healthcare

Note: 300582 Technologies for Web Applications requires 300580 Programming Fundamentals as a pre-requisite.

**Sub-major - Entertainment Computing**

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**SM3011.1**

This sub-major is available to all students.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Student must complete 40 credit points as follows

<b>300580.2</b>	Programming Fundamentals
<b>300491.2</b>	Games Technology
<b>300093.3</b>	Computer Graphics

Choose one of

<b>300492.2</b>	Games Theory and Design
<b>300862.1</b>	Video Games Development

Please note 300492 Games Theory and Design will be replaced by 300862 Video Games Development from 2012.

**Sub-major - Mathematics****SM3025.1**

This sub-major is available to all students. This sub-major may meet the NSW Institute of Teachers accreditation requirements for teaching Mathematics as a second subject in NSW state high schools.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Student must complete 40 credit points as follows

<b>300672.2</b>	Mathematics 1A
<b>300673.2</b>	Mathematics 1B

And choose two of

<b>200028.3</b>	Advanced Calculus
<b>200027.2</b>	Linear Algebra
<b>200030.3</b>	Differential Equations

**Sub-major - Statistics****SM3026.1**

This sub-major is available to all students.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Student must complete 40 credit points as follows

Choose one of

<b>200263.4</b>	Biometry
<b>200032.5</b>	Statistics for Business
<b>300700.5</b>	Statistical Decision Making

And choose at least one of

<b>200033.4</b>	Applied Statistics
<b>300606.2</b>	Foundations of Statistical Modelling and Decision Making
<b>300104.4</b>	Database Design and Development

And choose at least one of

<b>200037.4</b>	Regression Analysis & Experimental Design
<b>200038.3</b>	Time Series and Forecasting
<b>200036.3</b>	Data Mining and Visualisation
<b>200039.2</b>	Surveys and Multivariate Analysis

**Sub-major - Computational Decision Making****SM3027.1**

This sub-major is available to all students.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Student must complete 40 credit points as follows

<b>200025.2</b>	Discrete Mathematics
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And choose one of

<b>200263.4</b>	Biometry
<b>200032.5</b>	Statistics for Business
<b>300700.5</b>	Statistical Decision Making

And choose two of

<b>300606.2</b>	Foundations of Statistical Modelling and Decision Making
<b>200042.3</b>	Introduction to Operations Research
<b>200027.2</b>	Linear Algebra
<b>300670.2</b>	Optimisation Techniques
<b>300671.2</b>	Principles and Practice of Decision Making
<b>200044.1</b>	Simulation Techniques

Students enrolled in Bachelor of Information and Communications Technology course may replace 200025 Discrete Mathematics with 300699 Discrete Structures and Complexity.

Note: For students who want to complete a Mathematics sub-major, but may not necessarily want to qualify for NSW Institute of Teachers accreditation, 200029 Numerical Analysis would be added to the list of Level 2 units and 200024 Mathematical Finance would be added to the list of Level 3 units.

**Sub-major - Knowledge Discovery and Data Mining****SM3028.1**

This sub-major is available to all students.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Students must complete 40 credit points as follows

<b>300606.2</b>	Foundations of Statistical Modelling and Decision Making
<b>300104.4</b>	Database Design and Development
<b>200036.3</b>	Data Mining and Visualisation

And choose one of

<b>200263.4</b>	Biometry
<b>200032.5</b>	Statistics for Business
<b>300700.5</b>	Statistical Decision Making

**Sub-major - Construction Economics****SM3029.1**

This sub-major is a requirement for membership of the Australian Institute of Quantity Surveyors and is a useful course of study for those interested in the area of cost control and project planning.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Students must complete the following four units

<b>200503.2</b>	Construction Information Systems
<b>200487.3</b>	Quantity Surveying 2
<b>300748.2</b>	Quality and Value Management
<b>300726.2</b>	Estimating 2

**Sub-major - IT Support****SM3031.1**

This sub-major is only available to students enrolled in the Bachelor of Information and Communications Technology course.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Student must complete 40 credit points as follows

<b>300150.3</b>	PC Workshop
<b>300576.2</b>	Networking Workshop
<b>300136.4</b>	I.T. Support Practicum

And choose one of

<b>200083.2</b>	Marketing Principles
<b>300167.3</b>	Systems Programming 1
<b>200120.1</b>	E-Business Fundamentals and Systems

**Sub-major - Computer Engineering****SM3032.1**

This sub-major is available to students other than those enrolled in B Engineering (Computer) Key Program. This sub-major includes core subjects of computer engineering. It provides a comprehensive introduction to essential aspects of the discipline.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Student must complete 40 credit points as follows

<b>300029.3</b>	Engineering Visualization
<b>300167.3</b>	Systems Programming 1
<b>300096.5</b>	Computer Organisation

And choose one of

<b>300092.1</b>	Computer Architecture
<b>300149.2</b>	Operating Systems
<b>300044.2</b>	Microcontrollers and PLCs

**Sub-major - Construction****SM3033.1**

This sub-major is available to any student in UWS other than those enrolled in Bachelor of Construction Management or Bachelor of Housing. This sub-major includes core subjects of construction. It provides a comprehensive introduction to essential aspects of the discipline.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Students must complete the following four units

<b>300707.2</b>	Building 2
<b>BG302A.1</b>	Building Regulation Studies
<b>200471.3</b>	Construction Technology 5 (Envelope)
<b>MG313A.1</b>	Project Management

**Sub-major - Electrical Engineering**

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**SM3034.1**

This sub-major is available to students other than those enrolled in B Engineering (Electrical) Key Program. This sub-major includes core subjects of electrical engineering. It provides a comprehensive introduction to essential aspects of the discipline.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Student must complete 40 credit points as follows

<b>300071.2</b>	Electrical Machines 1
<b>300481.2</b>	Engineering Electromagnetics

And choose two of

<b>300026.3</b>	Energy Systems
<b>300070.4</b>	Electrical Drives
<b>300024.2</b>	Electronic Systems Design

**Sub-major - Environmental Engineering**

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**SM3035.1**

This sub-major is available to students other than those enrolled in B Engineering (Environmental) Key Program. This sub-major includes core subjects of environmental engineering. It provides a comprehensive introduction to essential aspects of the discipline.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Students must complete the following four units

<b>300469.2</b>	Introductory Chemistry
<b>EY101A.1</b>	Terrestrial Environment Management

<b>MG309A.2</b>	Water and Waste Management
<b>EH321A.1</b>	Air Quality Assessment & Management (UG)

**Sub-major - Wireless Engineering**

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**SM3036.1**

This sub-major is available to students other than those enrolled in B Engineering (Telecommunications) Key Program. This sub-major covers specialised topics on wireless communications, in addition to general concepts on telecommunications.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Student must complete 40 credit points as follows

<b>300007.2</b>	Communication Systems
<b>300065.4</b>	Wireless Communications
<b>300024.2</b>	Electronic Systems Design

And choose one of

<b>300068.3</b>	Communication Electronics
<b>300489.2</b>	Radio and Satellite Communication

**Sub-major - Civil Engineering**

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**SM3621CIVE.1**

This sub-major is available to students other than those enrolled in the B Engineering (Civil) Key Program. This sub-major includes core subjects of civil engineering. It provides a comprehensive introduction to essential aspects of the discipline.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Students must complete the following four units

<b>300732.2</b>	Structural Analysis
<b>300730.2</b>	Steel Structures
<b>300739.2</b>	Timber Structures (UG)
<b>300736.2</b>	Concrete Structures (UG)

**Sub-major - Ecological Engineering**

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**SM3621ECOE.1**

This sub-major is available to students other than those enrolled in the B Engineering (Civil) or (Environmental) Key Program. This sub-major includes core subjects of ecological engineering. It provides a comprehensive introduction to essential aspects of the discipline.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Students must complete the following four units

<b>300482.2</b>	Engineering Geology and Concrete Materials
<b>300738.3</b>	Surveying for Engineers
<b>300486.2</b>	Infrastructure Engineering
<b>300737.3</b>	Environmental Engineering

**Sub-major - Robotics and Mechatronics**

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**SM3621R&M.1**

This sub-major is available to students other than those enrolled in B Engineering (Robotics and Mechatronics) Key Program. The units forming this sub-major provide a comprehensive introduction to essential aspects of mechatronics and robotics. It is intended as a coherent set of units in mechanics of machines, automation and robotics that can add to engineering knowledge gained in other fields of engineering. The sub-major may be taken by students in non-engineering areas provided they satisfy the unit prerequisites and assumed knowledge.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Student must complete 40 credit points as follows

<b>300035.3</b>	Kinematics and Kinetics of Machines
<b>300735.2</b>	Automated Manufacturing
<b>300044.2</b>	Microcontrollers and PLCs

And choose one of

<b>300056.3</b>	Robotics
<b>300043.3</b>	Mobile Robotics

**Sub-major - Soil Engineering**

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**SM3621SOE.1**

This sub-major is available to students other than those enrolled in B Engineering (Civil) or (Environmental) Key Programs. This sub-major includes core subjects of soil engineering. It provides a comprehensive introduction to essential aspects of the discipline.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Students must complete the following four units

<b>200237.3</b>	Mathematics for Engineers 1
<b>300482.2</b>	Engineering Geology and Concrete Materials
<b>300731.2</b>	Soil Engineering
<b>300485.3</b>	Foundation Engineering

**Sub-major - Structural Engineering**

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**SM3621STRE.1**

This sub-major is available to students other than those enrolled in the B Engineering (Civil) or (Environmental) Key Programs. This sub-major includes core subjects of structural engineering. It provides a comprehensive introduction to essential aspects of the discipline.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Students must complete the following four units

<b>300463.2</b>	Fundamentals of Mechanics
<b>300040.2</b>	Mechanics of Materials
<b>300733.2</b>	Introduction to Structural Engineering
<b>300732.2</b>	Structural Analysis

**Sub-major - Water Engineering**

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**SM3621WATE.1**

This sub-major is available to students other than those enrolled in B Engineering (Civil) or (Environmental) Key Programs. This sub-major includes core subjects of water engineering. It provides a comprehensive introduction to essential aspects of the discipline.

## Location

Campus	Mode
Penrith Campus	Internal

## Unit Set Structure

Students must complete the following four units

<b>200237.3</b>	Mathematics for Engineers 1
<b>300740.1</b>	Water Engineering
<b>300479.1</b>	Drainage Engineering
<b>300734.1</b>	Water Resources Engineering (UG)

## SCHOOL OF SCIENCE AND HEALTH

### Bachelor of Applied Science (Honours) Occupational Therapy

#### 4521.2

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year in this course is 2010 or later.

Occupational therapy is a client centred process that facilitates an individual's performance in chosen life roles and every day tasks across the lifespan, within diverse social, cultural and physical environments. This program views occupational therapy as the practice of using occupation as a therapeutic means to optimise an individual's health, well being and quality of life. Throughout their lives, people have the right to actively choose and participate in occupations which add meaning, purpose and value to everyday life, regardless of ability, age, gender ethnicity beliefs and/or other status. The UWS occupational therapy program promotes the value of human diversity, fundamental human rights and the dignity and worth of every client.

#### Study Mode

Four years full-time.

#### Location

Campus	Attendance Mode
Campbelltown Campus	Full Time      Internal

#### Accreditation

The course is fully accredited with Occupational Therapy Australia (OT). It is also a World Federation of Occupational Therapists (WFOT) approved course.

#### Course Structure

Qualification for this award requires the successful completion of 320 credit points which include the units listed in the recommended sequence below. Students in the embedded Honours program undertake different units in fourth year, as outlined below.

#### Recommended Sequence

##### Full-time

##### Year 1

##### Autumn session

<b>400130.1</b>	Human Medical Sciences 1
<b>400160.3</b>	Introduction to Occupational Therapy
<b>400732.2</b>	Communication in Health
<b>400733.1</b>	Occupational Analysis

##### Spring session

<b>400134.1</b>	Human Medical Sciences 3
<b>400136.1</b>	Introduction to the Psychology of Health

<b>400137.1</b>	Introduction to Research for Health Sciences
<b>400907.3</b>	Occupational Therapy Practice 1

##### Year 2

##### Autumn session

<b>400164.2</b>	Introduction to Sociology of Health
<b>400138.3</b>	Pathophysiology 1
<b>400148.2</b>	Quantitative Research
<b>400734.1</b>	Functional Analysis

##### Spring session

<b>400964.1</b>	Clinical Neurosciences
<b>400167.2</b>	Occupational Therapy Clinical Practice 2
<b>400165.2</b>	Occupation and the Environment
<b>400162.2</b>	Child and Adolescent Occupations

##### Year 3

##### Autumn session

<b>400168.2</b>	Ergonomics and Work Occupations
<b>400169.2</b>	Occupation and Mental Health
<b>400171.2</b>	Occupation and Neurology
<b>400170.2</b>	Occupation and Social Participation

##### Spring session

<b>400172.2</b>	Occupational Therapy Clinical Specialties 1
<b>400173.2</b>	Occupational Therapy Clinical Specialties 2
<b>400174.2</b>	Occupational Therapy Clinical Practice 3a
<b>400175.2</b>	Occupational Therapy Clinical Practice 3b

##### Year 4 (Honours)

##### Autumn session

<b>400154.2</b>	Integrating Evidence into Practice
<b>400176.2</b>	Occupation and Ageing
<b>400180.2</b>	Occupational Therapy Honours Thesis 1
<b>400177.2</b>	Professional Reasoning

##### Spring session

<b>400182.2</b>	Occupational Therapy Clinical Practice 4 (Honours)
<b>400181.2</b>	Occupational Therapy Honours Thesis 2

#### Elective Units

Elective units in the Bachelor of Applied Science (Occupational Therapy) may be chosen from across UWS, provided that unit prerequisites are met and space is available.

The following is a list of elective units in the Occupational Therapy discipline area which are not listed elsewhere in the Handbook. These electives are open to students from across UWS provided that pre-requisites are met and space is available. Please note that these elective units will not be offered every year.

<b>400183.2</b>	Upper Limb Rehabilitation Following Stroke
<b>400184.2</b>	Conducting Medicolegal Assessments
<b>400186.2</b>	Paediatric Practice
<b>400187.2</b>	Supervision in Clinical Practice

**400809.2** Outcome Measures and Indicators in Clinical Practice

## Bachelor of Health Science

### 4656.1

Students should follow the course structure for the course version relevant to the year they commenced. This course version applies to students whose commencement year in this course is 2010 or later.

The course provides a broad introduction to the health sciences with opportunities to major in health promotion, health service management and therapeutic recreation, or to transfer to one of the other health science specialisations at UWS. Subject to meeting admission criteria, transfers are possible to the clinical programs in physiotherapy, occupational therapy and podiatric medicine. Note that transfer places may be limited.

### Study Mode

Three years full-time. Students may choose to study at a reduced load.

### Location

Campus	Attendance	Mode
Campbelltown Campus	Full Time	Internal

### Accreditation

The Bachelor of Health Science (Health Service Management) has Professional Accreditation with the Australasian College of Health Service Management (ACHSM). The Bachelor of Health Science (Therapeutic Recreation) has been granted accreditation from Diversional Therapy Australia (DTA).

### Admission

For local students admission is through UAC - Assumed knowledge, any 2 units of English.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

### Special Requirements

In order to enrol in Second Year Autumn units, all students must have: 1. NSW Health National Criminal Record Check, 2. Prohibited Employment Declaration Form. In order to enrol in Second Year Spring units, all students must have: 1. First Aid Certificate. To be eligible to undertake fieldwork placements in public hospitals, students must comply with vaccination requirements and be prepared to submit a completed Adult Immunisation Card to placement institutions. Details of necessary vaccinations are available from NSW Health.

### Course Structure

Qualification for this Key Program requires the successful completion of 240 credit points including the units within one of the following Key Programs.

### Recommended Sequence

Students must select and enrol in one of the following Key Programs before selecting individual units.

<b>KT4000.1</b>	Health Promotion
<b>KT4001.1</b>	Health Services Management
<b>KT4002.1</b>	Therapeutic Recreation

### Majors

**These majors are available to Health Promotion, Health Service Management and Therapeutic Recreation students only.**

<b>M4001.1</b>	Health Promotion
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This major is not available to students enrolled in the Health Promotion Key Program of the Bachelor of Health Science.

<b>M4002.1</b>	Health Services Management
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This major is not available to students enrolled in the Health Services Management Key Program of the Bachelor of Health Science.

<b>M4000.1</b>	Therapeutic Recreation
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This major is not available to students enrolled in the Therapeutic Recreation Key Program of the Bachelor of Health Science.

### Double Majors

The sharing of some common units across the Key Programs detailed above offers students the opportunity to achieve the Bachelor of Health Science with a double major. Qualification for the double major programs requires the successful completion of 240 credit points including the units listed in the recommended sequences below.



**Bachelor of Health Science (Therapeutic Recreation) with Health Promotion double major**

OR

**Bachelor of Health Science (Health Promotion) with Therapeutic Recreation double major****Recommended sequence (Double Major)****Full-time****Year 1****Autumn session**

<b>400870.2</b>	Population Health and Society
<b>300361.3</b>	Introduction to Human Biology
<b>400783.2</b>	Professional Pathways in Health Science
<b>400871.2</b>	Professional Health Competencies

**Spring session**

<b>101614.2</b>	Psychology and Health
<b>400863.2</b>	Foundations of Research and Evidence-Based Practice
<b>400732.2</b>	Communication in Health
<b>400285.2</b>	Public Health

**Year 2****Autumn session**

<b>400867.2</b>	Approaches to Health Promotion
<b>400244.2</b>	Introduction to Leisure and Recreation Theory
<b>400864.3</b>	Research Methods (Quantitative and Qualitative)
<b>400866.3</b>	Culture, Diversity and Health

**Spring session**

<b>400968.2</b>	Professional Practice in Aged Care and Disability
<b>400246.3</b>	Workplace Learning 1 (Therapeutic Recreation)
<b>400966.2</b>	Health Politics, Policy and Planning
<b>400286.3</b>	Injury Prevention

**Year 3****Autumn session**

<b>400275.2</b>	Health Planning Project
<b>400252.2</b>	Workplace Learning 2 (Community Placement)
<b>400789.3</b>	Leisure Education Programming and Mental Health
<b>400784.2</b>	Health Promotion Practice 1

**Spring session**

<b>400785.2</b>	Health Promotion Practice 2
<b>400786.2</b>	Professional Transition Project
<b>400254.2</b>	Therapeutic Recreation Professional Project

**400249.2** Ethical and Legal Issues in Health Care**Bachelor of Health Science (Therapeutic Recreation) with Health Services Management double major**

OR

**Bachelor of Health Science (Health Services Management) with Therapeutic Recreation double major****Recommended Sequence (Double Major)****Full-time****Year 1****Autumn session**

<b>400870.2</b>	Population Health and Society
<b>300361.3</b>	Introduction to Human Biology
<b>400783.2</b>	Professional Pathways in Health Science
<b>400871.2</b>	Professional Health Competencies

**Spring session**

<b>101614.2</b>	Psychology and Health
<b>400277.3</b>	Health Services Management
<b>400863.2</b>	Foundations of Research and Evidence-Based Practice
<b>400732.2</b>	Communication in Health

**Year 2****Autumn session**

<b>400867.2</b>	Approaches to Health Promotion
<b>400244.2</b>	Introduction to Leisure and Recreation Theory
<b>400864.3</b>	Research Methods (Quantitative and Qualitative)
<b>400866.3</b>	Culture, Diversity and Health

**Spring session**

<b>400968.2</b>	Professional Practice in Aged Care and Disability
<b>400246.3</b>	Workplace Learning 1 (Therapeutic Recreation)
<b>400966.2</b>	Health Politics, Policy and Planning
<b>400788.2</b>	Health Services Workforce Management

**Year 3****Autumn session**

<b>400275.2</b>	Health Planning Project
<b>400252.2</b>	Workplace Learning 2 (Community Placement)
<b>400789.3</b>	Leisure Education Programming and Mental Health
<b>400787.2</b>	Health Services Management Practice

**Spring session****400249.2** Ethical and Legal Issues in Health Care

- 400786.2 Professional Transition Project  
 400254.2 Therapeutic Recreation Professional Project  
 400279.3 Health Services Financial Management

### Bachelor of Health Science (Health Promotion) with Health Services Management double major

OR

### Bachelor of Health Science (Health Services Management) with Health Promotion double major

#### Recommended Sequence (Double Major)

#### Full-time

##### Year 1

##### Autumn session

- 400870.2 Population Health and Society  
 300361.3 Introduction to Human Biology  
 400783.2 Professional Pathways in Health Science  
 400871.2 Professional Health Competencies

##### Spring session

- 101614.2 Psychology and Health  
 400277.3 Health Services Management  
 400863.2 Foundations of Research and Evidence-Based Practice  
 400732.2 Communication in Health

##### Year 2

##### Autumn session

- 400867.2 Approaches to Health Promotion  
 400864.3 Research Methods (Quantitative and Qualitative)  
 400866.3 Culture, Diversity and Health

And one elective

##### Spring session

- 400285.2 Public Health  
 400286.3 Injury Prevention  
 400966.2 Health Politics, Policy and Planning  
 400788.2 Health Services Workforce Management

##### Year 3

##### Autumn session

- 400787.2 Health Services Management Practice  
 400275.2 Health Planning Project  
 400784.2 Health Promotion Practice 1

And one elective

##### Spring session

- 400785.2 Health Promotion Practice 2  
 400786.2 Professional Transition Project  
 400279.3 Health Services Financial Management  
 400249.2 Ethical and Legal Issues in Health Care

### Sub-major elective spaces

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

### Bachelor of Health Science (Honours)

#### 4657.2

Students should follow the course structure for the course version relevant to the year they commenced. This course version applies to students whose commencement year in this course is 2012.

High-achieving students in the Bachelor of Health Science can take Honours as an additional year for full-time students (or a longer equivalent for part-time students) at the end of Year 3. Honours is a key early step in the path to leadership in the profession and opens up the world of research. The honours thesis will identify new ways to address real problems and is written under the supervision of experienced academic researchers.

The honours program encourages independent learning, develops research skills and provides an opportunity for deeper investigation in the major field of study. An honours program is a recognised preparation and entry point for postgraduate research studies and the research training is valuable preparation for careers in research and development and analysis in the public and private sectors.

The honours program consists of supervised research on a topic in health science, culminating in the production of a thesis and presentation of a seminar. The coursework component covers research training, research ethics and advanced research methods. Research projects often involve clinical studies and involvement with external health organisations.

The honours program is available to meritorious students in the Bachelor of Health Science and related courses.

### Study Mode

One year full-time or two years part-time.

### Location

Campus	Attendance	Mode
Campbelltown Campus	Full Time	Internal
Campbelltown Campus	Part Time	Internal
Penrith Campus	Full Time	Internal
Penrith Campus	Part Time	Internal

### Admission

Admission is through direct application to the university. Students must have completed a Bachelor of Health Science from UWS or equivalent degree from another university, with a threshold Admission Average Mark (AAM) equal to or above the minimum of 65.

Entry is competitive and will depend of availability of places and supervisors.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students must have an IELTS equal to 6.5 or above.

Applicants from other universities for an honour program in Sport and Exercise Science will, in addition to the above, be required to demonstrate competence in the use of UWS Sport & Exercise Science laboratory equipment deemed necessary to carry out their proposed research as per the applicant's research statement.

In line with the Honours in Bachelors Award Policy:

Admission to an end-on or embedded honours program is determined on the basis of all of the four following criteria being met:

- a) Achievement of a threshold Admission Average Mark (AAM) equal to or above the minimum of 65; and
- b) Statement of Intent or School equivalent; and
- c) Appointment of a principal supervisor by the Head of School; and
- d) Demonstrated satisfactory academic writing skills appropriate to the discipline.
- A School Academic Committee may, on recommendation of the School Honours Coordinator, rank applicants on the basis of AAMs if the Head of School indicates the number of applications exceeds the availability of supervised places

## Course Structure

Qualification for this award requires the successful completion of 80 credit points including the units listed in the recommended sequence below.

## Recommended Sequence

### Start Year Intake

#### Full-time

##### Year 1

##### Autumn session

**400872.2** Honours Research Design and Methodology  
**400898.2** Honours Thesis in Health Science A

##### Spring session

**400899.2** Honours Thesis in Health Science B

#### Part-time

##### Year 1

##### Autumn session

**400872.2** Honours Research Design and Methodology

##### Spring session

**400898.2** Honours Thesis in Health Science A

##### Year 2

##### Autumn

**400900.2** Honours Thesis in Health Science C

##### Spring

**400901.2** Honours Thesis in Health Science D

## Mid Year Intake

##### Year 1

##### Spring session

**400898.2** Honours Thesis in Health Science A

##### Year 2

##### Autumn session

**400872.2** Honours Research Design and Methodology  
**400900.2** Honours Thesis in Health Science C

##### Spring session

**400901.2** Honours Thesis in Health Science D

## Bachelor of Health Science (Personal Development, Health and Physical Education)

### 4659.2

Students should follow the course structure for the course version relevant to the year they commenced. This course version applies to students whose commencement year in this course is 2011 or later.

The Personal Development, Health and Physical Education (PDHPE) program brings together a comprehensive foundation of health sciences, understanding of physical activity and personal development, and skills in interacting with people. Graduates stand out for their holistic understanding of the concepts of health and physical activity in personal development. The program is a popular pathway to a Master of Teaching degree, and then on to a teaching career. Teaching opportunities can be extended beyond PDHPE by studying electives, such as science and mathematics. Graduates also work as personal trainers and sports coaches and new opportunities are opening up in community-based recreation.

The course explores challenging areas of personal development, including youth health issues, sexuality, drugs, psychology and risk-taking behaviours, as well as general health science, including human biology, health systems, health promotion and research. Facilities are state of the art, including a new gymnasium and a renovated dance and gym studio, and practical experience is a strong feature of the program.

### Study Mode

Three years full-time. Students may choose to study at a reduced load.

**Location**

Campus	Attendance	Mode
Penrith Campus	Full Time	Internal

**Accreditation**

Graduates may be eligible to apply for accreditation with the NSW Institute of Teachers following the successful completion of a recognised teaching qualification. There is no professional accrediting body for the PDHPE specialisation.

**Admission**

For local students admission is through UAC. Assumed knowledge: any 2 units of English. Recommended Studies: Personal Development, Health and Physical Education or Community and Family Studies.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

**Special Requirements**

In order to enrol in Second Year Autumn units, all students must have: 1. NSW Health National Criminal Record Check, 2. Prohibited Employment Declaration Form. In order to enrol in Second Year Spring units, all students must have a First Aid Certificate. To be eligible to undertake fieldwork placements in public hospitals, students must comply with vaccination requirements and be prepared to submit a completed Adult Immunisation Card to placement institutions. Details of necessary vaccinations are available from NSW Health.

**Course Structure**

Note: For placement in schools, students must complete a working with children module. This requirement is completed by attendance at lectures in the unit 400732 Communication in Health.

Qualification for this award requires the successful completion of 240 credit points which include the units listed in the recommended sequence below.

Note: at least 60 credit points must be at Level 3 or above.

**Recommended sequence****Year 1****Autumn session**

<b>400870.2</b>	Population Health and Society
<b>300361.3</b>	Introduction to Human Biology
<b>400880.2</b>	Fundamentals of Exercise Science
<b>400871.2</b>	Professional Health Competencies

**Spring session**

<b>400808.3</b>	Outdoor Recreation
<b>400891.2</b>	Movement and Skill Development
<b>101614.2</b>	Psychology and Health
<b>400732.2</b>	Communication in Health

**Year 2****Autumn session**

<b>400867.2</b>	Approaches to Health Promotion
<b>400980.2</b>	Sport and Exercise Psychology
<b>400866.3</b>	Culture, Diversity and Health

And one elective

**Spring session**

<b>400892.2</b>	Physical Activity, Nutrition and Health
<b>400798.2</b>	PDHPE: Games for Diverse Groups
<b>400863.2</b>	Foundations of Research and Evidence-Based Practice
<b>400962.2</b>	Foundations of Wellbeing

**Year 3****Autumn session**

<b>400893.1</b>	Ethical Issues in Sports and Athletics
<b>400894.1</b>	Contemporary Youth Health Issues
<b>400895.1</b>	Aquatic Sports

And one elective

**Spring session**

<b>400896.1</b>	Gymnastics and Dance
<b>400897.1</b>	Personal Training and Coaching

And two electives

**Sub-major elective spaces**

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

## Bachelor of Health Science (Sport and Exercise Science)

### 4658.2

Students should follow the course structure for the course version relevant to the year they commenced. This course version applies to students whose commencement year in this course is 2011 or later.

Sport and exercise science encompasses the science that underpins health, physical activity and exercise, and their applications to the design, implementation and evaluation of exercise programs. There are a range of career options in health and fitness centres, for example as a personal trainer, a health and fitness specialist or a fitness assessor, in government agencies associated with sport, physical activity and health, in teaching and research, and with professional sporting groups, rehabilitation clinics and hospitals. If you gain higher-level accreditation as an exercise physiologist, you will also be able to provide healthcare services funded by Medicare (Australian Government).

The course combines studies in exercise physiology, sports psychology, biomechanics motor control and exercise prescription with a broad understanding of biomedicine and various health science fields to develop the professional competencies important for ethical and safe practice and high quality care and the skills to work in multidisciplinary teams. Facilities are state-of-the-art, centred on an Exercise and Sport Science Laboratory complex, and practical experience is a strong feature of the program.

### Study Mode

Three years full-time. Students may choose to study at a reduced load.

### Location

Campus	Attendance Mode
Campbelltown Campus	Full Time Internal

### Accreditation

Graduates may be eligible to apply for membership and accreditation with the Exercise and Sports Science Australia (ESSA).

### Admission

For local students admission is through UAC. Recommended Studies: Any 2 units of English, plus four units of Science and/or Mathematics. PDHPE can be counted as a science unit for this course.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

### Special Requirements

In order to enrol in Second Year Autumn units, all students must have: 1. NSW Health National Criminal Record Check, 2. Prohibited Employment Declaration Form. In order to enrol in Second Year Spring units, all students must have: 1. First Aid Certificate. To be eligible to undertake fieldwork placements in public hospitals, students must comply with vaccination requirements and be prepared to submit a completed Adult Immunisation Card to placement institutions. Details of necessary vaccinations are available from NSW Health.

### Course Structure

Qualification for this award requires the successful completion of 240 credit points which include the units listed in the recommended sequence below.

### Recommended sequence

#### Full-time

##### Year 1

##### Autumn session

<b>400880.2</b>	Fundamentals of Exercise Science
<b>400868.2</b>	Human Anatomy and Physiology 1
<b>400866.3</b>	Culture, Diversity and Health
<b>400871.2</b>	Professional Health Competencies

##### Spring session

<b>400881.3</b>	Functional Anatomy
<b>400869.2</b>	Human Anatomy and Physiology 2
<b>400863.2</b>	Foundations of Research and Evidence-Based Practice
<b>101614.2</b>	Psychology and Health

##### Year 2

##### Autumn session

<b>400882.2</b>	Introduction to Biomechanics
<b>400885.2</b>	Sport and Exercise Physiology
<b>400980.2</b>	Sport and Exercise Psychology
<b>400884.2</b>	Exercise Nutrition, Body Composition and Weight Control

##### Spring session

<b>400326.4</b>	Exercise Prescription for General Populations
<b>400903.2</b>	Professional Development and Work Experience
<b>400883.2</b>	Exercise Bioenergetics
<b>400886.2</b>	Motor Control and Skill Acquisition

**Year 3****Autumn session**

<b>400902.1</b>	Exercise in Musculo-Skeletal Rehabilitation
<b>400887.1</b>	Clinical Exercise Physiology 1
<b>400888.1</b>	Advanced Sports Physiology
<b>400864.3</b>	Research Methods (Quantitative and Qualitative)

**Spring session**

<b>400889.1</b>	Applied Biomechanics of Sport and Exercise
<b>400156.2</b>	Practice Management for Health Professionals
<b>400904.1</b>	Work Experience in Sport and Exercise Science
<b>400890.1</b>	Resistance Training and Physiology

## Bachelor of Health Science/Master of Occupational Therapy

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**4663.2**

Students should follow the course structure for the course version relevant to the year they commenced. This course version applies to students whose commencement year in this course is 2012.

Occupational therapy is a highly regarded field in which you can apply your knowledge and skills to provide therapy for people who, because of illness, injury or circumstances, are limited in their ability to perform everyday tasks. The program promotes the value of human diversity, fundamental human rights and the dignity and worth of every client. Occupational therapists find employment in public and private hospitals, rehabilitation centres, insurance companies, schools and large corporations.

The course in occupational therapy is offered as a combined Bachelor of Health Science/Master of Occupational Therapy. The first three years of the program combine studies in occupational therapy with a broad understanding of biomedicine and various health science fields to develop the professional competencies important for ethical and safe practice and high quality care and the skills to work in multidisciplinary teams. The progression to the Master's component of the combined degree is seamless and the final year focuses predominately on occupational therapy practice skills, practical experience and specialised areas. Evidence-based practice is one of the most important trends in healthcare today and a strong feature of the program.

An honours stream is available for high performing students.

**Study Mode**

4 years

**Location**

Campus	Attendance Mode
Campbelltown Campus	Full Time Internal

**Accreditation**

The course and the plan for an embedded honours program received interim re-accreditation in 2010. Final accreditation will occur in Spring semester 2013 prior to the first cohort's completion.

**Admission**

Assumed knowledge: any 2 units of English.

Recommended studies: Physics, Chemistry, Biology and/or Personal Development Health and Physical Education.

To be eligible to undertake fieldwork or practice placements, students must also comply with the NSW Health Records and Information Privacy Act (2004) and complete a relevant declaration.

Students must have successfully completed 200 or more credit points for entry into the honours stream in Spring of their third year of study.

In line with the Honours in Bachelors Award Policy:

Admission to an end-on or embedded honours program is determined on the basis of all of the four following criteria being met:

- a) Achievement of a threshold Admission Average Mark (AAM) equal to or above the minimum of 65; and
- b) Statement of Intent or School equivalent; and
- c) Appointment of a principal supervisor by the Head of School; and
- d) Demonstrated satisfactory academic writing skills appropriate to the discipline
- A School Academic Committee may, on recommendation of the School Honours Coordinator, rank applicants on the basis of AAMs if the Head of School indicates the number of applications exceeds the availability of supervised places

It is anticipated that approximately 10-15 students will enter the honours stream each year in line with the above admission requirements.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

**Special Requirements**

To be able to enrol in the first year Spring unit 400907 Occupational Therapy Practice 1 and subsequent

occupational therapy units, all students must have a NSW Health National Criminal Record Check, a Prohibited Employment Declaration Form and a First Aid Certificate. To be eligible to undertake fieldwork placements in public hospitals, students must comply with NSW Health vaccination requirements and be prepared to submit a completed Adult Immunisation Card to placement institutions. Details of necessary vaccinations are available from NSW Health.

### Course Structure

Qualification for this award requires the successful completion of 320 credit points which include the units listed in the recommended sequence below.

### Recommended sequence

#### Full-time

##### Year 1

##### Autumn session

<b>400870.2</b>	Population Health and Society
<b>400868.2</b>	Human Anatomy and Physiology 1
<b>400160.3</b>	Introduction to Occupational Therapy
<b>400871.2</b>	Professional Health Competencies

##### Spring session

<b>400907.3</b>	Occupational Therapy Practice 1
<b>400869.2</b>	Human Anatomy and Physiology 2
<b>400863.2</b>	Foundations of Research and Evidence-Based Practice
<b>400732.2</b>	Communication in Health

##### Year 2

##### Autumn session

<b>400908.2</b>	People, Environment and Occupations
<b>400138.3</b>	Pathophysiology 1
<b>400864.3</b>	Research Methods (Quantitative and Qualitative)
<b>400866.3</b>	Culture, Diversity and Health

##### Spring session

<b>300754.2</b>	Neuroanatomy
<b>400881.3</b>	Functional Anatomy
<b>101614.2</b>	Psychology and Health
<b>400909.2</b>	Occupational Therapy Practice 2

### Non-Honours Stream

##### Year 3

##### Autumn session

<b>400171.2</b>	Occupation and Neurology
<b>400169.2</b>	Occupation and Mental Health
<b>400912.1</b>	Occupational Therapy Process

Continuing students choose

<b>400910.1</b>	Occupational Therapy Practice 3
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Masters entry students choose

<b>400911.1</b>	Occupational Therapy Theory and Practice
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##### Spring session

<b>400162.2</b>	Child and Adolescent Occupations
<b>400165.2</b>	Occupation and the Environment
<b>400865.2</b>	Evidence-Based Practice
<b>400176.3</b>	Occupation and Ageing

**At this point, students may exit with a Bachelor of Health Science.**

##### Year 4

##### Autumn session

<b>400913.1</b>	Occupational Therapy Practice 4 Project
<b>400916.1</b>	Occupational Justice
<b>400926.1</b>	Ergonomics and Work Occupations
<b>400917.1</b>	Occupational Therapy Specialties

##### Spring session

<b>400925.1</b>	Professional Reasoning
<b>400914.1</b>	Occupational Therapy Practice 4
<b>400915.1</b>	Occupational Therapy Practice 4 Workshop

**Students will graduate with Bachelor of Health Science/ Master of Occupational Therapy**

### Honours Stream

##### Year 3

##### Autumn session

<b>400171.2</b>	Occupation and Neurology
<b>400169.2</b>	Occupation and Mental Health
<b>400912.1</b>	Occupational Therapy Process

Continuing students choose

<b>400910.1</b>	Occupational Therapy Practice 3
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Masters entry students choose

<b>400911.1</b>	Occupational Therapy Theory and Practice
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##### 2H session

<b>400944.1</b>	Evidence-Based Practice (Advanced)
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##### Spring session

<b>400162.2</b>	Child and Adolescent Occupations
<b>400165.2</b>	Occupation and the Environment
<b>400176.3</b>	Occupation and Ageing

##### Year 4

##### Term 3 session

<b>400945.1</b>	Honours Research 1
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##### Autumn session

<b>400926.1</b>	Ergonomics and Work Occupations
<b>400916.1</b>	Occupational Justice

**2H session**

400946.1 Honours Research 2

Occupational Therapy Practice 4 (Honours)

**Bachelor of Health Science/Master of Physiotherapy****4662.3**

Students should follow the course structure for the course version relevant to the year they commenced. This course version applies to students whose commencement year in this course is 2012 or later.

Physiotherapy is a highly regarded profession and demand for physiotherapists is strong. Physiotherapists work in private practice, aged care settings, private and public hospitals, workplaces, community based agencies, schools, rehabilitation centres and chronic health management clinics. Patients range across the life span, from birth to athletes and the elderly.

The course in physiotherapy is offered as a combined Bachelor of Health Science/Master of Physiotherapy. The first three years of the program combine studies in physiotherapy with a broad understanding of biomedicine and health science fields to develop the professional competencies important for ethical and safe practice, high quality care and the skills to work in multidisciplinary teams. The progression to the Master's component of the combined degree is seamless. The final year focuses predominately on the development of physiotherapy practice skills which are used during clinical placements to treat patients in the community. Evidence-based practice is one of the most important trends in healthcare today and a strong feature of the program.

**Study Mode**

Four years full-time

**Location**

Campus	Attendance Mode
Campbelltown Campus	Full Time Internal

**Accreditation**

The program is designed to meet all the requirements for accreditation by the Australian Physiotherapy Council and accreditation is being sought.

**Inherent requirements**

There are inherent requirements for this course that you must meet in order to complete your course and graduate. Make sure you read and understand the requirements for this course online.

**Admission**

For local students admission is through UAC. Assumed knowledge, any 2 units of English.

Recommended studies, Mathematics, Physics and/or Biology.

Special note: Students in this program are required to participate fully in practical classes. This involves disrobing

to shorts and singlet or swim-suit equivalent in mixed gender classes. Students will practice hands-on physiotherapy examination and treatment techniques on both genders, and will personally experience these techniques which will be performed on them by other students and relevant academic staff.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

**Special Requirements**

In order to enrol in Second Year Spring units, all students must have: 1. National Criminal Record Check (National Police Certificate), Prohibited Employment Declaration Form prior to 1st June 2010 or a Working with Children Check Student Declaration after 1st June 2010. 3. First Aid Certificate (including cardiopulmonary resuscitation). To be eligible for clinical placements, students must comply with vaccination requirements and be prepared to submit a completed Adult Immunisation Card to placement institutions. NSW Health can provide details of necessary vaccinations. To be eligible to undertake field/work/practice placements, students must also comply with the NSW Health Records and Information Privacy Act (2004) and complete a relevant declaration. In clinical placement units, students must wear the UWS physiotherapy uniform, which complies with NSW uniform requirements.

**Course Structure****Special Note:**

Students in this program are required to participate fully in practical classes. This involves disrobing to shorts and singlet or swim-suit equivalent in mixed gender classes. Students will practice hands-on physiotherapy examination and treatment techniques on both genders, and will personally experience these techniques which will be performed on them by other students and relevant academic staff.

Qualification for this award requires the successful completion of 320 credit points which include the units listed in the recommended sequence below.



## Recommended sequence

### Full-time

#### Year 1

##### Autumn session

400870.2	Population Health and Society
400868.1	Human Anatomy and Physiology 1
400906.2	Introduction to Physiotherapy Practice
400871.2	Professional Health Competencies

##### Spring session

400732.2	Communication in Health
400869.2	Human Anatomy and Physiology 2
400863.2	Foundations of Research and Evidence-Based Practice
400881.3	Functional Anatomy

Students may enter by transfer from Bachelor of Health Science at this point.

#### Year 2

##### Autumn session

400882.2	Introduction to Biomechanics
400138.3	Pathophysiology 1
400864.3	Research Methods (Quantitative and Qualitative)
400866.3	Culture, Diversity and Health

##### 2H session

400982.2	Core Competencies in Physiotherapy Practice
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##### Spring session

101614.2	Psychology and Health
400981.2	Clinical Pharmacology
300754.2	Neuroanatomy

#### Year 3

##### 1H session

400984.1	Cardiorespiratory Physiotherapy
400986.1	Neurological Physiotherapy
400983.1	Orthopaedic Physiotherapy

##### Autumn session

400985.1	Clinical Education A
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##### Spring session

400997.1	Exercise Rehabilitation
400998.1	Neurological Rehabilitation
400865.2	Evidence-Based Practice
400999.1	Musculoskeletal Physiotherapy

At this point, students may exit with a Bachelor of Health Science.

**Please Note: The confirmed structure for Year 4 which covers the theory and clinical practice of physiotherapy will be available at a later date.**

## Bachelor of Health Science (Honours)/ Master of Physiotherapy

### 4668.1

The Honours program is available to high achieving students in the Bachelor of Health Science/Master of Physiotherapy. Honours is a key early step in the pathway to leadership in the profession and opens up the world of research, without taking any longer to complete the degree. Students apply for entry into the Honours program in year 3 of the combined degree. They begin advanced research training in the latter half of year 3. Clinical placements and an honours thesis are completed during the fourth year of the program. The thesis presents research that addresses real physiotherapy problems. This research will be conducted under the supervision of experienced academic researchers.

### Study Mode

Four years full-time study

### Location

Campus	Attendance	Mode
Campbelltown Campus	Full Time	Internal

### Accreditation

The program is designed to meet all the requirements for accreditation by the Australian Physiotherapy Council and accreditation is being sought.

### Inherent requirements

There are inherent requirements for this course that you must meet in order to complete your course and graduate. Make sure you read and understand the requirements for this course online.

### Admission

Admission is through direct application to the university. Applications are directed to the School of Biomedical and Health Sciences.

Students must have completed 200 credit points in the first three years of the UWS B. Health Science/M. Physiotherapy course and achieved a GPA of 5.0 or more. Students with a GPA in the range 4.5 – 5.0 and a credit average in units completed in physiotherapy in levels 2 and 3 will also be considered (in accordance with Honours policy clause 13 and Graduations Policy clause 53).

### Special Requirements

All students must have: 1.National Criminal History Record Check (National Police Certificate) 2.Prohibited Employment Declaration Form prior to 1st June 2010 or a Working with Children Check Student Declaration after 1st June 2010 3.First Aid Certificate (including cardiopulmonary resuscitation). To be eligible for clinical placements,

students must comply with vaccination requirements and be prepared to submit a completed Adult Immunisation Card to placement institutions. NSW Health can provide details of necessary vaccinations. To be eligible to undertake field/work/practice placements, students must also comply with the NSW Health Records and Information Privacy Act (2004) and complete a relevant declaration. In clinical placement units, students must wear the UWS physiotherapy uniform, which complies with NSW uniform requirements.

## Course Structure

### Special Note:

Students in this program are required to participate fully in practical classes. This involves disrobing to shorts and singlet or swim-suit equivalent in mixed gender classes. Students will practice hands-on physiotherapy examination and treatment techniques on both genders, and will personally experience these techniques which will be performed on them by other students and relevant academic staff.

Qualification for this award requires the successful completion of 340 credit points which include the units listed in the recommended sequence below.

## Recommended sequence

### Full-time

#### Year 1

##### Autumn session

<b>400870.2</b>	Population Health and Society
<b>400868.2</b>	Human Anatomy and Physiology 1
<b>400906.2</b>	Introduction to Physiotherapy Practice
<b>400871.2</b>	Professional Health Competencies

##### Spring session

<b>400732.2</b>	Communication in Health
<b>400869.2</b>	Human Anatomy and Physiology 2
<b>400863.2</b>	Foundations of Research and Evidence-Based Practice
<b>400881.3</b>	Functional Anatomy

#### Year 2

##### Autumn session

<b>400882.2</b>	Introduction to Biomechanics
<b>400138.3</b>	Pathophysiology 1
<b>400864.3</b>	Research Methods (Quantitative and Qualitative)
<b>400866.3</b>	Culture, Diversity and Health

##### 2H session

<b>400982.2</b>	Core Competencies in Physiotherapy Practice
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##### Spring session

<b>101614.2</b>	Psychology and Health
<b>400981.2</b>	Clinical Pharmacology
<b>300754.2</b>	Neuroanatomy

#### Year 3

##### 1H session

<b>400984.1</b>	Cardiorespiratory Physiotherapy
<b>400986.1</b>	Neurological Physiotherapy
<b>400983.1</b>	Orthopaedic Physiotherapy

##### Autumn session

<b>400985.1</b>	Clinical Education A
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##### Spring session

<b>400997.1</b>	Exercise Rehabilitation
<b>400998.1</b>	Neurological Rehabilitation
<b>400944.1</b>	Evidence-Based Practice (Advanced)
<b>400999.1</b>	Musculoskeletal Physiotherapy

**Please Note: The confirmed structure for year 4 which covers the theory and clinical practice of physiotherapy will be available at a later date.**

## Bachelor of Health Science/Master of Podiatric Medicine

### 4661.3

Students should follow the course structure for the course version relevant to the year they commenced. This course version applies to students whose commencement year in this course is 2012 or later.

Podiatrists are best known for treating problems that people experience with their feet, but they are increasingly playing an important role in addressing chronic conditions such as diabetes. As a podiatrist, your patients can range from children to active sportspeople to the ageing. There is a large focus on footwear, from everyday wear to workwear and athletic shoes, as well as common problems such as ingrown toenails or bunions. Podiatrists are employed in sports medicine, community centres to help the aged become more mobile, private practice, ensuring children have footwear that meets their needs, and in hospital teams, addressing problems associated with chronic diseases and acute problems such as diabetes. You may also continue your training and become a podiatric surgeon.

The course in podiatry is offered as a combined Bachelor of Health Science/Master of Podiatric Medicine. The first three years of the program combine studies in podiatry with a broad understanding of biomedicine and various health science fields to develop the professional competencies important for ethical and safe practice and high quality care and the skills to work in multidisciplinary teams. The progression to the Master's component of the combined degree is seamless and the final year focuses predominately on podiatry practice skills, practical experience and specialised areas. Evidence-based practice is one of the most important trends in healthcare today and a strong feature of the program.

### Study Mode

Four years full time.

**Location**

Campus	Attendance	Mode
Campbelltown Campus	Full Time	Internal

**Accreditation**

The program is designed to meet all the requirements of the Australian and New Zealand Podiatrists Accreditation Council Inc. (ANZPZC) and accreditation is being sought.

**Admission**

For local students admission is through UAC.

Assumed knowledge: Any 2 units of English.

Recommended studies: Mathematics, Physics and Biology.

To be eligible to undertake fieldwork or practice placements, students must also comply with the NSW Health Records and Information Privacy Act (2004) and complete a relevant declaration.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

**Special Requirements**

In order to enrol in Second Year Spring units, all students must have: 1. National Criminal History Record Check (National Police Certificate), 2. Prohibited Employment Declaration Form prior to 1st June 2010 or a Working with Children Check Student Declaration after 1st June 2010. 3. First Aid Certificate (including cardiopulmonary resuscitation). To be eligible to undertake fieldwork placements in public hospitals, students must comply with vaccination requirements and be prepared to submit a completed Adult Immunisation Card to placement institutions. Details of necessary vaccinations are available from NSW Health.

**Course Structure****Special Note:**

Students in this program are required to participate fully in practical classes. This involves practical hands-on podiatry / lower extremity examination and treatment techniques on both genders and students will personally experience these techniques which will be performed on them by other students and/or relevant academic staff.

Qualification for this award requires the successful completion of 320 credit points which include the units listed in the recommended sequence below.

**Recommended sequence****Full-time****Year 1****Autumn session**

<b>400870.2</b>	Population Health and Society
<b>400868.1</b>	Human Anatomy and Physiology 1
<b>400905.2</b>	Introduction to Podiatry
<b>400871.2</b>	Professional Health Competencies

**Spring session**

<b>400881.3</b>	Functional Anatomy
<b>400869.2</b>	Human Anatomy and Physiology 2
<b>400863.2</b>	Foundations of Research and Evidence-Based Practice
<b>400732.2</b>	Communication in Health

**Year 2****Autumn session**

<b>400882.2</b>	Introduction to Biomechanics
<b>400138.3</b>	Pathophysiology 1
<b>400864.3</b>	Research Methods (Quantitative and Qualitative)
<b>400866.3</b>	Culture, Diversity and Health

**Spring session**

<b>300754.2</b>	Neuroanatomy
<b>101614.2</b>	Psychology and Health
<b>400981.2</b>	Clinical Pharmacology
<b>400933.2</b>	Podiatry Pre-Clinical

**Year 3****1H session**

<b>400929.2</b>	Podiatric Practice 1
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**Autumn session**

<b>400935.3</b>	Podiatric Techniques 1A
<b>400936.3</b>	Podiatric Techniques 1B

And one elective

**2H session**

<b>400930.3</b>	Podiatric Practice 2
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**Spring session**

<b>400937.3</b>	Podiatric Techniques 2A
<b>400938.3</b>	Podiatric Techniques 2B
<b>400865.2</b>	Evidence-Based Practice

At this point, students may exit with a Bachelor of Health Science.

#### Year 4

##### 1H session

**400931.2** Podiatric Practice 3

##### Autumn session

**400939.2** Podiatric Techniques 3A

**400940.2** Podiatric Techniques 3B

**400941.2** Podiatric Techniques 3C

##### 2H session

**400928.2** Podiatric Clinical Block

**400932.2** Podiatric Practice 4

##### Spring session

**400934.2** Podiatric Professional Practice Studies

Students will graduate with Bachelor of Health Science/ Master of Podiatric Medicine

## Bachelor of Health Science (Honours)/ Master of Podiatric Medicine

### 4666.1

The Honours program is available to high achieving students in the Bachelor of Health Science/Master of Podiatric Medicine and is embedded in the four-year combined degree. Honours is a key early step in the path to leadership in the profession and opens up the world of research, without taking any longer to complete the degree.

The honours program encourages independent learning, develops research skills and provides an opportunity for deeper investigation in the major field of study. An honours program is a recognised preparation and entry point for postgraduate research studies and the research training is valuable preparation for careers in research and development and analysis in the public and private sectors.

Students apply for entry into the Honours program in year 3 of the combined degree. They begin advanced research training in the latter half of year 3. Clinical placements and an honours thesis are completed during the fourth year of the program. The thesis presents research that addresses real podiatric problems and education across the lifespan. This research will be conducted under the supervision of experienced academic researchers.

#### Study Mode

Four years full-time study

#### Location

Campus	Attendance	Mode
Campbelltown Campus	Full Time	Internal

#### Accreditation

The program is designed to meet all the requirements of the Australian and New Zealand Podiatrists Accreditation Council Inc. (ANZPZC) and accreditation is being sought.

#### Admission

Admission is through direct application to the university. Applications are directed to the School of Biomedical and Health Sciences.

Students must have completed 200 credit points in the first three years of the UWS B Health Science/M Podiatric Medicine course and achieved a GPA of 5.0 or more. Students with a GPA in the range 4.5 – 5.0 and a credit average in units completed in podiatric medicine in levels 2 and 3 will also be considered (in accordance with Honours policy clause 13 and Graduations Policy clause 53).

#### Special Requirements

In order to enrol in Second Year Spring units, all students must have: 1. National Criminal History Record Check (National Police Certificate) 2. Prohibited Employment Declaration Form prior to 1st June 2010 or a Working with Children Check Student Declaration after 1st June 2010. 3. First Aid Certificate (including cardiopulmonary resuscitation). To be eligible to undertake fieldwork placements in public hospitals, students must comply with vaccination requirements and be prepared to submit a completed Adult Immunisation Card to placement institutions. Details of necessary vaccinations are available from NSW Health.

#### Course Structure

##### Special Note:

Students in this program are required to participate fully in practical classes. This involves practical hands-on podiatry / lower extremity examination and treatment techniques on both genders, and students will personally experience these techniques which will be performed on them by other students and/or relevant academic staff.

Qualification for this award requires the successful completion of 340 credit points which include the units listed in the recommended sequence below.

#### Recommended sequence

##### Full-time

##### Year 1

##### Autumn session

<b>400870.2</b>	Population Health and Society
<b>400868.2</b>	Human Anatomy and Physiology 1
<b>400905.2</b>	Introduction to Podiatry
<b>400871.2</b>	Professional Health Competencies

##### Spring session

<b>400881.3</b>	Functional Anatomy
<b>400869.2</b>	Human Anatomy and Physiology 2
<b>400863.2</b>	Foundations of Research and Evidence-Based Practice
<b>400732.2</b>	Communication in Health

**Year 2****Autumn session**

<b>400882.2</b>	Introduction to Biomechanics
<b>400138.3</b>	Pathophysiology 1
<b>400864.3</b>	Research Methods (Quantitative and Qualitative)
<b>400866.3</b>	Culture, Diversity and Health

**Spring session**

<b>300754.2</b>	Neuroanatomy
<b>101614.2</b>	Psychology and Health
<b>400981.2</b>	Clinical Pharmacology
<b>400933.2</b>	Podiatry Pre-Clinical

**Year 3****1H session**

<b>400929.2</b>	Podiatric Practice 1
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**Autumn session**

<b>400935.3</b>	Podiatric Techniques 1A
<b>400936.3</b>	Podiatric Techniques 1B

And one elective

**2H session**

<b>400944.1</b>	Evidence-Based Practice (Advanced)
<b>400930.3</b>	Podiatric Practice 2

**Spring session**

<b>400937.3</b>	Podiatric Techniques 2A
<b>400938.3</b>	Podiatric Techniques 2B

**Term 3**

<b>400945.1</b>	Honours Research 1
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**Year 4****1H session**

<b>400931.2</b>	Podiatric Practice 3
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**Autumn session**

<b>400939.2</b>	Podiatric Techniques 3A
<b>400940.2</b>	Podiatric Techniques 3B
<b>400941.2</b>	Podiatric Techniques 3C

**2H session**

<b>400946.1</b>	Honours Research 2
<b>400943.2</b>	Podiatric Clinical Block for Honours Students
<b>400932.2</b>	Podiatric Practice 4

**Bachelor of Health Science/Master of Traditional Chinese Medicine****4660.2**

Students should follow the course structure for the course version relevant to the year they commenced. This course version applies to students whose commencement year in this course is 2012 or later.

This course prepares graduates for careers as practitioners of Traditional Chinese Medicine. Traditional Chinese medicine practitioners are usually either self-employed in private practice or work as a member of a team in a clinic that offers a range of therapies. They practice as acupuncturists and treating clients using Chinese herbal medications. There are also opportunities in medical research, product development, management and sales roles in pharmaceutical and herbal companies.

The course in Traditional Chinese Medicine is offered as a combined Bachelor of Health Science/Master of Traditional Chinese Medicine. The first three years of the program combine studies in traditional Chinese medicine, acupuncture and Chinese herbal medicine with a broad understanding of biomedicine and various health science fields to develop the professional competencies important for ethical and safe practice and high quality care and the skills to work in multidisciplinary teams. The progression to the Master's component of the combined degree is seamless and the final year focuses predominately on practical experience and specialised areas. Part of the clinical experience can be taken through an intensive clinical placement in China. Evidence-based practice is one of the most important trends in healthcare today and a strong feature of the program.

**Study Mode**

Four years full-time

**Location**

Campus	Attendance	Mode
Campbelltown Campus	Full Time	Internal

**Accreditation**

This course has been approved by the Chinese Medicine Board of Australia. Students who have successfully completed the course are eligible to apply for national general registration. The national Chinese medicine registration commences from 1 July 2012.

**Admission**

For local students admission is through UAC. Assumed knowledge, Any 2 units of Higher School Certificate (or equivalent) English.

Recommended studies, Biology.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of

minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International. International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

### Special Requirements

In order to enrol in Second Year Autumn units, all students must have: 1. NSW Health National Criminal Record Check, 2. Prohibited Employment Declaration Form. In order to enrol in Second Year Spring units, all students must have a First Aid Certificate. To be eligible to undertake fieldwork placements in public hospitals, students must comply with vaccination requirements and be prepared to submit a completed Adult Immunisation Card to placement institutions. Details of necessary vaccinations are available from NSW Health.

### Course Structure

Qualification for this award requires the successful completion of 320 credit points which include the units listed in the recommended sequence below.

### Recommended sequence

#### Year 1

##### Autumn session

<b>400346.2</b>	Traditional Chinese Medicine 1
<b>400868.2</b>	Human Anatomy and Physiology 1
<b>400866.3</b>	Culture, Diversity and Health
<b>400871.2</b>	Professional Health Competencies

##### Spring session

<b>400348.2</b>	Traditional Chinese Medicine 2
<b>400869.2</b>	Human Anatomy and Physiology 2
<b>400732.2</b>	Communication in Health
<b>300816.1</b>	Cell Biology

#### Year 2

##### Autumn session

<b>400352.2</b>	Traditional Chinese Medicine 3
<b>400138.3</b>	Pathophysiology 1
<b>400874.2</b>	Channels and Points 1
<b>400876.2</b>	Chinese Materia Medica 1

##### Spring session

<b>400863.2</b>	Foundations of Research and Evidence-Based Practice
<b>400267.3</b>	Pathophysiology 2
<b>400875.2</b>	Channels and Points 2
<b>400877.2</b>	Chinese Materia Medica 2

#### Year 3

##### Autumn session

<b>400864.3</b>	Research Methods (Quantitative and Qualitative)
<b>400878.1</b>	Chinese Medicinal Formulas
<b>400873.1</b>	Acupuncture Techniques
<b>400354.2</b>	Traditional Chinese Medicine Practice 1

##### Spring session

<b>300505.2</b>	Pharmacology
<b>400865.2</b>	Evidence-Based Practice
<b>400879.1</b>	Clinical Assessment Methods
<b>400356.2</b>	Traditional Chinese Medicine Practice 2

**At this point, students may exit with the Bachelor of Health Science by transferring to course 4656 - Bachelor of Health Science.**

#### Year 4

##### Autumn session

<b>400918.1</b>	Chinese Internal Medicine 1 (PG)
<b>400919.1</b>	Specialities in Traditional Chinese Medicine 1 (PG)
<b>400969.1</b>	Classical Texts in Chinese Medicine (PG)
<b>400920.1</b>	Traditional Chinese Medicine Practice 3 (PG)

##### Spring session

<b>400922.1</b>	Chinese Internal Medicine 2 (PG)
<b>400923.1</b>	Specialities in Traditional Chinese Medicine 2 (PG)
<b>400927.1</b>	Block Clinical Practicum (PG)
<b>400924.1</b>	Traditional Chinese Medicine Practice 4 (PG)

## Bachelor of Medical Science

### 3673.1

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year in this course was 2012.

This degree comprises three areas of major: biomedical science, medicinal chemistry and anatomy & physiology. The biomedical science major focuses on microbiology, biochemistry, molecular biology and aspects of health. The medicinal chemistry major focuses on chemistry and biochemistry, while the anatomy & physiology major focuses on anatomy, physiology and pharmacology. Graduates of this degree will find employment in areas such as medical research laboratories, hospital laboratories and in pathology laboratories and be well suited for positions in the pharmaceutical, medical sales and various research and quality control laboratories, as well as further study including research degrees, graduate pharmacy and graduate medicine degrees.

### Study Mode

Three years full-time.

**Location**

Campus	Attendance	Mode
Campbelltown Campus	Full Time	Internal
Hawkesbury Campus	Full Time	Internal

**Accreditation**

The Medicinal Chemistry major within the Bachelor of Medical Science is accredited by the Royal Australian Chemical Institute (RACI) for normal entry of a graduate to the Chartered Chemist qualification.

**Admission**

Assumed knowledge required: At least two of biology, chemistry, mathematics and physics.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

**Course Structure****Recommended Sequence****Start Year Intake**

Qualification for this award requires the successful completion of 240 credit points which include the units listed in the recommended sequences below.

**Year 1****Autumn session**

<b>300802.1</b>	Biodiversity
<b>300811.1</b>	Scientific Literacy
<b>300800.1</b>	Essential Chemistry 1
<b>300825.1</b>	Introduction to Anatomy

**Spring session**

<b>300816.1</b>	Cell Biology
<b>300803.1</b>	Essential Chemistry 2
<b>300818.1</b>	Introduction to Physiology

Choose one of

<b>300830.1</b>	Analysis of Change
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<b>300831.1</b>	Quantitative Thinking
<b>300672.2</b>	Mathematics 1A
<b>200263.3</b>	Biometry

**Year 2 - Year 3**

Students must then select one of the following Majors

**Medicinal Chemistry Major**

<b>M3060.1</b>	Medicinal Chemistry
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**Anatomy and Physiology Major**

<b>M3061.1</b>	Anatomy and Physiology
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**Biomedical Science Major**

<b>M3062.1</b>	Biomedical Science
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**Recommended Sequence****Mid Year Intake**

The sequence of units for Year 1 for students Mid Year Intake is different for each major. Please see the details under each major in the links above.

**Sub-major elective spaces**

Elective units may be used toward obtaining an additional approved sub-major (40 credit points) including the sub-majors listed below.

**Sub-majors**

<b>SM3044.1</b>	Microbiology
<b>SM3048.1</b>	Climate Change
<b>SM3050.1</b>	Physics

**Sub-major elective spaces**

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

**Bachelor of Medical Science (Advanced)****3682.1**

If you enjoy being constantly challenged and extended by your studies and are thinking about a career involving medicinal or pharmaceutical research, then the UWS Medical Science (Advanced) degree is for you! This degree equips students with both specialised knowledge and enhanced inquiry skills in medicinal Chemistry OR, biomedical science OR anatomy and physiology OR biomedical nanotechnology. The Medical Science (Advanced) degree is specifically designed to provide initial training for a range of careers in medical science involving research and inquiry. You will be partnered with experienced academic researchers and their research teams, and participate in the University's exciting research activities to

facilitate your transition to an Honours year or directly into a range of exciting career opportunities available to high-achieving science graduates.

Further studies can be pursued (Masters (Hon) or PhD degree) leading to a research or academic career. Information and details on how to apply for Honours will be provided to you as you progress through your Bachelor degree, or you can find out more at

### Study Mode

Three years full-time.

### Location

Campus	Attendance	Mode
Campbelltown Campus	Full Time	Internal
Hawkesbury Campus	Full Time	Internal

### Accreditation

The Nanotechnology and Medicinal Chemistry majors for this degree are accredited by the Royal Australian Chemical Institute (RACI) for normal entry of a graduate to the Chartered Chemist qualification.

### Admission

Assumed knowledge required: Minimum ATAR of 90 with assumed knowledge of HSC mathematics and at least two of biology, chemistry and/or physics. Students must maintain a Grade Point Average (GPA) of 5.0 or above to continue their enrolment in the course. As part of the admission/enrolment process students will be required to sign a statement acknowledging that they understand that a minimum 5.0 GPA is required to remain in the program and that if this GPA is not maintained that they will be automatically transferred into the standard program.

Students in the base Bachelor of Medical Science suite of programs who achieve a GPA of 5.0 or greater at the end of their first year of study may be admitted into the Advanced Science program if sufficient places are available.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

International applicants must apply directly to the University of Western Sydney via UWS International.

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Details of minimum English proficiency requirements and acceptable proof can be found on the Universities Admissions Centre website (UAC).

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

### Course Structure

#### Recommended Sequence

Qualification for this award requires the successful completion of 240 credit points which include the units listed in the recommended sequences below.

### Medicinal Chemistry

Students completing the Bachelor of Medical Science (Advanced) with a major in Medicinal Chemistry will complete the following course structure.

**M3063.1** Medicinal Chemistry

### Anatomy and Physiology

Students completing the Bachelor of Medical Science (Advanced) with a major in Anatomy and Physiology will complete the following course structure.

**M3064.1** Anatomy and Physiology

### Biomedical Science

Students completing the Bachelor of Medical Science (Advanced) with a major in Biomedical Science will complete the following course structure.

**M3065.1** Biomedical Science

### Nanotechnology

Students completing the Bachelor of Medical Science (Advanced) Nanotechnology will complete the following course structure.

**KT3065.1** Nanotechnology

### Bachelor of Medical Science (Nanotechnology)

#### 3674.1

This degree prepares students for professional careers in the multidisciplinary field of nanotechnology, covering biological, chemical and physical processes at the nanoscale. Students will develop fundamental skills in the technology of advanced imaging and characterisation techniques for seeing and manipulating of atoms/molecules, creating chemical and biological nanomachines, smart materials, biomaterials and biodevices, molecular mimics and fabrication of nanostructured devices through the specialised units in this program. Graduates will be skilled to pursue further postgraduate research and/or many challenging career options, examples include as nanotechnologists, smart and effective product developers, managers and consultants in biotechnology, defence, petroleum and pharmaceutical and health industries, chemical, material and engineering focused industries

### Study Mode

Three years full-time.

### Location

Campus	Attendance	Mode
Campbelltown Campus	Full Time	Internal

### Accreditation

The Bachelor of Medical Science (Nanotechnology) is accredited with the Royal Australian Chemical Institute



(RACI) for normal entry of a graduate to the Chartered Chemist qualification.

### Admission

Assumed knowledge: Mathematics and at least two of Biology, Chemistry, Physics.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

### Course Structure

#### Recommended Sequence

Qualification for this award requires the successful completion of 240 credit points which include the units listed in the recommended sequences below.

**Note - At least 60 credit points must be at Level 3 or above (one elective must be at least a Level 3 unit)**

#### Start Year Intake

##### Year 1

##### Autumn session

<b>300828.1</b>	Physics 1
<b>300811.1</b>	Scientific Literacy
<b>300800.1</b>	Essential Chemistry 1
<b>300672.2</b>	Mathematics 1A

##### Spring session

<b>300827.1</b>	Nanotechnology
<b>300803.1</b>	Essential Chemistry 2
<b>300829.1</b>	Physics 2
<b>300673.2</b>	Mathematics 1B

##### Year 2

##### Autumn session

<b>300930.1</b>	Classical Physics and Advanced Technologies
<b>300849.1</b>	Physical Chemistry
<b>300899.1</b>	Inorganic Chemistry

And one elective unit

##### Spring session

<b>300818.1</b>	Introduction to Physiology
<b>300816.1</b>	Cell Biology
<b>300923.1</b>	Quantum Physics

And one elective unit

##### Year 3

##### Autumn session

<b>300890.1</b>	Biodevices
<b>300936.1</b>	Functional Proteins and Genes
<b>300819.1</b>	Topics in Physiology

And one elective unit

##### Spring session

<b>300893.1</b>	Topics in Medical Science
<b>300895.1</b>	Nanochemistry
<b>300889.1</b>	Pathological Basis of Disease

And one elective unit

#### Mid Year Intake

##### Year 1

##### Spring session

<b>300829.1</b>	Physics 2
<b>300827.1</b>	Nanotechnology
<b>300803.1</b>	Essential Chemistry 2
<b>300672.2</b>	Mathematics 1A

##### Autumn session

<b>300828.1</b>	Physics 1
<b>300811.1</b>	Scientific Literacy
<b>300800.1</b>	Essential Chemistry 1
<b>300673.2</b>	Mathematics 1B

##### Year 2

##### Spring session

<b>300923.1</b>	Quantum Physics
<b>300816.1</b>	Cell Biology
<b>300818.1</b>	Introduction to Physiology

And one elective unit

##### Autumn session

<b>300930.1</b>	Classical Physics and Advanced Technologies
<b>300849.1</b>	Physical Chemistry
<b>300899.1</b>	Inorganic Chemistry
<b>300936.1</b>	Functional Proteins and Genes

##### Year 3

##### Spring session

<b>300895.1</b>	Nanochemistry
<b>300893.1</b>	Topics in Medical Science
<b>300889.1</b>	Pathological Basis of Disease

And one elective unit

#### Autumn session

**300890.1** Biodevices  
**300819.1** Topics in Physiology

And two electives

#### Sub-major elective spaces

Elective units may be used toward obtaining an additional approved major (80 credit points) or sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

### Bachelor of Medical Science (Honours)

#### 3610.2

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year in this course was 2011 or later.

The Honours program encourages independent learning and research, further develops academic ability, provides the opportunity to pursue undergraduate studies to a more advanced level, deepens intellectual understanding in the major field of study and develops research skills. An Honours degree is a recognised point of entry for postgraduate research studies at PhD level and enhances a graduate's ability to perform at a high level in a commercial or public organisation. The Honours program consists of a rigorous program of supervised research on a medically related topic, culminating in the production of a thesis and presentation of a final seminar. Students enrol in a 60 credit point honours project and either a 20 credit point research methodology and experimental design unit or a 20 credit point advanced topics and research skills unit, allowing them to explore more advanced topics, including wider areas of research and their applications in science technology and medicine. Although the Honours course is available on several different campuses, some or all of the lectures, workshops and seminars may be held centrally at a single campus to ensure that students are exposed to as wide a range of research topics as possible. The course can provide opportunities for direct commercial and industrial involvement with a diverse range of organisations through the provision of, and joint supervision of, research projects.

#### Study Mode

One year full-time or two years part-time.

#### Location

Campus	Attendance	Mode
Campbelltown Campus	Full Time	Internal
Campbelltown Campus	Part Time	Internal
Hawkesbury Campus	Full Time	Internal

Campus	Attendance	Mode
Hawkesbury Campus	Part Time	Internal
Parramatta Campus	Full Time	Internal
Parramatta Campus	Part Time	Internal
Penrith Campus	Full Time	Internal
Penrith Campus	Part Time	Internal

#### Course Structure

Qualification for this award requires the successful completion of 80 credit points as per the recommended sequence below.

Please note: Students must enrol in 300747 Advanced Topics and Research Skills and 300412 Science, Technology and Environment Honours Projects in both 1H and 2H sessions.

#### Recommended Sequence

##### Full-time

###### Year 1

**1H**  
**300747.2** Advanced Topics and Research Skills  
**300412.3** Science, Technology and Environment Honours Project

###### 2H

**300747.2** Advanced Topics and Research Skills  
**300412.3** Science, Technology and Environment Honours Project

##### Part-time

###### Year 1

**1H**  
**300747.2** Advanced Topics and Research Skills

###### 2H

**300747.2** Advanced Topics and Research Skills

###### Year 2

**1H**  
**300412.3** Science, Technology and Environment Honours Project

###### 2H

**300412.3** Science, Technology and Environment Honours Project

## Bachelor of Natural Science (Animal Science)

### 3670.1

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year in this course was 2012.

Interactions between people and animals are increasing due to our ever-increasing reliance on animals for companionship and food production, whilst we also strive to understand the pressures placed on our unique wildlife. A Bachelor of Natural Science (Animal Science) will enable you to develop a deep understanding of these issues, through studies of animal behaviour, animal health and welfare, animal nutrition, animal production, animal reproduction, human-animal interactions, vertebrate biodiversity, and wildlife science. Throughout your studies, you will have access to diverse on-campus animal facilities including reptiles, native mammals, horses, sheep, cattle and deer and off-campus animal professionals and organisations such as wildlife parks, zoos, farms and horse studs. There are a range of majors (conservation biology, zoology) and sub-majors (environmental sustainability and management) offered in Natural Science and Science that can add diversity and/or focus to your degree, to enable your degree to be matched to your career aspirations. A variety of compelling and exciting career paths are available to graduates of this program, including international opportunities in the many fields of animal science.

### Study Mode

Three years full-time.

### Location

Campus	Attendance	Mode
Hawkesbury Campus	Full Time	Internal

### Admission

Assumed Knowledge: Any two units of English and Mathematics.

Recommended Studies: One unit of Biology, Chemistry, Geography, Earth and Environmental Science or Agriculture.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English

proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

### Course Structure

#### Recommended Sequence

Qualification for this award requires the successful completion of 240 credit points which include the units listed in the recommended sequences below.

#### Start Year Intake

##### Year 1

##### Autumn session

<b>300802.1</b>	Biodiversity
<b>300811.1</b>	Scientific Literacy
<b>300807.1</b>	Human Animal Interactions
<b>300813.1</b>	Wildlife Studies

##### Spring session

<b>300810.1</b>	Resource Sustainability
<b>300831.1</b>	Quantitative Thinking
<b>300801.1</b>	Animal Science

And one elective

##### Year 2

##### Autumn session

<b>300931.1</b>	Integrated Science
<b>300834.1</b>	Animal Health and Welfare
<b>300853.1</b>	Animal Nutrition and Feeding

And one elective

##### Spring session

<b>300932.1</b>	Natural Science Research Methods
<b>300835.1</b>	Animal Reproduction

Choose one of

<b>300836.1</b>	Botany
<b>300838.1</b>	Comparative Physiology

And one elective

##### Year 3

##### Autumn session

<b>300913.1</b>	Field Project 1
<b>300878.1</b>	Animal Behaviour
<b>300854.1</b>	Animal Production

And one elective

##### Spring session

<b>300914.1</b>	Field Project 2
<b>300861.1</b>	Vertebrate Biodiversity

And two electives

**Mid Year Intake****Year 1****Spring session**

<b>300810.1</b>	Resource Sustainability
<b>300831.1</b>	Quantitative Thinking
<b>300801.1</b>	Animal Science
<b>300811.1</b>	Scientific Literacy

**Autumn session**

<b>300802.1</b>	Biodiversity
<b>300813.1</b>	Wildlife Studies
<b>300807.1</b>	Human Animal Interactions

And one elective

**Year 2****Spring session**

<b>300932.1</b>	Natural Science Research Methods
<b>300835.1</b>	Animal Reproduction

Choose one of

<b>300836.1</b>	Botany
<b>300838.1</b>	Comparative Physiology

And one elective

**Autumn session**

<b>300913.1</b>	Field Project 1
<b>300834.1</b>	Animal Health and Welfare
<b>300853.1</b>	Animal Nutrition and Feeding
<b>300931.1</b>	Integrated Science

**Year 3****Spring session**

<b>300914.1</b>	Field Project 2
<b>300861.1</b>	Vertebrate Biodiversity

And two electives

**Autumn session**

<b>300854.1</b>	Animal Production
<b>300878.1</b>	Animal Behaviour

And two elective

**Major and Sub-major elective spaces**

Elective units may be used toward obtaining an additional approved major (80 credit points) or sub-major (40 credit points) including the majors and sub-majors listed below.

**Majors**

<b>M3056.1</b>	Zoology
<b>M3049.1</b>	Conservation Biology

**Sub-majors**

<b>SM3042.1</b>	Conservation Biology
<b>SM3045.1</b>	Zoology

**SM3048.1**

Climate Change

**Sub-major elective spaces**

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

**Bachelor of Natural Science (Environment and Health)****3672.1**

The air we breathe, the water we drink, the food we eat, and the places we live, work and play all have major impacts on our health and well-being. Health scares such as swine/bird flu, obesity, cancers and asthma have all been connected to our environmental conditions. A Bachelor of Natural Science (Environment and Health) will equip you to explore the diverse range of natural and built-environment challenges that confront us, from the mitigation of human health impacts of global climate change through to the more localised issues of air and water quality, waste management, food security, environmental noise and healthy communities. The major areas of study addressed within the program include air pollution; community studies; emergency management; environmental regulation and policy; environmental monitoring; environmental planning; environmental protection; epidemiology; food safety; noise, occupational environment; risk assessment; sustainable environmental management; toxicology; urban development and water pollution. A variety of fulfilling career paths are available to graduates of this program.

**Study Mode**

Six years in external part-time offering.

**Location**

Campus	Attendance	Mode
Hawkesbury Campus	Part Time	External

**Accreditation**

This course is currently accredited by Environmental Health Australia.

**Admission**

Assumed Knowledge: Any two units of Mathematics and Science or equivalent.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying

directly to UWS should also use the information provided on the UAC website.

This course is not available to International Students.

## Course Structure

### Recommended Sequence

Qualification for this award requires the successful completion of 240 credit points which include the units listed in the recommended sequences below.

### Start Year Intake

#### Year 1

##### Autumn session

<b>300802.1</b>	Biodiversity
<b>300811.1</b>	Scientific Literacy
<b>300824.1</b>	Management of Aquatic Environments
<b>300808.1</b>	Introductory Chemistry

##### Spring session

<b>300810.1</b>	Resource Sustainability
<b>300831.1</b>	Quantitative Thinking
<b>300821.1</b>	Environment and Health
<b>300814.1</b>	Water Quality Assessment and Management

#### Year 2

##### Autumn session

<b>300931.1</b>	Integrated Science
<b>300872.1</b>	Epidemiology
<b>300840.1</b>	Environmental Planning and Climate Change
<b>300844.1</b>	General Microbiology

##### Spring session

<b>300932.1</b>	Natural Science Research Methods
<b>300877.1</b>	Toxicology
<b>300841.1</b>	Environmental Regulation and Policy
<b>300859.1</b>	Food Safety

#### Year 3

##### Autumn session

<b>300913.1</b>	Field Project 1
<b>300919.1</b>	Occupational Health and Safety
<b>300858.1</b>	Environmental Risk Management
<b>300852.1</b>	Air Quality and Climate Change

##### Spring session

<b>300914.1</b>	Field Project 2
<b>300860.1</b>	Urban Environment
<b>300867.1</b>	Disease Prevention and Control
<b>300880.1</b>	Disaster and Emergency Management

## Mid Year Intake

### Full Time

#### Year 1

##### Spring session

<b>300810.1</b>	Resource Sustainability
<b>300811.1</b>	Scientific Literacy
<b>300821.1</b>	Environment and Health
<b>300814.1</b>	Water Quality Assessment and Management

##### Autumn session

<b>300802.1</b>	Biodiversity
<b>300831.1</b>	Quantitative Thinking
<b>300824.1</b>	Management of Aquatic Environments
<b>300808.1</b>	Introductory Chemistry

#### Year 2

##### Spring session

<b>300932.1</b>	Natural Science Research Methods
<b>300877.1</b>	Toxicology
<b>300841.1</b>	Environmental Regulation and Policy
<b>300859.1</b>	Food Safety

##### Autumn session

<b>300913.1</b>	Field Project 1
<b>300931.1</b>	Integrated Science
<b>300840.1</b>	Environmental Planning and Climate Change
<b>300844.1</b>	General Microbiology

#### Year 3

##### Spring session

<b>300914.1</b>	Field Project 2
<b>300860.1</b>	Urban Environment
<b>300867.1</b>	Disease Prevention and Control
<b>300880.1</b>	Disaster and Emergency Management

##### Autumn session

<b>300872.1</b>	Epidemiology
<b>300919.1</b>	Occupational Health and Safety
<b>300858.1</b>	Environmental Risk Management
<b>300852.1</b>	Air Quality and Climate Change

## Part Time

#### Year 1

##### Spring session

<b>300821.1</b>	Environment and Health
<b>300811.1</b>	Scientific Literacy

##### Autumn session

<b>300802.1</b>	Biodiversity
<b>300831.1</b>	Quantitative Thinking

**Year 2****Spring session**

**300810.1** Resource Sustainability  
**300877.1** Toxicology

**Autumn session**

**300844.1** General Microbiology  
**300931.1** Integrated Science

**Year 3****Spring session**

**300932.1** Natural Science Research Methods  
**300841.1** Environmental Regulation and Policy

**Autumn session**

**300808.1** Introductory Chemistry  
**300840.1** Environmental Planning and Climate Change

**Year 4****Q3 session**

**300880.1** Disaster and Emergency Management

**Spring session**

**300859.1** Food Safety

**Autumn session**

**300824.1** Management of Aquatic Environments  
**300852.1** Air Quality and Climate Change

**Year 5****Spring session**

**300814.1** Water Quality Assessment and Management  
**300867.1** Disease Prevention and Control

**Autumn session**

**300872.1** Epidemiology  
**300919.1** Occupational Health and Safety

**Year 6****Spring session**

**300914.1** Field Project 2  
**300860.1** Urban Environment

**Autumn session**

**300913.1** Field Project 1  
**300858.1** Environmental Risk Management

## Bachelor of Natural Science (Environmental Management)

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**3671.1**

History has shown that if we don't effectively manage our environment, we will degrade it - possibly to the point where it can no longer sustain us. Environmental managers are concerned with ensuring the ecological sustainability of human development and minimising the size of our "ecological footprint". A Bachelor of Natural Science (Environmental Management) will develop your problem solving skills and equip you to work collaboratively with both community members and professional practitioners to develop innovative policy and strategies that address the increasingly complex causes of today's environmental problems. Issues include urban development, global climate change, persistent organic pollutants (POPs), decreasing biodiversity, deteriorating air and water quality, and sustainable use of natural resources. The major areas embodied within the program include assessment and management of aquatic environments water quality assessment and management; introduction to wildlife; sustainable land and resource use; Indigenous land management; environmental planning; climate change science; environmental regulation and policy; environmental risk management and urban development. The majors (aquatic and conservation biology) and sub-majors (environmental sustainability and management) offered in Natural Science and Science can add diversity and/or focus to your degree, to help match your studies to your career aspirations.

**Study Mode**

Three years full-time.

**Location**

Campus	Attendance	Mode
Hawkesbury Campus	Full Time	Internal

**Accreditation**

This course is currently accredited by Environmental Health Australia.

**Admission**

Assumed Knowledge: Any two units of Science (Biology or Chemistry recommended) and any two units of English.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English

proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

## Course Structure

### Recommended Sequence

Qualification for this award requires the successful completion of 240 credit points which include the units listed in the recommended sequences below.

**Note - At least 60 credit points must be at Level 3 or above (one elective must be at least a Level 3 unit)**

#### Year 1

### Start Year Intake

#### Autumn session

<b>300802.1</b>	Biodiversity
<b>300811.1</b>	Scientific Literacy
<b>300813.1</b>	Wildlife Studies
<b>300824.1</b>	Management of Aquatic Environments

#### Spring session

<b>300810.1</b>	Resource Sustainability
<b>300831.1</b>	Quantitative Thinking
<b>300814.1</b>	Water Quality Assessment and Management
<b>300812.1</b>	Understanding Landscape

#### Year 2

#### Autumn session

<b>300931.1</b>	Integrated Science
<b>101878.1</b>	Indigenous Landscapes
<b>300840.1</b>	Environmental Planning and Climate Change

And one elective

#### Spring session

<b>300932.1</b>	Natural Science Research Methods
<b>300875.1</b>	Landuse and the Environment
<b>300841.1</b>	Environmental Regulation and Policy

And one elective

#### Year 3

#### Autumn session

<b>300913.1</b>	Field Project 1
<b>300858.1</b>	Environmental Risk Management

And two electives

#### Spring session

<b>300914.1</b>	Field Project 2
<b>300860.1</b>	Urban Environment
<b>300870.1</b>	Water in the Landscape

And one elective

## Mid Year Intake

### Year 1

#### Spring session

<b>300810.1</b>	Resource Sustainability
<b>300811.1</b>	Scientific Literacy
<b>300814.1</b>	Water Quality Assessment and Management
<b>300812.1</b>	Understanding Landscape

#### Autumn session

<b>300802.1</b>	Biodiversity
<b>300831.1</b>	Quantitative Thinking
<b>300813.1</b>	Wildlife Studies
<b>300824.1</b>	Management of Aquatic Environments

### Year 2

#### Spring session

<b>300932.1</b>	Natural Science Research Methods
<b>300875.1</b>	Landuse and the Environment
<b>300841.1</b>	Environmental Regulation and Policy

And one elective

#### Autumn session

<b>300913.1</b>	Field Project 1
<b>300931.1</b>	Integrated Science
<b>300840.1</b>	Environmental Planning and Climate Change
<b>101878.1</b>	Indigenous Landscapes

### Year 3

#### Spring session

<b>300914.1</b>	Field Project 2
<b>300860.1</b>	Urban Environment
<b>300870.1</b>	Water in the Landscape

And one elective

#### Autumn session

<b>300858.1</b>	Environmental Risk Management
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And three electives

## Major and Sub-major elective spaces

Elective units may be used toward obtaining an additional approved major (80 credit points) or sub-major (40 credit points) including the majors and sub-majors listed below.

### Majors

<b>M3049.1</b>	Conservation Biology
<b>M3046.1</b>	Aquatic Biology

### Sub-majors

<b>SM3040.1</b>	Aquatic Environments
<b>SM3042.1</b>	Conservation Biology
<b>SM3048.1</b>	Climate Change

## Sub-major elective spaces

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

## Bachelor of Natural Science (Advanced)

### 3683.1

Our world and its resources are under ever increasing pressure, and we need enthusiastic, switched-on people with new ideas and innovative approaches to address these challenges. We are seeing a bigger population, technology advancements and environmental issues, all of which are placing unprecedented pressure on our natural resources and the biosphere. An Advanced degree in the Natural Sciences will enable you to understand these competing pressures and contribute to the development of sustainable strategies to drive change. This is a challenging program that will stretch you - it includes advanced coursework, extension activities and fundamental research training. You will be partnered with experienced academic researchers and contribute to the University's exciting research activities. The degree will allow you to undertake any of the Natural Science programs in Animal Science, Environmental Management or Sustainable Agriculture and Food Security. Students undertake three Advanced Science projects, Advanced Science Project A, B and C. An Honours year is available to high-achieving students and further studies can be pursued (Masters (Hon) or PhD degree) leading to a research or academic career.

Information and details on how to apply for Honours will be provided to you as you progress through your Bachelor degree, or you can find out more at

### Study Mode

3 years full-time.

### Location

Campus	Attendance	Mode
Hawkesbury Campus	Full Time	Internal

### Admission

Entry requirements: Minimum ATAR of 90 with assumed knowledge of HSC mathematics and at least two of biology, chemistry and/or physics. Students must maintain a Grade Point Average (GPA) of 5.0 or above to continue their enrolment in the course. As part of the admission/enrolment process students will be required to sign a statement acknowledging that they understand that a minimum 5.0 GPA is required to remain in the program and that if this GPA is not maintained that they will be automatically transferred into the standard program.

Students in the base Natural science courses within the suite who achieve a GPA of 5.0 or greater at the end of their first year of study may be admitted into the Bachelor of Natural Science Advanced program if sufficient places are available.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

International applicants must apply directly to the University of Western Sydney via UWS International.

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Details of minimum English proficiency requirements and acceptable proof can be found on the Universities Admissions Centre website (UAC).

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

## Course Structure

Qualification for this award requires the successful completion of 240 credit points which include the units listed in the recommended sequences below.

Students in the Bachelor of Natural Science (Advanced) must follow one of the study programs listed below.

<b>KT3097.1</b>	Animal Science
<b>KT3098.1</b>	Environmental Management
<b>KT3099.1</b>	Sustainable Agriculture and Food Security

Students enrolled in the Bachelor of Natural Science (Advanced) must complete the units appropriate to their chosen study program and the three project units listed below. These Advanced Science Project units are taken in Semesters 3, 4 and 5.

<b>300937.1</b>	Advanced Science Project A
<b>300938.1</b>	Advanced Science Project B
<b>300910.1</b>	Advanced Science Project C

## Bachelor of Science

### 3675.1

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year in this course was 2012.

Science asks questions about how the natural world works. It does so in a systematic, yet rigorously creative way based on inquiry and evidence for ideas. This approach has led to our current understanding of nature as being (in large part) systematic and predictable, and has underpinned major advances in human welfare. A Bachelor of Science will prepare you to take part in this process of enquiry, by both contributing to it and by using scientific knowledge to solve current problems. Students will learn core concepts and skills necessary for scientific inquiry: investigating the natural world, proposing and testing ideas by experimentation and observation; quantifying and modelling processes; communicating findings, thinking independently and critically. Students can enrol in a generalist Bachelor of Science or a Bachelor of Science in a specific discipline. Within each program students can select from a range of scientific disciplines to suit their interests, studying a core of basic science units to which other science units, and if desired, non-science units, can be added.



## Study Mode

Three years full-time.

## Location

Campus	Attendance	Mode
Campbelltown Campus	Full Time	Internal
Campbelltown Campus	Part Time	Internal
Hawkesbury Campus	Full Time	Internal
Hawkesbury Campus	Part Time	Internal
Parramatta Campus	Full Time	Internal
Parramatta Campus	Part Time	Internal

## Admission

Assumed Knowledge: At least two of Biology, Chemistry, Mathematics and Physics.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

## Course Structure

Qualifying for this award requires successful completion of 240 credit points within the following rules

### Core units

Six core units must be completed as follows

- at least one mathematics or statistics unit
- one academic skills unit
- three science foundation units, which must come from a further two science disciplines out of the following: Biology, Chemistry, Computer Science, Geoscience, Physics or Integrated Science
- one level 3 capstone unit which ties the area of study together

## Remaining units

- at least ten more science units must be selected from the listings for each Campus below
- at least one science Major must be completed
- at least 60 credit points must be taken at level 3

Note 1: Students must complete at least one of the following majors:

- Hawkesbury: Aquatic Biology, Biochemistry and Molecular Biology, Climate Change, Conservation Biology, Forensic Science, Microbiology, General Biology, Nutrition and Physiology, Zoology. Please note: Mathematics major can not be completed on Hawkesbury campus.
- Parramatta: Biochemistry and Molecular Biology, Chemistry, General Biology, Geochemistry, Mathematics
- Campbelltown: Biochemistry and Molecular Biology, Chemistry, General Biology, Mathematics

Note 2: selection of science units in Year 1 must cover the following discipline areas: mathematics/statistics, and two more from the following: Biology, Chemistry, Computer Science, Geoscience, Physics or Integrated Science

Note 3: Students commencing mid-year should seek academic advice about completing their chosen major; more than three years may be required for completing in some cases due to the Semester some units are offered in and the sequence in which they must be completed

## Start Year Intakes

### Hawkesbury Campus

#### Year 1

#### Autumn session

**Non-mathematics majors: choose at least one mathematics or statistics unit in your first year: Students cannot do a mathematics major on the Hawkesbury campus**

**300811.1** Scientific Literacy

Choose three of

**300802.1** Biodiversity  
**300828.1** Physics 1  
**300931.1** Integrated Science  
**300831.1** Quantitative Thinking  
**300830.1** Analysis of Change  
**200263.4** Biometry  
**300800.1** Essential Chemistry 1

Or

**300808.1** Introductory Chemistry

\*Students may only choose one unit 300800 - Essential Chemistry 1 or 300808 - Introductory Chemistry

**Spring session**

Choose at least two of

<b>300803.1</b>	Essential Chemistry 2
<b>300816.1</b>	Cell Biology
<b>300818.1</b>	Introduction to Physiology
<b>300134.2</b>	Introduction to Information Technology
<b>200263.4</b>	Biometry
<b>300831.1</b>	Quantitative Thinking
<b>300830.1</b>	Analysis of Change

And two elective units

**Year 2****Autumn session**

Choose at least three of

<b>300936.1</b>	Functional Proteins and Genes
<b>300833.1</b>	Microbiology 1
<b>300845.1</b>	Genetics
<b>300865.1</b>	Plant Physiology
<b>300837.1</b>	Climate Change Science
<b>300843.1</b>	Forensic and Environmental Analysis

And one elective

**Spring session**

Choose at least three of

<b>300848.1</b>	Metabolism
<b>300896.1</b>	Microbiology 2
<b>300817.1</b>	Molecular Biology
<b>300838.1</b>	Comparative Physiology
<b>300839.1</b>	Ecology

And one elective

**Year 3****Autumn session**

**Choose at least one capstone unit in your final year of study; capstone units are listed below. The capstone unit selected should come from your Major.**

Choose at least two of

<b>300820.1</b>	Genes, Genomics and Human Health
<b>300850.1</b>	Advanced Cell Biology
<b>300856.1</b>	Ecosystem Carbon Accounting
<b>300921.1</b>	Plant Health and Biosecurity
<b>300919.1</b>	Occupational Health and Safety

**Capstone units**

<b>300857.1</b>	Environmental Geochemistry
<b>300866.1</b>	Analytical Microbiology
<b>300851.1</b>	Advanced Physiology
<b>300929.1</b>	Aquatic Ecology

And two electives (one elective must be a Level 3 unit)

**Spring session**

Choose at least two of

<b>300905.1</b>	Advanced Immunology
<b>300855.1</b>	Conservation Biology
<b>300826.1</b>	Medical Microbiology

<b>300861.1</b>	Vertebrate Biodiversity
<b>300918.1</b>	Invertebrate Biology

**Capstone units**

<b>300927.1</b>	Molecular Medicine
<b>300924.1</b>	Science Research Project
<b>300909.1</b>	Biological Adaptation to Climate Change
<b>300883.1</b>	Laboratory Quality Management

And two electives (one elective must be a Level 3 unit)

**Parramatta Campus****Year 1****Autumn session**

**Non-mathematics majors choose at least one mathematics or statistics unit in your first year**

<b>300811.1</b>	Scientific Literacy
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Choose three of

<b>300802.1</b>	Biodiversity
<b>300828.1</b>	Physics 1
<b>300822.1</b>	Introduction to Earth Science
<b>300931.1</b>	Integrated Science
<b>300831.1</b>	Quantitative Thinking
<b>300830.1</b>	Analysis of Change
<b>200263.4</b>	Biometry
<b>300672.2</b>	Mathematics 1A
<b>200025.2</b>	Discrete Mathematics
<b>300580.2</b>	Programming Fundamentals
<b>300134.2</b>	Introduction to Information Technology
<b>300800.1</b>	Essential Chemistry 1

Or

<b>300808.1</b>	Introductory Chemistry
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**Spring session**

Choose at least two units from the list below

<b>300803.1</b>	Essential Chemistry 2
<b>300816.1</b>	Cell Biology
<b>300818.1</b>	Introduction to Physiology
<b>300829.1</b>	Physics 2
<b>200263.4</b>	Biometry
<b>300809.1</b>	Introductory Geochemistry
<b>300672.2</b>	Mathematics 1A
<b>300673.2</b>	Mathematics 1B
<b>300580.2</b>	Programming Fundamentals
<b>300830.1</b>	Analysis of Change

And two electives

**Year 2****Autumn session**

Choose at least three of

<b>300936.1</b>	Functional Proteins and Genes
<b>300833.1</b>	Microbiology 1
<b>300845.1</b>	Genetics
<b>300865.1</b>	Plant Physiology
<b>300899.1</b>	Inorganic Chemistry
<b>300849.1</b>	Physical Chemistry

- 200027.2** Linear Algebra  
**200028.3** Advanced Calculus

And one elective unit

### Spring session

Choose at least three of

- 300848.1** Metabolism  
**300896.1** Microbiology 2  
**300817.1** Molecular Biology  
**300838.1** Comparative Physiology  
**300839.1** Ecology  
**300876.1** Organic Chemistry  
**300832.1** Analytical Chemistry  
**200030.3** Differential Equations  
**200033.4** Applied Statistics  
**300847.1** Immunology

And one elective

### Year 3

#### Autumn session

**Choose at least one capstone unit in your final year of study; capstone units are listed below. The capstone unit selected should come from your Major.**

Choose at least two of

- 300820.1** Genes, Genomics and Human Health  
**300907.1** Advanced Inorganic Chemistry  
**300926.1** Advanced Physical Chemistry  
**200193.2** Abstract Algebra  
**200037.4** Regression Analysis & Experimental Design  
**200023.3** Analysis

#### Capstone units

- 300857.1** Environmental Geochemistry

And two electives (one elective must be a Level 3 unit)

#### Spring session

Choose at least two of

- 300905.1** Advanced Immunology  
**300925.1** Advanced Analytical Chemistry  
**300906.1** Advanced Organic Chemistry  
**200038.3** Time Series and Forecasting  
**200022.3** Mathematical Modelling

#### Capstone units

- 300927.1** Molecular Medicine  
**300855.1** Conservation Biology  
**300924.1** Science Research Project

And two electives (one elective must be a Level 3 unit)

## Campbelltown Campus

### Year 1

#### Autumn session

**Non-mathematics majors: choose at least one mathematics or statistics unit in your first year:**

- 300811.1** Scientific Literacy

Choose three of

- 300802.1** Biodiversity  
**300828.1** Physics 1  
**300931.1** Integrated Science  
**300831.1** Quantitative Thinking  
**300830.1** Analysis of Change  
**200263.4** Biometry  
**300580.2** Programming Fundamentals  
**300134.2** Introduction to Information Technology  
**300672.2** Mathematics 1A  
**300800.1** Essential Chemistry 1

Or

- 300808.1** Introductory Chemistry

#### Spring session

Choose at least two of

- 300803.1** Essential Chemistry 2  
**300816.1** Cell Biology  
**300818.1** Introduction to Physiology  
**300829.1** Physics 2  
**300580.2** Programming Fundamentals  
**300672.2** Mathematics 1A  
**300673.2** Mathematics 1B  
**200263.4** Biometry

And two elective units

### Year 2

#### Autumn session

Choose at least three of

- 300936.1** Functional Proteins and Genes  
**300833.1** Microbiology 1  
**300845.1** Genetics  
**300899.1** Inorganic Chemistry  
**300849.1** Physical Chemistry  
**200027.2** Linear Algebra  
**200028.3** Advanced Calculus

And one elective unit

#### Spring session

Choose at least three of

- 300848.1** Metabolism  
**300896.1** Microbiology 2  
**300817.1** Molecular Biology  
**300838.1** Comparative Physiology  
**300839.1** Ecology  
**300876.1** Organic Chemistry  
**300832.1** Analytical Chemistry  
**200030.3** Differential Equations  
**200033.4** Applied Statistics

**300847.1** Immunology

And one elective unit

**Year 3****Autumn session**

**Choose at least one capstone unit in your final year of study; capstone units are listed below. The capstone unit selected should come from your Major.**

Choose at least two of

<b>300820.1</b>	Genes, Genomics and Human Health
<b>300850.1</b>	Advanced Cell Biology
<b>300819.1</b>	Topics in Physiology
<b>300907.1</b>	Advanced Inorganic Chemistry
<b>300912.1</b>	Molecular Pharmacokinetics
<b>200193.2</b>	Abstract Algebra
<b>200037.4</b>	Regression Analysis & Experimental Design
<b>200023.3</b>	Analysis

And two elective units (One elective must be a Level 3 unit)

**Spring session**

Choose at least two of

<b>300905.1</b>	Advanced Immunology
<b>300925.1</b>	Advanced Analytical Chemistry
<b>300906.1</b>	Advanced Organic Chemistry
<b>200038.3</b>	Time Series and Forecasting
<b>200022.3</b>	Mathematical Modelling

**Capstone units**

<b>300927.1</b>	Molecular Medicine
<b>300924.1</b>	Science Research Project

And two elective units (One elective must be a Level 3 unit)

**Mid Year Intakes****Hawkesbury Campus**

Select at least six level 1 science units over the next three semesters; Scientific Literacy is a compulsory unit, at least one unit must be mathematics or statistics, and the remaining four units must cover at least two other scientific disciplines

**Year 1****Spring session****Level 1 Science units**

<b>300811.1</b>	Scientific Literacy
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Choose at least two of

<b>300816.1</b>	Cell Biology
<b>300818.1</b>	Introduction to Physiology
<b>300134.2</b>	Introduction to Information Technology
<b>300803.1</b>	Essential Chemistry 2

**Statistics Unit**

<b>200263.4</b>	Biometry
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And one elective (if 200263 - Biometry has not been chosen)

**Autumn session**

Choose two of

<b>300802.1</b>	Biodiversity
<b>300828.1</b>	Physics 1
<b>300931.1</b>	Integrated Science
<b>300800.1</b>	Essential Chemistry 1

Or

<b>300808.1</b>	Introductory Chemistry
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\*Students may only choose one unit 300800 - Essential Chemistry 1 or 300808 - Introductory Chemistry

**Mathematics and Statistics Units**

<b>300831.1</b>	Quantitative Thinking
<b>200263.4</b>	Biometry

And one elective if completing a mathematics or statistics unit this semester; select two electives otherwise.

**Year 2****Spring session**

Select unit below if required by your major

<b>300803.1</b>	Essential Chemistry 2
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**Level 2 Science Units**

Select one of

<b>300839.1</b>	Ecology
<b>300838.1</b>	Comparative Physiology

And two electives if doing Essential Chemistry 1; select three electives otherwise.

**Autumn session**

Select three of

<b>300936.1</b>	Functional Proteins and Genes
<b>300833.1</b>	Microbiology 1
<b>300845.1</b>	Genetics
<b>300865.1</b>	Plant Physiology
<b>300837.1</b>	Climate Change Science
<b>300843.1</b>	Forensic and Environmental Analysis

And one elective

**Year 3****Spring session**

Continue your choice of level 2 units from the list below: select units required to complete six level 2 science units.

<b>300848.1</b>	Metabolism
<b>300896.1</b>	Microbiology 2
<b>300817.1</b>	Molecular Biology

**Level 3 Science Units**

Select at least four level 3 science units over the next two semesters; one must be a capstone unit.

<b>300855.1</b>	Conservation Biology
<b>300826.1</b>	Medical Microbiology
<b>300861.1</b>	Vertebrate Biodiversity

**300918.1** Invertebrate Biology

### Capstone Units

**300927.1** Molecular Medicine  
**300924.1** Science Research Project  
**300909.1** Biological Adaptation to Climate Change  
**300883.1** Laboratory Quality Management

### Autumn session

Select your remaining level 3 science units from the list below

**300820.1** Genes, Genomics and Human Health  
**300850.1** Advanced Cell Biology  
**300856.1** Ecosystem Carbon Accounting  
**300921.1** Plant Health and Biosecurity  
**300919.1** Occupational Health and Safety

### Capstone Units

**300857.1** Environmental Geochemistry  
**300866.1** Analytical Microbiology  
**300851.1** Advanced Physiology  
**300929.1** Aquatic Ecology

And two Level 3 electives

### Parramatta Campus

Select at least six level 1 science units over the next three semesters; Scientific Literacy is a compulsory unit, at least one unit must be mathematics or statistics, and the remaining four units must cover at least two other scientific disciplines.

### Year 1

#### Spring session

#### Level 1 Science units

**300811.1** Scientific Literacy

Choose two of

**300816.1** Cell Biology  
**300818.1** Introduction to Physiology  
**300829.1** Physics 2  
**300931.1** Integrated Science  
**300580.2** Programming Fundamentals  
**300803.1** Essential Chemistry 2

#### Mathematics and Statistics Units

**200263.4** Biometry  
**300830.1** Analysis of Change  
**300672.1** Mathematics 1A

And one elective (if not completing a mathematics or statistics unit)

#### Autumn session

Choose two of

**300802.1** Biodiversity  
**300828.1** Physics 1  
**300822.1** Introduction to Earth Science  
**300931.1** Integrated Science

**300134.2** Introduction to Information Technology  
**300580.2** Programming Fundamentals  
**300800.1** Essential Chemistry 1

Or

**300808.1** Introductory Chemistry

\*Students may only choose one unit 300800 - Essential Chemistry 1 or 300808 - Introductory Chemistry

#### Mathematics Units

**300831.1** Quantitative Thinking  
**200263.1** Biometry  
**300672.1** Mathematics 1A  
**200025.2** Discrete Mathematics

And one elective if completing a mathematics or statistics unit this semester; select two electives otherwise

### Year 2

#### Spring session

Select unit below if required by your major

**300803.1** Essential Chemistry 2

#### Level 2 Science Units

Select one of

**300838.1** Comparative Physiology  
**300839.1** Ecology

And two electives if doing Essential Chemistry 1; select three electives otherwise.

#### Autumn session

Continue your choice of Level 2 units from the list below: do at least three this semester

**300936.1** Functional Proteins and Genes  
**300833.1** Microbiology 1  
**300845.1** Genetics  
**300865.1** Plant Physiology  
**300899.1** Inorganic Chemistry  
**300849.1** Physical Chemistry  
**200027.2** Linear Algebra

And one elective

### Year 3

#### Spring session

Continue your choice of level 2 units from the list below: select units required to complete six level 2 science units.

**300848.1** Metabolism  
**300896.1** Microbiology 2  
**300817.1** Molecular Biology  
**300876.1** Organic Chemistry  
**300832.1** Analytical Chemistry  
**200030.2** Differential Equations  
**200033.4** Applied Statistics  
**300847.1** Immunology

#### Level 3 Science Units

Select at least four level 3 science units over the next two semesters; one must be a capstone unit.

<b>300855.1</b>	Conservation Biology
<b>300905.1</b>	Advanced Immunology
<b>300925.1</b>	Advanced Analytical Chemistry
<b>300906.1</b>	Advanced Organic Chemistry
<b>200038.3</b>	Time Series and Forecasting
<b>200022.3</b>	Mathematical Modelling

**Capstone Units**

<b>300927.1</b>	Molecular Medicine
<b>300855.1</b>	Conservation Biology
<b>300924.1</b>	Science Research Project

**Autumn session**

Select your remaining level 3 science units from the list below

<b>300820.1</b>	Genes, Genomics and Human Health
<b>300850.1</b>	Advanced Cell Biology
<b>300907.1</b>	Advanced Inorganic Chemistry
<b>300926.1</b>	Advanced Physical Chemistry
<b>200193.2</b>	Abstract Algebra
<b>200037.4</b>	Regression Analysis & Experimental Design
<b>200023.3</b>	Analysis

**Capstone Units**

<b>300857.1</b>	Environmental Geochemistry
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And two Level 3 electives

**Campbelltown Campus**

Select at least six level 1 science units over the next three semesters; Scientific Literacy is a compulsory unit, at least one unit must be mathematics or statistics, and the remaining four units must cover at least two other scientific disciplines

**Year 1****Spring session****Level 1 Science Units**

<b>300811.1</b>	Scientific Literacy
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Choose two of

<b>300816.1</b>	Cell Biology
<b>300818.1</b>	Introduction to Physiology
<b>300829.1</b>	Physics 2
<b>300931.1</b>	Integrated Science
<b>300580.2</b>	Programming Fundamentals
<b>300803.1</b>	Essential Chemistry 2

**Mathematics and Statistics Units**

<b>200263.4</b>	Biometry
<b>300830.1</b>	Analysis of Change
<b>300672.1</b>	Mathematics 1A

And one elective

**Autumn session**

Select two of

<b>300802.1</b>	Biodiversity
<b>300828.1</b>	Physics 1

<b>300931.1</b>	Integrated Science
<b>300134.2</b>	Introduction to Information Technology
<b>300580.2</b>	Programming Fundamentals
<b>300800.1</b>	Essential Chemistry 1

Or

<b>300808.1</b>	Introductory Chemistry
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\*Students may only choose one unit 300800 - Essential Chemistry 1 or 300808 - Introductory Chemistry

**Major and Sub-major elective spaces****Mathematics Units**

<b>300831.1</b>	Quantitative Thinking
<b>200263.4</b>	Biometry
<b>300672.1</b>	Mathematics 1A
<b>200025.2</b>	Discrete Mathematics

And one elective if completing a mathematics or statistics unit this semester; select two electives otherwise.

**Year 2****Spring session**

Select unit below if required by your major

**Level 2 Science Units**

Select one of

<b>300839.1</b>	Ecology
<b>300838.1</b>	Comparative Physiology
<b>300803.1</b>	Essential Chemistry 2

And two electives if doing Essential Chemistry 1; select three electives otherwise.

**Autumn session**

Continue your choice of level 2 units from the list below: do at least three this semester

<b>300936.1</b>	Functional Proteins and Genes
<b>300833.1</b>	Microbiology 1
<b>300845.1</b>	Genetics
<b>300899.1</b>	Inorganic Chemistry
<b>300849.1</b>	Physical Chemistry
<b>200027.2</b>	Linear Algebra
<b>200028.3</b>	Advanced Calculus

And one elective

**Year 3****Spring session**

Continue your choice of level 2 units from the list below: select what you require to make the total of six level 2 science units completed.

<b>300848.1</b>	Metabolism
<b>300896.1</b>	Microbiology 2
<b>300817.1</b>	Molecular Biology
<b>300876.1</b>	Organic Chemistry
<b>300832.1</b>	Analytical Chemistry
<b>200030.3</b>	Differential Equations
<b>200033.4</b>	Applied Statistics
<b>300847.1</b>	Immunology

**Level 3 Science Units**

Select at least four level 3 science units over the next two semesters; one must be a capstone unit.

<b>300905.1</b>	Advanced Immunology
<b>300925.1</b>	Advanced Analytical Chemistry
<b>300906.1</b>	Advanced Organic Chemistry
<b>200038.3</b>	Time Series and Forecasting
<b>200022.3</b>	Mathematical Modelling

**Capstone Units**

<b>300927.1</b>	Molecular Medicine
<b>300924.1</b>	Science Research Project

**Year 3****Autumn session**

Select your remaining level 3 science units from the list below

<b>300820.1</b>	Genes, Genomics and Human Health
<b>300850.1</b>	Advanced Cell Biology
<b>300819.1</b>	Topics in Physiology
<b>300907.1</b>	Advanced Inorganic Chemistry
<b>300912.1</b>	Molecular Pharmacokinetics
<b>200193.2</b>	Abstract Algebra
<b>200039.2</b>	Surveys and Multivariate Analysis
<b>200023.3</b>	Analysis

And two Level 3 electives

Elective units may be used toward obtaining an additional approved major (80 credit points) or sub-major (40 credit points) including the majors and sub-majors listed below.

**Majors**

<b>M3045.1</b>	Biochemistry and Molecular Biology
<b>M3047.1</b>	Chemistry
<b>M3048.1</b>	Climate Change
<b>M3050.1</b>	Environmental Management
<b>M3051.1</b>	Forensic Science
<b>M3053.1</b>	Geochemistry
<b>M3054.1</b>	Mathematics
<b>M3058.1</b>	Nutrition and Physiology
<b>M3052.1</b>	General Biology
<b>M3056.1</b>	Zoology
<b>M3055.1</b>	Microbiology
<b>M3049.1</b>	Conservation Biology
<b>M3046.1</b>	Aquatic Biology

**Sub-majors**

<b>SM3040.1</b>	Aquatic Environments
<b>SM3038.1</b>	Food Technology - Secondary Teaching
<b>SM3046.1</b>	Sustainable Environmental Management
<b>SM3050.1</b>	Physics
<b>SM3041.1</b>	Biochemistry and Molecular Biology
<b>SM3042.1</b>	Conservation Biology
<b>SM3043.1</b>	Geochemistry
<b>SM3044.1</b>	Microbiology
<b>SM3045.1</b>	Zoology
<b>SM3048.1</b>	Climate Change
<b>SM3049.1</b>	Immunology and Cell Biology

**Major and Sub-major elective spaces**

Elective units may be used toward obtaining an additional approved major (80 credit points) or sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

**Bachelor of Science (Advanced Science)****3562.6**

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year in this course is 2012 or later

If you enjoy being constantly challenged and extended by your studies and are thinking about a career involving scientific research, then the UWS Advanced Science degree is for you! This degree equips students with both specialised knowledge and enhanced inquiry skills in any one of a range of scientific disciplines. The Advanced Science degree is specifically designed to provide initial training for a range of scientific careers involving research and inquiry. You will be partnered with experienced academic researchers and their research teams and participate in the University's exciting research activities to facilitate your transition to an Honours year or directly into a range of exciting career opportunities available to high-achieving science graduates.

Further studies can be pursued (Masters (Hon) or PhD degree) leading to a research or academic career. Information and details on how to apply for Honours will be provided to you as you progress through your Bachelor degree, or you can find out more at

**Study Mode**

Three years full-time.

**Location**

<b>Campus</b>	<b>Attendance</b>	<b>Mode</b>
Campbelltown Campus	Full Time	Internal
Hawkesbury Campus	Full Time	Internal
Parramatta Campus	Full Time	Internal

**Accreditation**

The Bachelor of Science (Advanced Science) is accredited by the Royal Australian Chemical Institute (RACI) for normal entry of a graduate to the Chartered Chemist qualification.

**Admission**

Minimum ATAR of 90. Students must maintain a Grade Point Average (GPA) of 5.0 or above to continue their enrolment in the course. If this GPA is not maintained they will be automatically transferred into the standard program after one warning (one semester of further study). Students in other UWS science courses who achieve a GPA of 5.0 or greater at the end of their first year of study may be

admitted into the Advanced Science program by invitation if sufficient places are available.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

### Course Structure

Qualification for this award requires the successful completion of 240 credit points which include the units listed in the recommended sequences below.

Students in the Bachelor of Science (Advanced Science) must follow one of the study programs listed below.

<b>KP3010.1</b>	Bachelor of Science (Advanced Science) General structure
<b>KT3090.1</b>	Biological Science
<b>KT3091.1</b>	Chemistry
<b>KT3092.1</b>	Environmental Science
<b>KT3093.1</b>	Forensic Science
<b>KT3094.1</b>	Nutrition and Food Science
<b>KT3095.1</b>	Mathematical Sciences
<b>KT3096.1</b>	Zoology

## Bachelor of Science (Biological Sciences)

### 3677.1

The biological sciences are diverse, fascinating, rapidly changing, and essential to our understanding of living systems at scales ranging from the molecular to the global. They play a vital role in our understanding of the environment, as well as animals, plants and micro-organisms, and are essential to a wide range of contemporary industries. A Bachelor of Science (Biological Science) offers a solid foundation in the basic sciences, including biology, microbiology, biochemistry and environmental science. You will be equipped to enter government, industry or research-based employment in this area (e.g. Biotechnology companies, pathology, quality assurance, university and hospital laboratories, scientific sales and government agencies). You may also choose to maximise the biological science content of your degree or combine biological sciences with studies in another discipline.

### Study Mode

Three years full-time.

### Location

Campus	Attendance	Mode
Campbelltown Campus	Full Time	Internal
Campbelltown Campus	Part Time	Internal
Hawkesbury Campus	Full Time	Internal
Hawkesbury Campus	Part Time	Internal
Parramatta Campus	Full Time	Internal
Parramatta Campus	Part Time	Internal

### Admission

Assumed Knowledge: At least two units of Biology, Chemistry, Mathematics and Physics.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

### Course Structure

#### Recommended Sequence

Qualification for this award requires the successful completion of 240 credit points which include the units listed in the recommended sequences below.

**Note: At least 60 credit points must be at Level 3 or above.**

#### Year 1

##### Autumn session

<b>300802.1</b>	Biodiversity
<b>300811.1</b>	Scientific Literacy

Choose one of

<b>300800.1</b>	Essential Chemistry 1
<b>300808.1</b>	Introductory Chemistry

Choose one of

<b>300831.1</b>	Quantitative Thinking
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**200263.4** Biometry

### Spring session

**300816.1** Cell Biology  
**300803.1** Essential Chemistry 2  
**300818.1** Introduction to Physiology

And one elective

### Year 2

#### Autumn session

**300936.1** Functional Proteins and Genes  
**300833.1** Microbiology 1  
**300845.1** Genetics

And one elective

#### Spring session

**300839.1** Ecology  
**300817.1** Molecular Biology

Choose one of

**300848.1** Metabolism  
**300896.1** Microbiology 2  
**300838.1** Comparative Physiology  
**300876.1** Organic Chemistry  
**300832.1** Analytical Chemistry  
**200030.3** Differential Equations  
**200033.4** Applied Statistics  
**300847.1** Immunology

And one elective

### Year 3

#### Autumn session

Choose at least one capstone unit in your final year of study. Capstone units are listed separately below.

#### Hawkesbury Campus

Choose at least two of

**300820.1** Genes, Genomics and Human Health  
**300850.1** Advanced Cell Biology  
**300856.1** Ecosystem Carbon Accounting  
**300919.1** Occupational Health and Safety  
**300826.1** Medical Microbiology

#### Capstone units

**300866.1** Analytical Microbiology  
**300851.1** Advanced Physiology  
**300929.1** Aquatic Ecology

#### Parramatta Campus

**300820.1** Genes, Genomics and Human Health  
**300850.1** Advanced Cell Biology

#### Campbelltown Campus

Choose at least two of

**300820.1** Genes, Genomics and Human Health  
**300850.1** Advanced Cell Biology

**300819.1** Topics in Physiology

And two elective units (One elective must be a Level 3 unit)

### Spring session

#### Hawkesbury Campus

Choose at least two of

**300905.1** Advanced Immunology  
**300861.1** Vertebrate Biodiversity  
**300918.1** Invertebrate Biology

#### Capstone units

**300927.1** Molecular Medicine  
**300924.1** Science Research Project  
**300855.1** Conservation Biology  
**300909.1** Biological Adaptation to Climate Change  
**300883.1** Laboratory Quality Management

#### Parramatta Campus

Choose at least two of

**300905.1** Advanced Immunology  
**300826.1** Medical Microbiology

#### Capstone units

**300927.1** Molecular Medicine  
**300855.1** Conservation Biology  
**300924.1** Science Research Project

#### Campbelltown Campus

Choose at least two of

**300905.1** Advanced Immunology  
**300826.1** Medical Microbiology

#### Capstone units

**300927.1** Molecular Medicine  
**300924.1** Science Research Project

And two elective units (One elective must be a Level 3 unit)

### Major and Sub-major elective spaces

Elective units may be used toward obtaining an additional approved major (80 credit points) or sub-major (40 credit points) including the majors and sub-majors listed below.

### Majors

**M3052.1** General Biology  
**M3056.1** Zoology  
**M3055.1** Microbiology  
**M3049.1** Conservation Biology  
**M3045.1** Biochemistry and Molecular Biology  
**M3046.1** Aquatic Biology

### Sub-majors

**SM3041.1** Biochemistry and Molecular Biology  
**SM3042.1** Conservation Biology  
**SM3043.1** Geochemistry  
**SM3044.1** Microbiology  
**SM3045.1** Zoology

**SM3048.1** Climate Change  
**SM3049.1** Immunology and Cell Biology

### Sub-major elective spaces

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

## Bachelor of Science (Chemistry)

### 3676.1

A Bachelor of Science (Chemistry) will prepare you to take part in a process of inquiry, by both contributing to it and by using scientific knowledge to solve current problems. The Chemistry program provides a strong background in the key topic areas of contemporary chemistry, including aspects of chemical theory in analytical, inorganic, organic and physical chemistry, with a strong emphasis on practical laboratory skills, and applications in contemporary research, industry and the environment. A research project is available to students in the final year of the degree preparing you for a professional career in a wide range of chemistry based industries. A major in geochemistry will prepare you for a career in the minerals and mining industries (where graduates are in high demand). A double major or sub-major with biochemistry and molecular biology or microbiology will prepare you for a career in the pharmaceutical, health or food industries. Alternatively, graduates who elect studies in the physical sciences, mathematics or business are well placed for careers in the manufacturing industry.

### Study Mode

Three years full-time.

### Location

Campus	Attendance	Mode
Campbelltown Campus	Full Time	Internal
Campbelltown Campus	Part Time	Internal
Parramatta Campus	Full Time	Internal
Parramatta Campus	Part Time	Internal

### Accreditation

The Bachelor of Science (Chemistry) is accredited by The Royal Australian Chemical Institute (RACI).

### Admission

Assumed Knowledge: At least two units of Biology, Chemistry, Mathematics and Physics.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of

minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

## Course Structure

### Recommended Sequence

Qualification for this award requires the successful completion of 240 credit points which include the units listed in the recommended sequences below.

**Note: At least 60 credit points must be at Level 3 or above, including one elective unit**

#### Year 1

##### Autumn session

**300800.1** Essential Chemistry 1  
**300811.1** Scientific Literacy  
**300828.1** Physics 1

Choose one of

**300802.1** Biodiversity  
**300822.1** Introduction to Earth Science  
**300931.1** Integrated Science  
**300831.1** Quantitative Thinking  
**200263.4** Biometry  
**200025.2** Discrete Mathematics  
**300580.2** Programming Fundamentals  
**300134.2** Introduction to Information Technology

##### Spring session

**300803.1** Essential Chemistry 2

Choose one of

**300672.2** Mathematics 1A  
**300830.1** Analysis of Change

Choose one of

**300816.1** Cell Biology  
**300818.1** Introduction to Physiology  
**300829.1** Physics 2  
**300809.1** Introductory Geochemistry  
**300672.2** Mathematics 1A  
**300673.2** Mathematics 1B  
**200263.4** Biometry  
**200025.2** Discrete Mathematics  
**300580.2** Programming Fundamentals

And one elective

**Year 2****Autumn session**

<b>300899.1</b>	Inorganic Chemistry
<b>300849.1</b>	Physical Chemistry

Choose at least one of

<b>300936.1</b>	Functional Proteins and Genes
<b>300833.1</b>	Microbiology 1
<b>300845.1</b>	Genetics
<b>300865.1</b>	Plant Physiology
<b>200027.2</b>	Linear Algebra
<b>200028.3</b>	Advanced Calculus

And one elective

**Spring session**

<b>300876.1</b>	Organic Chemistry
<b>300832.1</b>	Analytical Chemistry

Choose at least one of

<b>300848.1</b>	Metabolism
<b>300896.1</b>	Microbiology 2
<b>300817.1</b>	Molecular Biology
<b>300838.1</b>	Comparative Physiology
<b>300839.1</b>	Ecology
<b>200030.3</b>	Differential Equations
<b>200033.4</b>	Applied Statistics
<b>300847.1</b>	Immunology

And one elective

**Year 3****Autumn session**

<b>300907.1</b>	Advanced Inorganic Chemistry
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Choose one of

<b>300926.1</b>	Advanced Physical Chemistry
<b>300912.1</b>	Molecular Pharmacokinetics

And two electives (one elective must be a Level 3 unit)

**Spring session**

<b>300925.1</b>	Advanced Analytical Chemistry
<b>300906.1</b>	Advanced Organic Chemistry

Choose one of

<b>300924.1</b>	Science Research Project
<b>300883.1</b>	Laboratory Quality Management

And one elective

**Major and Sub-major elective spaces**

Elective units may be used toward obtaining an additional approved major (80 credit points) or sub-major (40 credit points) including the majors and sub-majors listed below.

**Majors**

<b>M3052.1</b>	General Biology
<b>M3053.1</b>	Geochemistry
<b>M3055.1</b>	Microbiology
<b>M3045.1</b>	Biochemistry and Molecular Biology

**Sub-majors**

<b>SM3041.1</b>	Biochemistry and Molecular Biology
<b>SM3043.1</b>	Geochemistry
<b>SM3049.1</b>	Immunology and Cell Biology
<b>SM3050.1</b>	Physics

**Sub-major elective spaces**

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

**Bachelor of Science (Environmental Science)****3680.1**

Solving the world's environmental problems will require professionals who are trained in the sciences underlying these issues and who understand the wider human and social contexts of the challenges faced. A Bachelor of Science (Environmental Science) will open up a wide range of career opportunities for those with environmental, conservation and ecological interests. A solid grounding in the underlying science is essential for people intending to work in this field, who will need to integrate knowledge across a range of disciplines, to devise solutions spanning the scientific and social issues involved. Some of the key areas in this degree include conservation biology, environmental analysis, regulation and policy, environmental chemistry, climate change science, microbiological and spatial data analysis, environmental geochemistry, biodiversity and adaptation, and ecology including aquatic ecology. There are a range of majors (climate change and environmental management) and sub-majors (sustainability) offered in Science that can add diversity and/or focus to your degree. There are also a range of sub-majors from other disciplines such as the arts, business, humanities and social sciences to choose from, although these may require cross campus study and are subject to availability and timetabling.

**Study Mode**

Three years full-time.

**Location**

Campus	Attendance Mode
Hawkesbury Campus	Full Time Internal

**Admission**

Assumed Knowledge: Any two units of English and any two units of Science (Biology or Chemistry recommended).

Recommended Studies: Geography.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

## Course Structure

### Recommended Sequence

Qualification for this award requires the successful completion of 240 credit points which include the units listed in the recommended sequences below.

**Note: At least 60 credit points must be at Level 3 or above, including one elective unit**

#### Year 1

##### Autumn session

<b>300802.1</b>	Biodiversity
<b>300811.1</b>	Scientific Literacy
<b>300824.1</b>	Management of Aquatic Environments

Choose one of

<b>300808.1</b>	Introductory Chemistry
<b>300800.1</b>	Essential Chemistry 1

##### Spring session

<b>300816.1</b>	Cell Biology
<b>300803.1</b>	Essential Chemistry 2
<b>101646.2</b>	Analysis of Spatial Data
<b>300810.1</b>	Resource Sustainability

#### Year 2

##### Autumn session

<b>300837.1</b>	Climate Change Science
<b>300843.1</b>	Forensic and Environmental Analysis

Choose one of

<b>300831.1</b>	Quantitative Thinking
<b>200263.4</b>	Biometry

And one elective

##### Spring session

<b>300839.1</b>	Ecology
<b>300841.1</b>	Environmental Regulation and Policy

Choose one of

<b>300836.1</b>	Botany
<b>300838.1</b>	Comparative Physiology

And one elective

#### Year 3

##### Autumn session

<b>300929.1</b>	Aquatic Ecology
<b>300857.1</b>	Environmental Geochemistry
<b>300833.1</b>	Microbiology 1

And one elective

##### Spring session

<b>300855.1</b>	Conservation Biology
<b>300909.1</b>	Biological Adaptation to Climate Change

Choose one of

<b>300861.1</b>	Vertebrate Biodiversity
<b>300918.1</b>	Invertebrate Biology

And one elective

### Major and Sub-major elective spaces

Elective units may be used toward obtaining an additional approved major (80 credit points) or sub-major (40 credit points) including the majors and sub-majors listed below.

#### Majors

<b>M3048.1</b>	Climate Change
<b>M3050.1</b>	Environmental Management
<b>M3052.1</b>	General Biology
<b>M3056.1</b>	Zoology
<b>M3049.1</b>	Conservation Biology
<b>M3046.1</b>	Aquatic Biology

#### Sub-majors

<b>SM3040.1</b>	Aquatic Environments
<b>SM3042.1</b>	Conservation Biology
<b>SM3044.1</b>	Microbiology
<b>SM3045.1</b>	Zoology
<b>SM3046.1</b>	Sustainable Environmental Management
<b>SM3048.1</b>	Climate Change

### Sub-major elective spaces

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

## Bachelor of Science (Forensic Science)

### 3589.4

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year in this course was 2012 or later.

This is a three year program that produces scientists who have a good background in the biological and chemical sciences, coupled with specialised expertise in forensic science, including methods of forensic analysis, crime scene investigation, forensic photography, forensic investigation, crime and criminal justice and complex case. Students may opt to further specialise in forensic biology, chemistry or microbiology by selecting additional electives or studies in a related or unrelated discipline. Career opportunities include forensic scientists, crime scene investigators, private investigators and consultants, police officers, drug analysts, researchers and academics, and specialised forensic science practitioners. The main employers of forensic scientists are State and Federal police services, State and Commonwealth Government Health Departments and analytical chemical laboratories. Graduates will be versatile with a wide skills base with (depending on their choice of electives) potential for employment in analytical chemistry and microbiology, quality control and assurance, biochemistry and molecular biology, scientific research, education and the chemical industry.

### Study Mode

Three years full-time.

### Location

Campus	Attendance	Mode
Hawkesbury Campus	Full Time	Internal

### Admission

**Assumed Knowledge:** Students should have successfully completed at least two of the following units: Biology, Chemistry or Mathematics.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills

Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

### Course Structure

#### Recommended Sequence

Qualification for this award requires the successful completion of 240 credit points which include the units listed in the recommended sequences below.

**Note - At least 60 credit points must be at Level 3 or above. (One elective must be at least a Level 3 unit)**

#### Year 1

##### Autumn session

<b>300802.1</b>	Biodiversity
<b>300811.1</b>	Scientific Literacy
<b>300800.1</b>	Essential Chemistry 1
<b>300806.1</b>	Forensic Science

##### Spring session

<b>300816.1</b>	Cell Biology
<b>300803.1</b>	Essential Chemistry 2

Choose one of

<b>200263.1</b>	Biometry
<b>300831.1</b>	Quantitative Thinking

Choose one of

<b>101567.3</b>	Evidence, Investigations and Police Intelligence
<b>101568.3</b>	Legislation, Courts and Policing

#### Year 2

##### Autumn session

<b>300843.1</b>	Forensic and Environmental Analysis
<b>300845.1</b>	Genetics
<b>300874.1</b>	Digital Forensic Photography

And one elective

##### Spring session

<b>300873.1</b>	Crime Scene Investigation
<b>300817.1</b>	Molecular Biology
<b>300864.1</b>	Imaging Science & Photographic Evidence

And one elective

#### Year 3

##### Autumn session

<b>300881.1</b>	Forensic Biology
<b>300868.1</b>	Forensic Chemistry
<b>300882.1</b>	Forensic Archaeology

Plus one elective unit

##### Spring session

<b>300911.1</b>	Complex Forensic Studies
<b>300877.1</b>	Toxicology
<b>300918.1</b>	Invertebrate Biology

And one elective

### Sub-majors

<b>SM3041.1</b>	Biochemistry and Molecular Biology
<b>SM3044.1</b>	Microbiology
<b>SM3049.1</b>	Immunology and Cell Biology

### Sub-major elective spaces

Elective units may be used toward obtaining an additional approved sub-major (40 credit points) including the sub-majors listed below. UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

## Bachelor of Science (Mathematical Science)

### 3679.1

A Bachelor of Science (Mathematical Science) provides you with a strong background in key analytical techniques that have contemporary applications such as the treatment and interpretation of data and the modelling of real-world problems such as global warming. You will develop skills that allow you to model and solve real world problems using mathematical techniques and have the opportunity to specialise in mathematics, statistics or a combination of both. This will provide you with a wide range of career options in commercial and government institutions, which require highly-skilled problem-solvers. There are also a range of majors (e.g. Biology, chemistry) and sub-majors offered in Science that can add diversity and/or focus to your degree. There are also a range of sub-majors from other disciplines such as the arts, business, humanities and social sciences to choose from, although these may require cross campus study and are subject to availability and timetabling.

### Study Mode

Three years full-time.

### Location

Campus	Attendance	Mode
Campbelltown Campus	Full Time	Internal
Parramatta Campus	Full Time	Internal

### Admission

Recommended Studies: Mathematics.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying

directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

### Course Structure

#### Recommended Sequence

Qualification for this award requires the successful completion of 240 credit points which include the units listed in the recommended sequences below.

#### Year 1

##### Autumn session

<b>300672.2</b>	Mathematics 1A
<b>300811.1</b>	Scientific Literacy
<b>200025.2</b>	Discrete Mathematics

Choose one of

<b>300802.1</b>	Biodiversity
<b>300800.1</b>	Essential Chemistry 1
<b>300828.1</b>	Physics 1
<b>300822.1</b>	Introduction to Earth Science

##### Spring session

<b>300134.2</b>	Introduction to Information Technology
<b>300673.2</b>	Mathematics 1B
<b>200263.4</b>	Biometry

And one elective

#### Year 2

##### Autumn session

<b>200027.2</b>	Linear Algebra
<b>200028.3</b>	Advanced Calculus
<b>300580.2</b>	Programming Fundamentals

And one elective

##### Spring session

<b>200030.3</b>	Differential Equations
<b>200033.4</b>	Applied Statistics

Choose one science foundation core unit

<b>300816.1</b>	Cell Biology
<b>300803.1</b>	Essential Chemistry 2
<b>300829.1</b>	Physics 2
<b>300809.1</b>	Introductory Geochemistry

And one elective

**Year 3****Autumn session**

<b>200193.2</b>	Abstract Algebra
<b>200037.4</b>	Regression Analysis & Experimental Design
<b>200023.3</b>	Analysis

And one elective

**Spring session**

<b>300924.1</b>	Science Research Project
<b>200038.3</b>	Time Series and Forecasting
<b>200022.3</b>	Mathematical Modelling

And one elective

**Sub-major elective spaces**

Elective units may be used toward obtaining an additional approved sub-major (40 credit points) including the sub-majors listed below.

**Sub-majors**

<b>SM3050.1</b>	Physics
<b>SM3039.1</b>	Statistics

UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

**Bachelor of Science (Nutrition & Food Sciences)****3678.1**

There is more to healthy eating than you realise. This program will help you understand nutrition and the science behind food. A Bachelor of Science (Nutrition and Food Science) will prepare you for the future by developing the skills and knowledge to solve future challenges in nutrition and health, food quality and security. Students will develop a strong foundation in the biological and chemical sciences to needed underpin their studies, with majors in 'Human Nutrition' or 'Food Science and Technology' that will allow further specialisation. Career opportunities include community nutrition and health, health promotion, new food product development, quality assurance, and food technology secondary teaching. The program has strong industry and community links, well-equipped facilities including food processing pilot plant and modern kitchen facilities.

A major in Human Nutrition (M3059) investigates healthy eating as a vital part of good health. The major covers nutrition, food and health, with specialised studies in community nutrition, public health nutrition, human physiology, health promotion and food studies. The major prepares students for careers in community nutrition, health promotion and education, or work in a range of food and nutrition related businesses, including new product development of healthy foods. Students seeking to do

postgraduate studies in Nutrition and Dietetics are advised to select a double major of Nutrition and Physiology (M3058) with the Human Nutrition major and complete further studies in metabolism and advanced physiology.

A major in Food Science and Technology (M3057) explores the science behind food, its preparation and manufacture. The major covers specialised topics in food processing, food safety, quality assurance, new product development, postharvest, packaging, microbiological and chemical analysis. The major prepares students for a wide range of careers in the food and beverage related industries, including food product development, quality assurance, management of the fresh food supply, food regulations, research and development.

Students seeking to be secondary Food Technology teachers are advised to select a Sub-major in Education Studies (SM1067) in preparation for Master of Teaching in their fourth year of study. This program will satisfy the requirements of the NSW Institute of Teachers for first teaching areas of 'Food Technology' and 'Biology', with further teaching areas possible in 'chemistry', 'physics', or 'design and technology' depending on the electives selected.

**Study Mode**

Three years full-time.

**Location**

Campus	Attendance	Mode
Hawkesbury Campus	Full Time	Internal
Hawkesbury Campus	Part Time	Internal

**Admission**

Assumed Knowledge: At least two of the following subjects - 2 unit Biology, 2 unit Chemistry or 2 unit Mathematics.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

## Course Structure

### Recommended Sequence

Qualification for this award requires the successful completion of 240 credit points which include the units listed in the recommended sequences below.

**Note: At least 60 credit points must be at Level 3 or above. Some students may need to take one elective as a Level 3 unit.**

#### Year 1

##### Autumn session

- 300802.1 Biodiversity  
300811.1 Scientific Literacy  
300831.1 Quantitative Thinking

Choose one of

- 300808.1 Introductory Chemistry  
300800.1 Essential Chemistry 1

##### Spring session

- 300816.1 Cell Biology  
300803.1 Essential Chemistry 2  
300805.1 Food Science 1

And one elective

#### Year 2

##### Autumn session

- 300936.1 Functional Proteins and Genes  
300833.1 Microbiology 1  
300842.1 Food Science 2  
300933.1 Nutrition and Health 1

##### Spring session

- 300879.1 Experimental Foods

##### Human Nutrition Major

- 300934.1 Nutrition and Health 2  
300818.1 Introduction to Physiology

And one elective

##### Food Science and Technology Major

- 300859.1 Food Safety  
300869.1 Postharvest

And one elective

#### Year 3

##### Autumn session

- 300922.1 Quality Assurance and Food Analysis

##### Human Nutrition Major

- 300928.1 Consumer Issues in Nutrition  
300871.1 Culinary Science

And one elective

##### Food Science and Technology major

- 300871.1 Culinary Science

Choose one of

- 300866.1 Analytical Microbiology  
300843.1 Forensic and Environmental Analysis

Or Education Studies sub-major unit

And one elective

##### Spring session

- 300915.1 Food Product Development  
300655.2 Approved Industrial Experience

##### Human Nutrition Major

- 300908.1 Applied Nutrition  
300917.1 Global Nutrition, Food and Community

And one elective

##### Food Science and Technology Major

- 300904.1 Advanced Food Science and Technology

Choose one of

- 300883.1 Laboratory Quality Management

Or Education sub-major unit

And one elective

Students seeking to be secondary Food Technology teachers are also able to select a Sub-major in Education Studies (SM1067) in preparation for Master of Teaching in the fourth year of study. This program will satisfy the requirements of the NSW Institute of Teachers for first teaching areas of 'Food Technology' and 'Biology', with further teaching areas possible in 'chemistry', 'physics', or 'design and technology' depending on the electives selected.

- SM1067.1 Education Studies

### Major and Sub-major elective spaces

Elective units may be used toward obtaining an additional approved major (80 credit points) or sub-major (40 credit points) including the majors and sub-majors listed below.

#### Majors

- M3057.1 Food Science & Technology  
M3052.1 General Biology  
M3058.1 Nutrition and Physiology  
M3059.1 Human Nutrition  
M3055.1 Microbiology  
M3045.1 Biochemistry and Molecular Biology

#### Sub-majors

- SM3038.1 Food Technology - Secondary Teaching  
SM3041.1 Biochemistry and Molecular Biology  
SM3044.1 Microbiology  
SM3049.1 Immunology and Cell Biology



## Sub-major elective spaces

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

## Bachelor of Science (Zoology)

### 3681.1

A Bachelor of Science (Zoology) recognises the increased demand for scientific knowledge of how to conserve, protect and care for animals, including native wildlife, and companion and production animals. It will enable you to develop an in-depth scientific understanding of how animals function and interact with their environment; from their ecology and evolution; to physiology and biochemistry of tissues and major organs systems, as well as the structure and function of biomolecules and cells. The key learning and research areas embodied in this degree are ecology, evolution, physiology, growth, reproduction, genetics, and conservation biology. On-campus animal facilities include those for reptiles, small marsupials, small rodents, horses, sheep and cattle, as well as over 1,000ha of native, rural and aquatic habitats.

### Study Mode

Three years full-time.

### Location

Campus	Attendance	Mode
Hawkesbury Campus	Full Time	Internal

### Admission

Assumed Knowledge: Any two units of English and any two units of Science.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

## Course Structure

### Recommended Sequence

Qualification for this award requires the successful completion of 240 credit points which include the units listed in the recommended sequences below.

#### Year 1

##### Autumn session

<b>300802.1</b>	Biodiversity
<b>300811.1</b>	Scientific Literacy
<b>300813.1</b>	Wildlife Studies

Choose one of

<b>300800.1</b>	Essential Chemistry 1
<b>300808.1</b>	Introductory Chemistry

##### Spring session

<b>300816.1</b>	Cell Biology
<b>300803.1</b>	Essential Chemistry 2
<b>300801.1</b>	Animal Science
<b>300831.1</b>	Quantitative Thinking

#### Year 2

##### Autumn session

<b>300834.1</b>	Animal Health and Welfare
<b>300936.1</b>	Functional Proteins and Genes
<b>200263.4</b>	Biometry

And one elective

##### Spring session

<b>300861.1</b>	Vertebrate Biodiversity
<b>300838.1</b>	Comparative Physiology
<b>300839.1</b>	Ecology

And one elective

#### Year 3

##### Autumn session

<b>300878.1</b>	Animal Behaviour
<b>300851.1</b>	Advanced Physiology

And two electives

##### Spring session

<b>300855.1</b>	Conservation Biology
<b>300918.1</b>	Invertebrate Biology

Choose one of

<b>300909.1</b>	Biological Adaptation to Climate Change
<b>300924.1</b>	Science Research Project

And one elective

### Major and Sub-major elective spaces

Elective units may be used toward obtaining an additional approved major (80 credit points) or sub-major (40 credit points) including the majors and sub-majors listed below.

## Majors

<b>M3048.1</b>	Climate Change
<b>M3052.1</b>	General Biology
<b>M3049.1</b>	Conservation Biology
<b>M3045.1</b>	Biochemistry and Molecular Biology
<b>M3046.1</b>	Aquatic Biology

## Sub-majors

<b>SM3040.1</b>	Aquatic Environments
<b>SM3041.1</b>	Biochemistry and Molecular Biology
<b>SM3042.1</b>	Conservation Biology
<b>SM3044.1</b>	Microbiology
<b>SM3048.1</b>	Climate Change
<b>SM3049.1</b>	Immunology and Cell Biology

## Sub-major elective spaces

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

## Bachelor of Science (Honours)

### 3611.2

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year in this course was 2011 or later.

The Honours program encourages independent learning and research, further develops academic ability, provides the opportunity to pursue undergraduate studies to a more advanced level, deepens intellectual understanding in the major field of study and develops research skills. An Honours degree is a recognised point of entry for postgraduate research studies at PhD level and enhances a graduate's ability to perform at a high level in a commercial or public organisation. The Honours program consists of a rigorous program of supervised research on a scientific topic, culminating in the production of a thesis and presentation of a final seminar. Students enrol in a 60 credit point honours project and either a 20 credit point research methodology and experimental design unit, or a 20 credit point advanced topics and research skills unit, allowing them to explore more advanced topics, including wider areas of research and their applications in science, technology, medicine and the environment. Although the Honours course is available on several different campuses, some or all of the lectures, workshops and seminars may be held centrally at a single campus to ensure that students are exposed to as wide a range of research topics as possible. The course can provide opportunities for direct commercial and industrial involvement with a diverse range of organisations through the provision of, and joint supervision of, research projects.

### Study Mode

One year full-time or two years part-time.

## Location

Campus	Attendance	Mode
Campbelltown Campus	Full Time	Internal
Campbelltown Campus	Part Time	Internal
Hawkesbury Campus	Full Time	Internal
Hawkesbury Campus	Part Time	Internal
Parramatta Campus	Full Time	Internal
Parramatta Campus	Part Time	Internal
Penrith Campus	Full Time	Internal
Penrith Campus	Part Time	Internal

## Course Structure

Qualification for this award requires the successful completion of 80 credit points as per the recommended sequence below.

Please note: Students must enrol in 300747 Advanced Topics and Research Skills and 300412 Science, Technology and Environment Honours Projects in both 1H and 2H sessions.

## Recommended Sequence

### Full-time

#### Year 1

##### 1H

<b>300412.3</b>	Science, Technology and Environment Honours Project
<b>300747.2</b>	Advanced Topics and Research Skills

##### 2H

<b>300412.3</b>	Science, Technology and Environment Honours Project
<b>300747.2</b>	Advanced Topics and Research Skills

### Part-time

#### Year 1

##### 1H

<b>300747.2</b>	Advanced Topics and Research Skills
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##### 2H

<b>300747.2</b>	Advanced Topics and Research Skills
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#### Year 2

##### 1H

<b>300412.3</b>	Science, Technology and Environment Honours Project
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##### 2H

<b>300412.3</b>	Science, Technology and Environment Honours Project
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## Bachelor of Science - Pathway to Teaching (Secondary)

### 3638.4

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year in this course is 2012 or later.

The Bachelor of Science - Pathway to Teaching (Secondary) will allow you to focus on a science program of your choice and to structure your units of study to gain the necessary learning areas to satisfy the NSW Institute of Teachers discipline knowledge requirements for entry into teaching. It also gives the advantage of early access to Education Studies units through mandatory completion of an Education Studies submajor.

Graduates of this degree who complete the requisite units to meet the requirements of the Institute will receive guaranteed entry into the Master of Teaching.

### Study Mode

Three years full-time.

### Location

Campus	Attendance	Mode
Campbelltown Campus	Full Time	Internal
Hawkesbury Campus	Full Time	Internal
Parramatta Campus	Full Time	Internal

### Accreditation

The Bachelor of Science (Chemistry) is accredited by The Royal Australian Chemical Institute Incorporated (RACI).

### Admission

At least two of Biology, Chemistry, Mathematics (excluding General Mathematics) and Physics at HSC level.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International. International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

## Course Structure

Qualifying for this award requires successful completion of 240 credit points within the following rules

- Students completing the biological sciences program must follow the course structure for 3677 Bachelor of Science (Biological Science)
- Students completing the chemistry program must follow the course structure for 3676 Bachelor of Science (Chemistry)
- Students completing the mathematical sciences program must follow the course structure for 3679 Bachelor of Science (Mathematical Science)
- Students completing other science programs must follow the course structure for 3675 Bachelor of Science

In addition, all students must complete the mandatory 40 credit point sub-major in Education Studies (SM1067 Education Studies). Students must meet this requirement by choosing the units from SM1067 as electives within their Bachelor of Science program.

**SM1067.1** Education Studies

## Bachelor of Science

### Bachelor of Science (Biological Science)

### Bachelor of Science (Chemistry)

### Bachelor of Science (Mathematical Science)

### Unit Set

### Sub-major elective spaces

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

## Bachelor of Science/Bachelor of Arts

### 3658.3

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year in this course is 2012 or later.

This double degree program is designed for students whose interests span the Arts and Sciences. It will produce versatile graduates who can work across a range of academic and professional disciplines, including the opportunity to develop global perspectives and communication skills in an Asian language. In the Science area, students can design their own academic program within the Bachelor of Science course structure, which must include a science Major. This qualification in science can be combined with one of the following majors: Asian Studies

and International Relations; Religion, Anthropology and Philosophy; Cultural and Social Analysis; English, Text and Writing; Global Studies; History and Political Thought; Chinese; Japanese.

### Study Mode

Four years full-time.

### Location

Campus	Attendance Mode
Parramatta Campus	Full Time Internal

### Admission

Eligibility for admission to the Bachelor of Science/Bachelor of Arts is based on the following requirements:

Bachelor of Science

Assumed knowledge: At least two of Biology, Chemistry, Mathematics, Physics.

Bachelor of Arts

Assumed knowledge: Two units of HSC English at Band 4

Recommended studies: HSC English Standard, or equivalent

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

### Course Structure

Qualification for this award requires the successful completion of 320 credit points as prescribed in the structure below. Students who complete this award will graduate with a Bachelor of Science and a Bachelor of Arts.

**Note: At least 60 credit points must be at Level 3 or above.**

Students who wish to exit this double degree after their third year and graduate with a Bachelor of Science must have completed 240 credit points and completed the units as listed below in Years 1, 2 and 3.

Students completing the Bachelor of Science portion of this double degree must complete one of the Science majors listed, in the first three years of study.

The conceptual design of this Bachelor of Science/Bachelor of Arts double degree is as follows.

Years 1 to 3

Students will complete 160 credit points of Bachelor of Science units as listed in the course structure below.

In Years 1 to 4 they will complete the eight Bachelor of Arts core units and 8 Bachelor of Arts major units from one of the following Bachelor of Arts majors:

- Asian Studies and International Relations
- Chinese
- Cultural and Social Analysis
- English, Text and Writing
- Global Studies
- History and Political Thought
- Japanese
- Religion, Anthropology and Philosophy

### Arts Units

For details of the relevant Arts units, refer to the current listing of Bachelor of Arts, course code 1604. Continuing students should refer to the earlier versions of 1604.

### Recommended Sequence

For the Science component of this degree students must study 16 Science units of which a minimum of 8 units must be from one of the Science majors: Biochemistry and Molecular Biology, Chemistry, General Biology, or Mathematics.

Consult the handbook entry for the Bachelor of Science degree course for further details about the science majors.

### Year 1

#### Autumn session

Two Core Arts units

#### Non-mathematics majors choose

**300811.1** Scientific Literacy

Choose one more science unit as follows

#### Biochemistry and Molecular Biology major choose one of

**300802.1** Biodiversity

**300800.1** Essential Chemistry 1

#### General Biology major choose

**300802.1** Biodiversity

#### Chemistry major choose

**300800.1** Essential Chemistry 1

#### Mathematics major choose

**300672.2** Mathematics 1A

**200025.2** Discrete Mathematics

#### Spring session

Two Core Arts units

#### Non-mathematics majors choose two units as follows

#### Biochemistry and Molecular Biology major or General Biology major

**300816.1** Cell Biology

**300803.1** Essential Chemistry 2

### Chemistry major choose

**300803.1** Essential Chemistry 2

And one science units from the list below

### Science units

**300816.1** Cell Biology  
**300818.1** Introduction to Physiology  
**300809.1** Introductory Geochemistry  
**300580.2** Programming Fundamentals  
**300829.1** Physics 2

### Mathematics majors choose

**300673.2** Mathematics 1B  
**200263.3** Biometry

### Year 2

#### Autumn session

One core Arts unit

**Non-mathematics majors choose at least one Level 1 mathematics unit from the list below in either semester in second year.**

### Mathematics units

**300831.1** Quantitative Thinking  
**300830.1** Analysis of Change  
**300672.2** Mathematics 1A  
**200263.3** Biometry  
**200025.2** Discrete Mathematics

Either choose two more science units if completing a mathematics unit in Autumn, or three science units otherwise

### Science units

**300936.1** Functional Proteins and Genes  
**300845.1** Genetics  
**300865.1** Plant Physiology  
**300833.1** Microbiology 1  
**300899.1** Inorganic Chemistry  
**300849.1** Physical Chemistry

### Mathematics major choose

**300811.1** Scientific Literacy  
**200027.2** Linear Algebra  
**200028.3** Advanced Calculus  
**300580.2** Programming Fundamentals

### Spring session

One core Arts unit

**Non-mathematics majors choose either one mathematics unit and two science units, or, three science units (if mathematics unit completed in Autumn)**

### Science units

**300848.1** Metabolism

**300847.1** Immunology  
**300838.1** Comparative Physiology  
**300896.1** Microbiology 2  
**300839.1** Ecology  
**300817.1** Molecular Biology  
**300876.1** Organic Chemistry  
**300832.1** Analytical Chemistry  
**300846.1** Geochemical Systems

### Mathematics major choose

**200030.3** Differential Equations  
**200033.4** Applied Statistics

And one science unit from the following

**300816.1** Cell Biology  
**300803.1** Essential Chemistry 2  
**300829.1** Physics 2  
**300809.1** Introductory Geochemistry

### Year 3

#### Autumn session

One core Arts unit

**Non-mathematics majors choose three units from the following**

**300907.1** Advanced Inorganic Chemistry  
**300926.1** Advanced Physical Chemistry  
**300857.1** Environmental Geochemistry  
**300820.1** Genes, Genomics and Human Health  
**300850.1** Advanced Cell Biology  
**300866.1** Analytical Microbiology

### Mathematics major

**200193.2** Abstract Algebra  
**200023.3** Analysis  
**200037.4** Regression Analysis & Experimental Design

### Spring session

One core Arts unit

**Non-mathematics majors choose three units from the list below, at least one must be a capstone unit appropriate to your major.**

### Major capstone units

**300927.1** Molecular Medicine  
**300855.1** Conservation Biology  
**300924.1** Science Research Project  
**300883.1** Laboratory Quality Management

### Alternate units

**300925.1** Advanced Analytical Chemistry  
**300906.1** Advanced Organic Chemistry  
**300826.1** Medical Microbiology  
**300905.1** Advanced Immunology

### Mathematics major

**200022.3** Mathematical Modelling  
**200193.2** Abstract Algebra

**200023.3** Analysis**Year 4****Autumn session**

Four Bachelor of Arts Major units

**Spring session**

Four Bachelor of Arts Major units

**Major and Sub-major elective spaces**

Elective units may be used toward obtaining an additional approved major (80 credit points) or sub-major (40 credit points) including the majors and sub-majors listed below.

**Majors**

<b>M3047.1</b>	Chemistry
<b>M3052.1</b>	General Biology
<b>M3053.1</b>	Geochemistry
<b>M3054.1</b>	Mathematics
<b>M3055.1</b>	Microbiology
<b>M3045.1</b>	Biochemistry and Molecular Biology

**Sub-majors**

<b>SM3041.1</b>	Biochemistry and Molecular Biology
<b>SM3049.1</b>	Immunology and Cell Biology

**Bachelor of Science/Bachelor of Business and Commerce****3659.3**

Students should follow the course structure for the course version relevant to the year they commenced. This course version applies to students who commenced study in this course in 2012 or later.

The Bachelor of Science/Bachelor of Business and Commerce double degree program allows graduates to span both the commercial and scientific worlds in a way that single degree graduates cannot. It provides students with the capacity for critical analysis and independent thinking. The double degrees permit students to undertake multi-skilling, and offer diverse career paths providing high marketability in multiple areas of expertise. This double degree program equips its graduates with a qualification in science, combined with a good understanding of basic business issues, complemented by a high level of knowledge relevant to a specific business discipline as applied in a global environment. Graduates will have a solid grounding in a core science discipline such as Biochemistry and Molecular Biology, Chemistry, General Biology, or Mathematics. This qualification in science is combined with one of the following Majors from the Bachelor of Business and Commerce: Applied Finance; Hospitality Management; Human Resource Management and Industrial Relations; International Business; Management; Marketing; Sport Management. Graduates will be equipped to work as scientists, with a good understanding of business principles and practices. Alternatively, as Business and Commerce graduates they will be well-prepared to work in science-based industries and institutions.

**Study Mode**

Four years full-time.

**Location**

Campus	Attendance	Mode
Campbelltown Campus	Full Time	Internal
Parramatta Campus	Full Time	Internal

**Accreditation**

Accreditation is held with the Australian Human Resource Institute (AHRI) for students completing the Bachelor of Business and Commerce (Human Resource Management and Industrial Relations) major only.

**Admission**

Eligibility for admission to the Bachelor Science/Bachelor of Business and Commerce is based on the following requirements:

The following sets of Assumed Knowledge and Recommended Studies apply:

Bachelor of Science

Assumed knowledge: At least two of Biology, Chemistry, Mathematics (excluding General Mathematics), Physics at HSC level.

Bachelor of Business and Commerce

Assumed knowledge: HSC Mathematics and any two units of HSC English.

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

**Course Structure**

Qualification for this award requires the successful completion of 320 credit points as prescribed in the structure below.

**Note: At least 60 credit points must be at Level 3 or above.**

Students who complete this award will graduate with a Bachelor of Science and a Bachelor of Business and Commerce.

Students who wish to exit this double degree after their third year and graduate with a Bachelor of Science must have completed 240 credit points and completed the units as listed below in Years 1, 2 and 3.

Students completing the Bachelor of Science portion of this double degree must complete one of the Science majors, in the first three years of study. Students must study 16 Science units of which a minimum of 8 units must be from one of the Science majors: Biochemistry and Molecular Biology, Chemistry, General Biology, or Mathematics.

Consult the handbook entry for the Bachelor of Science degree courses for further details about the science majors.

The conceptual design of this Bachelor of Science/Bachelor of Business and Commerce double degree is as follows

1) Years 1 to 3 - Students will complete 160 credit points of Bachelor of Science units as listed in the course structure below.

2) also, in Years 1 to 3 students complete the Bachelor of Business and Commerce seven common core units and also one Bachelor of Business and Commerce Major unit. In Year 4 they complete eight Bachelor of Business and Commerce Major units.

3) students within this course will only be permitted to undertake the following majors within 2753 Bachelor Business and Commerce.

- Applied Finance
- Hospitality Management
- Human Resource Management and Industrial Relations
- International Business
- Management
- Marketing
- Sport Management

### Recommended Sequence

Students in the Bachelor of Science /Bachelor of Business and Commerce must follow one of the study programs listed below.

#### Bachelor of Science/Bachelor of Business and Commerce (Applied Finance)

**KP3011.1** Bachelor of Science/Bachelor of Business and Commerce (Applied Finance)

#### Bachelor of Science/Bachelor of Business and Commerce (Hospitality Management)

**KP3012.1** Bachelor of Science/Bachelor of Business and Commerce (Hospitality Management)

#### Bachelor of Science/Bachelor of Business and Commerce (HRM & IR)

**KP3013.1** Bachelor of Science/Bachelor of Business and Commerce (HRM & IR)

#### Bachelor of Science/Bachelor of Business and Commerce (Management)

**KP3014.1** Bachelor of Science/Bachelor of Business and Commerce (Management)

#### Bachelor of Science/Bachelor of Business and Commerce (Sport Management)

**KP3015.1** Bachelor of Science/Bachelor of Business and Commerce (Sport Management)

#### Bachelor of Science/Bachelor of Business and Commerce (International Business)

**KP3016.1** Bachelor of Science/Bachelor of Business and Commerce (International Business)

#### Bachelor of Science/Bachelor of Business and Commerce (Marketing)

**KP3017.1** Bachelor of Science/Bachelor of Business and Commerce (Marketing)

#### Bachelor of Science/Bachelor of International Studies

### 3660.3

Students should follow the course structure for the course version relevant to the year they commenced. This course version applies to students who commenced study in this course in 2012 or later.

This double degree program is designed for students who want to combine their interest and expertise in science with a sophisticated understanding of international issues and systems. This will equip them to work in globalised science-based professions and industries. In the Science area, students can design their own academic program within the Bachelor of Science course structure, which must include a science Major. This will be combined with a degree in International Studies that examines the relationships of societies, cultures, languages and systems of government within the international system. It develops students' capacity to analyse the historical development of relations among nation states and contemporary political, social and cultural issues, such as globalisation, transnationalism and migration. Students complete a major in Asian Studies and International Relations, and sub-majors are available in Japanese or Chinese.

#### Study Mode

Four years full-time.

**Location**

Campus	Attendance	Mode
Parramatta Campus	Full Time	Internal

**Admission**

Local students will normally be admitted through UAC. The following sets of Assumed Knowledge and Recommended Studies apply.

Bachelor of Science

Assumed knowledge: At least two of Biology, Chemistry, Mathematics, Physics.

Bachelor of International Studies

Assumed knowledge: Two units of HSC English at Band 4

Recommended studies: HSC English Standard, or equivalent

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC).

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to UWS should also use the information provided on the UAC website.

International applicants must apply directly to the University of Western Sydney via UWS International.

International students applying to UWS through UWS International can find details of minimum English proficiency requirements and acceptable proof on the UWS International website.

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and UWS.

**Course Structure**

Qualification for this award requires the successful completion of 320 credit points as prescribed in the structure below. Students who complete this award will graduate with a Bachelor of Science and a Bachelor of International Studies.

**Note: At least 60 credit points must be at Level 3 or above.**

Students who wish to exit this double degree after their third year and graduate with a Bachelor of Science must have completed 240 credit points and completed the units as listed below in Years 1, 2 and 3.

Students completing the Bachelor of Science portion of this double degree must complete one of the Science majors listed, in the first three years of study.

The conceptual design of this BSc/BIS double degree is as follows:

Years 1 to 3

Students complete 160 credit points of Bachelor of Science units as listed in the course structure below.

In Years 1 to 4 students complete the four Bachelor of Science/Bachelor of International Studies core units and 12 Bachelor of International Studies units as offered on Parramatta campus only:

- Asian Studies and International Relations major and Sub-majors are available in the BIS course as follows:
- Japanese
- Chinese

**Bachelor of International Studies Units**

For details of the relevant International Studies units, refer to the current listing of Bachelor of International Studies, course code 1658 - Bachelor of International Studies. Continuing students should refer to the earlier versions of 1658 -Bachelor of International Studies.

For the Science component of this double degree students must study 16 Science units of which a minimum of 8 units must be from one of the Science majors: Biochemistry and Molecular Biology, Chemistry, General Biology or Mathematics.

Consult the handbook entry for the Bachelor of Science degree course for further details about the science majors.

**Recommended Sequence****Year 1****Autumn session**

Two core Arts units

**Non-mathematics majors**

**300811.1** Scientific Literacy

Choose one more science unit as follows

**Biochemistry and Molecular Biology major choose one of**

**300802.1** Biodiversity

**300800.1** Essential Chemistry 1

**General Biology major choose**

**300802.1** Biodiversity

**Chemistry major choose**

**300800.1** Essential Chemistry 1

**Mathematics major choose**

**300672.2** Mathematics 1A

**200025.2** Discrete Mathematics

**Spring session**

Two Core Arts units

**Non-mathematics majors choose two units as follows****Biochemistry and Molecular Biology major or General Biology major choose**

**300816.1** Cell Biology

**300803.1** Essential Chemistry 2



**Chemistry major choose**

**300803.1** Essential Chemistry 2

And one science unit from the list below

**Science units**

**300816.1** Cell Biology  
**300818.1** Introduction to Physiology  
**300809.1** Introductory Geochemistry  
**300580.2** Programming Fundamentals  
**300829.1** Physics 2

**Mathematics majors choose**

**300673.2** Mathematics 1B  
**200263.3** Biometry

**Year 2****Autumn session**

One Bachelor of International Studies unit

**Non-mathematics majors choose at least one Level 1**

**Mathematics unit from the list below in either semester second year.**

**Mathematics units**

**300831.1** Quantitative Thinking  
**300830.1** Analysis of Change  
**300672.2** Mathematics 1A  
**200263.3** Biometry  
**200025.2** Discrete Mathematics

Either choose two more science units if completing a mathematics unit in Autumn, or three science units otherwise:

**Science units**

**300936.1** Functional Proteins and Genes  
**300845.1** Genetics  
**300865.1** Plant Physiology  
**300833.1** Microbiology 1  
**300899.1** Inorganic Chemistry  
**300849.1** Physical Chemistry

**Mathematics major choose**

**300811.1** Scientific Literacy  
**200027.2** Linear Algebra  
**200028.3** Advanced Calculus

**Spring session**

One Bachelor of International Studies unit

**Non-mathematics majors choose either one mathematics unit and two science units, or, three science units (if mathematics unit completed in Autumn)**

**Science units**

**300848.1** Metabolism  
**300847.1** Immunology  
**300838.1** Comparative Physiology  
**300896.1** Microbiology 2

**300839.1** Ecology  
**300817.1** Molecular Biology  
**300876.1** Organic Chemistry  
**300832.1** Analytical Chemistry  
**300846.1** Geochemical Systems

**Mathematics major**

**200030.3** Differential Equations  
**200033.4** Applied Statistics

And one science unit from the following

**300816.1** Cell Biology  
**300803.1** Essential Chemistry 2  
**300829.1** Physics 2  
**300809.1** Introductory Geochemistry

**Year 3****Autumn session**

One Bachelor of International Studies unit

**Non-mathematics majors choose three units from the following**

**300907.1** Advanced Inorganic Chemistry  
**300926.1** Advanced Physical Chemistry  
**300857.1** Environmental Geochemistry  
**300820.1** Genes, Genomics and Human Health  
**300850.1** Advanced Cell Biology  
**300866.1** Analytical Microbiology

**Mathematics major**

**200193.2** Abstract Algebra  
**200023.3** Analysis  
**200037.4** Regression Analysis & Experimental Design

**Spring session**

One Bachelor of International Studies unit

**Non-mathematics majors choose three units from the list below. At least one must be a capstone unit appropriate for your major.**

**Major capstone units**

**300927.1** Molecular Medicine  
**300855.1** Conservation Biology  
**300924.1** Science Research Project  
**300883.1** Laboratory Quality Management

**Alternate Science units:**

**300925.1** Advanced Analytical Chemistry  
**300906.1** Advanced Organic Chemistry  
**300826.1** Medical Microbiology  
**300905.1** Advanced Immunology

**Mathematics major**

**200022.3** Mathematical Modelling  
**200193.2** Abstract Algebra  
**200023.3** Analysis

**Year 4****Autumn session**

Four Bachelor of International Studies units

**Spring session**

Four Bachelor of International Studies units

**Major and Sub-major elective spaces**

Elective units may be used toward obtaining an additional approved major (80 credit points) or sub-major (40 credit points) including the majors and sub-majors listed below.

**Majors**

<b>M3047.1</b>	Chemistry
<b>M3052.1</b>	General Biology
<b>M3053.1</b>	Geochemistry
<b>M3054.1</b>	Mathematics
<b>M3055.1</b>	Microbiology
<b>M3045.1</b>	Biochemistry and Molecular Biology

**Sub-majors**

<b>SM3041.1</b>	Biochemistry and Molecular Biology
<b>SM3049.1</b>	Immunology and Cell Biology

**Bachelor of Science (UWSC First Year Program)****7025.1**

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year in this course is 2012.

The Bachelor in Science (UWSC First Year Program) is designed to prepare students for tertiary study in Science and in doing so address any perceived deficiencies in the students' mathematical and chemistry knowledge and skills. It presents students with first year level Bachelor of Science units. Equivalent to the Diploma in Science, this course aims to produce students who are fully prepared for study beyond the first year of the Bachelor of Science degree. The course, completed in a smaller, more supportive learning environment than usually found in first year undergraduate programs, is designed to develop students to have greater ability in self-directed study and have the self esteem that comes from prior achievement in a tertiary environment.

For more information on UWSCollege, please refer to the UWSCollege web site.

**Study Mode**

One year full time.

**Location**

Campus	Attendance	Mode
UWSC - Nirimba Education Precinct	Full Time	Internal

**Admission**

The aim of the course is to prepare students for tertiary study in Science. This course is accredited by the University, as principal, to enable its agent (UWSCollege) to produce students who are fully prepared for study beyond the first year of a tertiary award.

## 1. Academic Entry Requirements:

Varies according to country of origin. However, in general:

- Completion of Year 12 or its equivalent is the minimum entry requirement; Or
- Passed the UWSCollege Foundation Certificate, offered by UWSCollege, with a Grade Point Average (GPA) of 5.5 or higher.

## 2. Local students entering this course are required to have met the following:

- Completed an English subject in the NSW Higher School Certificate, or to have competency in English at IELTS 6.0 with a minimum of 5.5 in all areas (unless a native speaker) or have completed the UWSCollege English test at IELTS 6.0 equivalent with a minimum of 5.5 in all areas or to have passed the UWSCollege Foundation English unit.
- Other entry requirements such as an ATAR identified prior to the offer of a place, or to have completed the UWSCollege Foundation Studies course, with a GPA of 5.5 or better, and a pass in Foundation level Mathematics Extension.

## 3. Students are assumed to have completed some study in Mathematics and Science at senior high school level or its equivalent.

**Special Requirements**

All students must complete Tertiary Study Skills with UWSCollege prior to completion of the program.

**Course Structure**

Students must pass the following units:

<b>700095.1</b>	Biodiversity (UWSC)
<b>700125.1</b>	Cell Biology (UWSC)
<b>700121.2</b>	Essential Chemistry 1 (UWSC)
<b>700122.1</b>	Essential Chemistry 2 (UWSC)
<b>700124.1</b>	Scientific Literacy (UWSC)

Students must also complete the following two units:

<b>700043.1</b>	Chemistry (UWSCFS)
<b>700069.2</b>	Mathematics B (UWSCFS)

Students must also pass one of the following units (dependent upon the students result in 700069 Mathematics B (UWSCF):

<b>700108.1</b>	Analysis of Change (UWSC)
<b>700123.1</b>	Quantitative Thinking (UWSC)

Students wishing to enter the Bachelor of Natural Science (Animal Science) or the Bachelor of Natural Science (Environmental Management) or the Bachelor of Natural Science (Environment and Health), upon successful completion of their studies must also pass the following two units:

<b>700099.1</b>	Resource Sustainability (UWSC)
<b>700096.1</b>	Integrated Science (UWSC)

Or

Students wishing to enter the Bachelor of Science or the Bachelor of Medical Science, upon successful completion of their studies must also pass the following two units:

- 700097.1** Introduction to Anatomy (UWSC)  
**700098.1** Introduction to Physiology (UWSC)

Students must also complete (does not count towards the course)

Tertiary Study Skills (Special Requirement)

## Diploma in Health Science

### 7018.2

This course, along with 7017 Diploma in Health Science (PDHPE Pathway), replaces 7013 Diploma in Health Science from 2011.

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year for this course is 2012 or later.

This course is delivered by UWSCollege as an agent of the University of Western Sydney.

The Diploma in Health Science is designed to provide students with the first year units included in the Bachelor of Health Science course. The Diploma presents students with subjects covering introductory Science, Communication and Health aspects of the Bachelor of Health Science course. Transition to tertiary study is assisted by the inclusion of Foundation level Academic English and Science. The Diploma aims to produce students who are fully prepared for study beyond the first year of the Bachelor of Health Science degree in the specified key programs of Health Promotion, Health Services Management and Therapeutic Recreation. This course, completed in a smaller, more supportive learning environment than usually found in first year undergraduate programs, is designed to develop students to have greater ability in self-directed study and have the self esteem that comes from prior achievement in a tertiary environment.

For more information on UWSCollege, please refer to the UWSCollege web site

### Study Mode

One year full-time (three semesters).

### Location

Campus	Attendance	Mode
UWSC - Nirimba Education Precinct	Full Time	Internal

### Admission

The aim of the course is to prepare students for tertiary study in Health Science areas of Health Promotion, Health Services Management and Therapeutic Recreation. The Diploma will be accredited by the University, as principal, to enable its agent, UWSCollege, to produce students who are fully prepared for study beyond the first year of a tertiary award.

1. English Entry Requirements. International students must satisfy one of the following language requirements:

- IELTS 6.0 with a minimum of 5.5 in all areas, or
- Completion of UWS College EAPIII course with a 50% pass, or
- A "B" grade in the Foundation Academic English unit, or
- A pass in the UWS College English Entrance test at IELTS 6.0 equivalent

### 2. Academic Entry Requirements

- Vary according to country of origin. However, in general, completion of Year 12 or its equivalent is the minimum entry requirement OR to have passed the UWS College Foundation Certificate, offered by UWSCollege, with a Grade Point Average of 5.5 or higher.

Local students entering this Diploma are:

1. Required to have completed an English subject in the NSW Higher School Certificate; or to have competency in English at IELTS 6.0 with a minimum of 5.5 in all areas (unless a native speaker); or have completed the UWS College English test at IELTS 6.0 equivalent with a minimum of 5.5 in all areas; or to have gained a "B" grade in the UWSCollege Foundation English unit.

2. Required to have met other entry requirements such as an ATAR identified prior to the offer of a place, or to have completed the UWS College Foundation Studies course, offered by UWS College, with a GPA of 5.5 or better

### Course Structure

Successful completion of the following units will allow students to enter the second year of the Bachelor of Health Science (with key programs in Health Promotion, Health Services Management, or Therapeutic Recreation) at UWS with 80cp advanced standing.

Qualification for this award requires the successful completion of the units listed below.

- 700067.1** Professional Health Competencies (UWSC)  
**700066.1** Population Health and Society (UWSC)  
**700062.2** Communication in Health (UWSC)  
**700060.1** Psychology and Health (UWSC)  
**700061.1** Introduction to Human Biology (UWSC)  
**700064.1** Foundations of Research and Evidence-Based Practice (UWSC)  
**700065.2** Approaches to Health Promotion (UWSC)  
**700075.1** Professional Pathways in Health Science (UWSC)

Students must pass, with a satisfactory grade, the following units

- 700056.1** Academic English (UWSCFS)  
**700059.2** Science for Health Science (UWSCFS)

Students also complete a mandatory unit Tertiary Study Skills, although this does not count for credit towards the Diploma.

## Diploma in Health Science Fast Track

### 7019.2

This course replaces 7014 Diploma in Health Science Fast Track from Term 2, 2011.

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year for this course is 2012 or later.

The Diploma in Health Science Fast Track is designed to provide students with the first year units included in the Bachelor of Health Science course. The Diploma presents students with subjects covering introductory Science, Communication and Health aspects of the Bachelor of Health Science course. The Diploma aims to produce students who are fully prepared for study beyond the first year of the Bachelor of Health Science degree in the specified key programs of Health Promotion, Health Services Management and Therapeutic Recreation. This course, completed in a smaller, more supportive learning environment than usually found in first year undergraduate programs, is designed to develop students to have greater ability in self-directed study and have the self esteem that comes from prior achievement in a tertiary environment. For more information on UWSCollege, please refer to the UWSCollege web site.

### Study Mode

Eight months (two semesters)

### Location

Campus	Attendance	Mode
UWSC - Nirimba Education Precinct	Full Time	Internal

### Admission

The aim of the course is to prepare students for tertiary study in Health Science areas of Health Promotion, Health Services Management and Therapeutic Recreation. The Diploma will be accredited by the University, as principal, to enable its agent, UWSCollege, to produce students who are fully prepared for study beyond the first year of a tertiary award.

1. English Entry Requirements. International students must satisfy one of the following language requirements:

- IELTS 6.0 with a minimum of 5.5 in all areas, or
- Completion of UWS College EAPIII course with a 50% pass, or
- A "B" grade in the Foundation Academic English unit, or
- A pass in the UWSCollege English Entrance test at IELTS 6.0 equivalent

2. Academic Entry Requirements

- Vary according to country of origin. However, in general, completion of Year 12 or its equivalent is the minimum entry requirement or to have passed the UWS College Foundation Certificate, offered by UWSCollege, with a Grade Point Average of 6.0 or higher.

Local students entering this Diploma are:

1. Required to have completed an English subject in the NSW Higher School Certificate; or to have competency in English at IELTS 6.0 with a minimum of 5.5 in all areas (unless a native speaker); or have completed the UWS College English test at IELTS 6.0 equivalent with a minimum of 5.5 in all areas; or to have gained a "B" grade in the UWSCollege Foundation English unit.

2. Required to have met other entry requirements such as an ATAR identified prior to the offer of a place, or to have completed the UWS College Foundation Studies course, offered by UWS College, with a GPA of 6.0 or better.

### Course Structure

Successful completion of the units listed below will allow students to enter the second year of the Bachelor of Health Science (with key programs in Health Promotion, Health Services Management, or Therapeutic Recreation) at UWS with 80cp advanced standing.

Qualification for this award requires the successful completion of the units listed below.

<b>700067.1</b>	Professional Health Competencies (UWSC)
<b>700066.1</b>	Population Health and Society (UWSC)
<b>700062.2</b>	Communication in Health (UWSC)
<b>700060.1</b>	Psychology and Health (UWSC)
<b>700061.1</b>	Introduction to Human Biology (UWSC)
<b>700064.1</b>	Foundations of Research and Evidence-Based Practice (UWSC)
<b>700065.2</b>	Approaches to Health Promotion (UWSC)
<b>700075.1</b>	Professional Pathways in Health Science (UWSC)

Students also complete a special requirement unit, Tertiary Study Skills, although this does not count for credit towards the Diploma.

### Diploma in Health Science (Personal Development, Health and Physical Education Pathway)

#### 7017.2

This course, along with 7018 Diploma in Health Science (Health Promotion, Health Services Management and Therapeutic Recreation Pathway), replaces 7013 Diploma in Health Science from 2011.

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year for this course is 2012 or later.

This course is delivered by UWSCollege as an agent of the University of Western Sydney.

The Diploma in Health Science (PDHPE Pathway) is designed to provide students with the first year units included in the Bachelor of Health Science (PDHPE) course. The Diploma presents students with subjects covering introductory Science, Communication and Health aspects of the Bachelor of Health Science course. Transition to tertiary study is assisted by the inclusion of Foundation level Academic English and Science. The Diploma aims to produce students who are fully prepared for study beyond the first year of the Bachelor of Health Science degree in the specified key programs of PDHPE. This course, completed in a smaller, more supportive learning environment than usually found in first year undergraduate programs, is designed to develop students to have greater ability in self-directed study and have the self esteem that comes from prior achievement in a tertiary environment.

For more information on UWSCollege, please refer to the UWSCollege web site.

### Study Mode

One year full-time (three semesters)

### Location

Campus	Attendance	Mode
UWSC - Nirimba Education Precinct	Full Time	Internal

### Admission

The aim of the course is to prepare students for tertiary study in Health Science areas of PDHPE. The Diploma will be accredited by the University, as principal, to enable its agent, UWSCollege, to produce students who are fully prepared for study beyond the first year of a tertiary award.

1. English Entry Requirements. International students must satisfy one of the following language requirements:

- IELTS 6.0 with a minimum of 5.5 in all areas, or
- Completion of UWS College EAPIII course with a 50% pass, or
- A "B" grade in the Foundation Academic English unit, or
- A pass in the UWSCollege English Entrance test at IELTS 6.0 equivalent.

2. Academic Entry Requirements

- Vary according to country of origin. However, in general, completion of Year 12 or its equivalent is the minimum entry requirement OR to have passed the UWS College Foundation Certificate, offered by UWSCollege, with a Grade Point Average of 5.5 or higher.

Local students entering this Diploma are:

- required to have completed an English subject in the NSW Higher School Certificate; or to have competency in English at IELTS 6.0 with a minimum of 5.5 in all areas (unless a native speaker); or have completed the UWS College English test at IELTS 6.0 equivalent with a minimum of 5.5 in all areas; or to have gained a "B" grade in the UWSCollege Foundation English unit.
- required to have met other entry requirements such as an ATAR identified prior to the offer of a place, or to have completed the UWS College Foundation Studies course, offered by UWS College, with a GPA of 5.5 or better.

### Course Structure

Successful completion of the following units will allow students to enter the second year of the Bachelor of Health Science (PDHPE) course at UWS with 80cp advanced standing.

Qualification for this award requires the successful completion of the units listed below.

<b>700067.1</b>	Professional Health Competencies (UWSC)
<b>700066.1</b>	Population Health and Society (UWSC)
<b>700062.2</b>	Communication in Health (UWSC)
<b>700060.1</b>	Psychology and Health (UWSC)
<b>700061.1</b>	Introduction to Human Biology (UWSC)
<b>700064.1</b>	Foundations of Research and Evidence-Based Practice (UWSC)
<b>700065.2</b>	Approaches to Health Promotion (UWSC)

### 700073.1 Fundamentals of Exercise Science (UWSC)

Students must pass, with a satisfactory grade, the following units

<b>700056.1</b>	Academic English (UWSCFS)
<b>700059.2</b>	Science for Health Science (UWSCFS)

Students also complete a special requirement unit, Tertiary Study Skills, although this does not count for credit towards the Diploma.

## Diploma in Science

### 7003.4

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year in this course is 2012 or later.

This course is delivered by UWSCollege as an agent of the University of Western Sydney.

The Diploma in Science is designed to prepare students for tertiary study in Science and in doing so address any perceived deficiencies in the students' mathematical and chemistry knowledge and skills. It presents students with first year level Bachelor of Science subjects. The Diploma aims to produce students who are fully prepared for study beyond the first year of the Bachelor of Science degree. The Diploma in Science, completed in a smaller, more supportive learning environment than usually found in first year undergraduate programs, is designed to develop students to have greater ability in self-directed study and have the self esteem that comes from prior achievement in a tertiary environment.

For more information on UWSCollege, please refer to the UWSCollege web site.

### Study Mode

1 year

### Location

Campus	Attendance	Mode
UWSC - Nirimba Education Precinct	Full Time	Internal

### Admission

The aim of the course is to prepare students for tertiary study in Science. The Diploma will be accredited by the University, as principal, to enable its agent, UWSCollege, to produce students who should be fully prepared for study beyond the first year of a tertiary award.

International students entering this Diploma are required to have met the following.

1. English Entry Requirements

- IELTS 6.0 with a minimum of 5.5 in all areas, or
- Completion of UWSCollege EAPIII course with a 50% pass, or
- A pass in the Foundation Academic English, or
- A pass in the UWSCollege English test at IELTS 6.0 with a minimum of 5.5 in all areas.

2. Academic Entry Requirements

Vary according to country of origin. However, in general:

- Completion of Year 12 or its equivalent is the minimum entry requirement; or
- Passed the UWSCollege Foundation Certificate, offered by UWSCollege, with a Grade Point Average (GPA) of 5.5 or higher.

Students are also assumed to have completed some study in Mathematics and Science at senior high school level or its equivalent.

Local students entering this Diploma are required to have met the following:

1. Completed an English subject in the NSW Higher School Certificate, or to have competency in English at IELTS 6.0 with a minimum of 5.5 in all areas (unless a native speaker) or have completed the UWSCollege English test at IELTS 6.0 equivalent with a minimum of 5.5 in all areas or to have passed the UWSCollege Foundation English unit.
2. Other entry requirements such as an ATAR identified prior to the offer of a place, or to have completed the UWSCollege Foundation Studies course, with a Grade Point Average of 5.5 or better.
3. Assumed to have completed some study in Mathematics and Science at senior high school level or its equivalent.

### Special Requirements

All students must complete Tertiary Study Skills with UWSCollege prior to completion of the Diploma.

### Course Structure

Students must pass the following units:

<b>700095.1</b>	Biodiversity (UWSC)
<b>700125.1</b>	Cell Biology (UWSC)
<b>700121.2</b>	Essential Chemistry 1 (UWSC)
<b>700122.1</b>	Essential Chemistry 2 (UWSC)
<b>700124.1</b>	Scientific Literacy (UWSC)

Students must also complete the following two units:

<b>700043.1</b>	Chemistry (UWSCFS)
<b>700069.2</b>	Mathematics B (UWSCFS)

Students must also pass one of the following units (dependent upon the students result in 700069 Mathematics B (UWSCFS)):

<b>700108.1</b>	Analysis of Change (UWSC)
<b>700123.1</b>	Quantitative Thinking (UWSC)

Students wishing to enter the Bachelor of Natural Science (Animal Science) or the Bachelor of Natural Science (Environmental Management) or the Bachelor of Natural Science (Environment and Health), upon successful completion of their studies must also pass the following two units:

<b>700099.1</b>	Resource Sustainability (UWSC)
<b>700096.1</b>	Integrated Science (UWSC)

Or

Students wishing to enter the Bachelor of Science or the Bachelor of Medical Science, upon successful completion of their studies must also pass the following two units:

<b>700097.1</b>	Introduction to Anatomy (UWSC)
<b>700098.1</b>	Introduction to Physiology (UWSC)

Students must also complete (does not count towards the course)

Tertiary Study Skills (Special Requirement)

## Diploma in Science Fast Track

### 7009.3

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year in this course is 2012 or later.

This course is delivered by UWSCollege as an agent of the University of Western Sydney.

The Diploma in Science Fast Track is designed to prepare students for tertiary study in Science and in doing so address any perceived deficiencies in the students' mathematical and chemistry knowledge and skills. It presents students with eight university level Science units. The Diploma aims to produce students who are fully prepared for study beyond the first year of university study. The Diploma in Science Fast Track, completed in a smaller, more supportive learning environment than usually found in first year undergraduate programs, is designed to develop students to have greater ability in self-directed study and have the self esteem that comes from prior achievement in a tertiary environment.

For more information on UWSCollege, please refer to the UWSCollege web site.

### Study Mode

8 months

### Location

Campus	Attendance Mode	
UWSC - Nirimba Education Precinct	Full Time	Internal

### Admission

The aim of the course is to prepare students for tertiary study in Science. The Diploma is accredited by the University, as principal, to enable its agent (UWSCollege) to produce students who are fully prepared for study beyond the first year of a tertiary award.

International students entering this Diploma are required to have met the following:

1. English Entry Requirements
  - IELTS 6.0 with a minimum of 5.5 in all areas; or
  - Completion of UWSCollege EAPIII course with a 50% pass; or
  - A pass in Foundation Studies Academic English; or
  - A pass in the UWSCollege English test at IELTS 6.0 with a minimum of 5.5 in all areas

2. Academic Entry Requirements

Varies according to country of origin. However, in general:

- Completion of Year 12 or its equivalent is the minimum entry requirement; or
- Passed the UWSCollege Foundation Certificate, offered by UWSCollege, with a Grade Point Average (GPA) of 6.0 or higher.

Students are also assumed to have completed some study in Mathematics and Science at senior high school level or its equivalent.

Local students entering this Diploma are required to have met the following:

1. Completed an English subject in the NSW Higher School Certificate, or to have competency in English at IELTS 6.0 with a minimum of 5.5 in all areas (unless a native speaker) or have completed the UWSCollege English test at IELTS 6.0 equivalent with a minimum of 5.5 in all areas or to have passed the UWSCollege Foundation English unit.
2. Other entry requirements such as an ATAR identified prior to the offer of a place, or to have completed the UWSCollege Foundation Studies course, with a GPA of 6.0 or better and a C grade in Mathematics.
3. Assumed to have completed some study in Mathematics and Science at senior high school level or its equivalent.

### Special Requirements

All students must complete Tertiary Study Skills with UWSCollege prior to completion of the diploma.

### Course Structure

Students must pass the following units:

<b>700095.1</b>	Biodiversity (UWSC)
<b>700125.1</b>	Cell Biology (UWSC)
<b>700121.2</b>	Essential Chemistry 1 (UWSC)
<b>700122.1</b>	Essential Chemistry 2 (UWSC)
<b>700124.1</b>	Scientific Literacy (UWSC)

Students must also pass one of the following units (based on advice from UWSCollege prior to enrolment):

<b>700108.1</b>	Analysis of Change (UWSC)
<b>700123.1</b>	Quantitative Thinking (UWSC)

Students wishing to enter the Bachelor of Natural Science (Animal Science) or the Bachelor of Natural Science (Environmental Management) or the Bachelor of Natural Science (Environment and Health), upon successful completion of their studies must also pass the following two units:

<b>700099.1</b>	Resource Sustainability (UWSC)
<b>700096.1</b>	Integrated Science (UWSC)

Or

Students wishing to enter the Bachelor of Science or the Bachelor of Medical Science, upon successful completion of their studies must also pass the following two units:

<b>700097.1</b>	Introduction to Anatomy (UWSC)
<b>700098.1</b>	Introduction to Physiology (UWSC)

Students must also complete (does not count towards the course)

Tertiary Study Skills (Special Requirement)

## Unit Sets

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### Key Program - Bachelor of Science (Advanced Science) General structure

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#### KP3010.1

Science asks questions about how the natural world works. It does so in a systematic, yet rigorously creative way based on inquiry and evidence for ideas. This approach has led to our current understanding of nature as being (in large part) systematic and predictable, and has underpinned major advances in human welfare. A Bachelor of Science will prepare you to take part in this process of enquiry, by both contributing to it and by using scientific knowledge to solve current problems. Students will learn core concepts and skills necessary for scientific inquiry: investigating the natural world, proposing and testing ideas by experimentation and observation; quantifying and modelling processes; communicating findings, thinking independently and critically.

#### Unit Set Structure

Students completing the Bachelor of Science (Advanced Science) General will complete the following course structure.

Qualifying for this award requires successful completion of 240 credit points within the following rules.

#### Core units

Six core units must be completed, comprising

- at least one mathematics or statistics unit other than Quantitative Thinking or Analysis of Change
- one academic skills unit
- three science foundation units, which must come from a further two science disciplines out of the following: Biology, Chemistry, Computer Science, Geoscience, Physics or Integrated Science
- one level 3 capstone unit which ties the area of study together

#### Remaining units

- at least ten more science units must be selected from the listings for each Campus below
- at least one science Major must be completed
- at least 60 credit points must be taken at level 3
- 3 Advanced Science project units plus one other science research unit must be completed

Note 1: Students must complete at least one of the following majors:

- Hawkesbury: Aquatic Biology, Biochemistry and Molecular Biology, Climate Change, Conservation Biology, Forensic Science, Microbiology, General Biology, Nutrition and Physiology, Zoology. Please note: Mathematics major can not be completed on Hawkesbury campus.
- Parramatta: Biochemistry and Molecular Biology, Chemistry, General Biology, Geochemistry, Mathematics
- Campbelltown: Biochemistry and Molecular Biology, Chemistry, General Biology, Mathematics

Note 2: selection of science units in Year 1 must cover the following discipline areas: mathematics/statistics, and two more from the following: Biology, Chemistry, Computer Science, Geoscience, Physics or Integrated Science

Note 3: Students commencing mid-year should seek academic advice about completing their chosen major; more than three years may be required for completing in some cases due to the Semester some units are offered in and the sequence in which they must be completed

### Hawkesbury Campus

#### Year 1

##### Autumn session

Non-mathematics majors: choose at least one appropriate mathematics or statistics unit in your first year: Students cannot do a mathematics major on the Hawkesbury campus.

**300811.1** Scientific Literacy

Choose three of

**300800.1** Essential Chemistry 1  
**300802.1** Biodiversity  
**300828.1** Physics 1  
**300931.1** Integrated Science  
**300831.1** Quantitative Thinking  
**300830.1** Analysis of Change  
**200263.4** Biometry

##### Spring session

Choose at least two of

**300803.1** Essential Chemistry 2  
**300816.1** Cell Biology  
**300818.1** Introduction to Physiology  
**300134.2** Introduction to Information Technology  
**200263.4** Biometry  
**300831.1** Quantitative Thinking  
**300830.1** Analysis of Change

And two elective units

#### Year 2

##### Autumn session

**300937.1** Advanced Science Project A

Choose at least three of

**300936.1** Functional Proteins and Genes



<b>300833.1</b>	Microbiology 1
<b>300845.1</b>	Genetics
<b>300865.1</b>	Plant Physiology
<b>300837.1</b>	Climate Change Science
<b>300843.1</b>	Forensic and Environmental Analysis

**Spring session**

<b>300938.1</b>	Advanced Science Project B
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Choose at least three of

<b>300848.1</b>	Metabolism
<b>300896.1</b>	Microbiology 2
<b>300817.1</b>	Molecular Biology
<b>300838.1</b>	Comparative Physiology
<b>300839.1</b>	Ecology

**Year 3****Autumn session**

Choose at least one capstone unit in your final year of study; capstone units are listed below. The capstone unit selected should come from your Major.

<b>300910.1</b>	Advanced Science Project C
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Choose at least two of

<b>300820.1</b>	Genes, Genomics and Human Health
<b>300850.1</b>	Advanced Cell Biology
<b>300856.1</b>	Ecosystem Carbon Accounting
<b>300921.1</b>	Plant Health and Biosecurity
<b>300919.1</b>	Occupational Health and Safety

**Capstone Units**

<b>300857.1</b>	Environmental Geochemistry
<b>300866.1</b>	Analytical Microbiology
<b>300851.1</b>	Advanced Physiology
<b>300929.1</b>	Aquatic Ecology

And one Level 3 elective

**Spring session**

<b>300924.1</b>	Science Research Project
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Choose at least two of

<b>300905.1</b>	Advanced Immunology
<b>300855.1</b>	Conservation Biology
<b>300826.1</b>	Medical Microbiology
<b>300861.1</b>	Vertebrate Biodiversity
<b>300918.1</b>	Invertebrate Biology

**Capstone Units**

<b>300927.1</b>	Molecular Medicine
<b>300909.1</b>	Biological Adaptation to Climate Change
<b>300883.1</b>	Laboratory Quality Management

And one Level 3 elective

**Parramatta Campus****Year 1****Autumn session**

Non-mathematics majors: choose at least one appropriate mathematics or statistics unit in your first year:

<b>300811.1</b>	Scientific Literacy
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Choose three of

<b>300800.1</b>	Essential Chemistry 1
<b>300802.1</b>	Biodiversity
<b>300828.1</b>	Physics 1
<b>300822.1</b>	Introduction to Earth Science
<b>300931.1</b>	Integrated Science
<b>300831.1</b>	Quantitative Thinking
<b>300830.1</b>	Analysis of Change
<b>200263.4</b>	Biometry
<b>300672.2</b>	Mathematics 1A
<b>200025.2</b>	Discrete Mathematics
<b>300580.2</b>	Programming Fundamentals
<b>300134.2</b>	Introduction to Information Technology

**Spring session**

Choose at least two of

<b>300803.1</b>	Essential Chemistry 2
<b>300816.1</b>	Cell Biology
<b>300818.1</b>	Introduction to Physiology
<b>300829.1</b>	Physics 2
<b>200263.4</b>	Biometry
<b>300809.1</b>	Introductory Geochemistry
<b>300672.2</b>	Mathematics 1A
<b>300673.2</b>	Mathematics 1B
<b>300580.2</b>	Programming Fundamentals
<b>300830.1</b>	Analysis of Change

And two electives

**Year 2****Autumn session**

<b>300937.1</b>	Advanced Science Project A
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Choose at least three of

<b>300936.1</b>	Functional Proteins and Genes
<b>300833.1</b>	Microbiology 1
<b>300845.1</b>	Genetics
<b>300865.1</b>	Plant Physiology
<b>300899.1</b>	Inorganic Chemistry
<b>300849.1</b>	Physical Chemistry
<b>200027.2</b>	Linear Algebra
<b>200028.3</b>	Advanced Calculus

**Spring session**

<b>300938.1</b>	Advanced Science Project B
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Choose at least three of

<b>300848.1</b>	Metabolism
<b>300896.1</b>	Microbiology 2
<b>300817.1</b>	Molecular Biology
<b>300838.1</b>	Comparative Physiology

<b>300839.1</b>	Ecology
<b>300876.1</b>	Organic Chemistry
<b>300832.1</b>	Analytical Chemistry
<b>200030.3</b>	Differential Equations
<b>200033.4</b>	Applied Statistics
<b>300847.1</b>	Immunology

**Year 3****Autumn session**

Choose at least one capstone unit in your final year of study; capstone units are listed below. The capstone unit selected should come from your Major.

<b>300910.1</b>	Advanced Science Project C
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Choose at least two of

<b>300820.1</b>	Genes, Genomics and Human Health
<b>300907.1</b>	Advanced Inorganic Chemistry
<b>300926.1</b>	Advanced Physical Chemistry
<b>200193.2</b>	Abstract Algebra
<b>200037.4</b>	Regression Analysis & Experimental Design
<b>200023.3</b>	Analysis

**Capstone Units**

<b>300857.1</b>	Environmental Geochemistry
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And one Level 3 elective

**Spring session**

<b>300924.1</b>	Science Research Project
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Choose at least two of

<b>300905.1</b>	Advanced Immunology
<b>300925.1</b>	Advanced Analytical Chemistry
<b>300906.1</b>	Advanced Organic Chemistry
<b>200038.3</b>	Time Series and Forecasting
<b>200022.3</b>	Mathematical Modelling

**Capstone Units**

<b>300927.1</b>	Molecular Medicine
<b>300855.1</b>	Conservation Biology

And one Level 3 elective

**Campbelltown Campus****Year 1****Autumn session**

Non-mathematics majors: choose at least one other than Quantitative Thinking appropriate mathematics or statistics unit in your first year:

<b>300811.1</b>	Scientific Literacy
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Choose three of

<b>300800.1</b>	Essential Chemistry 1
<b>300802.1</b>	Biodiversity
<b>300828.1</b>	Physics 1
<b>300931.1</b>	Integrated Science
<b>300831.1</b>	Quantitative Thinking
<b>300830.1</b>	Analysis of Change

<b>200263.4</b>	Biometry
<b>300580.2</b>	Programming Fundamentals
<b>300134.2</b>	Introduction to Information Technology
<b>300672.2</b>	Mathematics 1A

**Spring session**

Choose at least two of

<b>300803.1</b>	Essential Chemistry 2
<b>300816.1</b>	Cell Biology
<b>300818.1</b>	Introduction to Physiology
<b>300829.1</b>	Physics 2
<b>300580.2</b>	Programming Fundamentals
<b>300672.2</b>	Mathematics 1A
<b>300673.2</b>	Mathematics 1B
<b>200263.4</b>	Biometry

And two electives

**Year 2****Autumn session**

<b>300937.1</b>	Advanced Science Project A
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Choose at least three of

<b>300936.1</b>	Functional Proteins and Genes
<b>300833.1</b>	Microbiology 1
<b>300845.1</b>	Genetics
<b>300899.1</b>	Inorganic Chemistry
<b>300849.1</b>	Physical Chemistry
<b>200027.2</b>	Linear Algebra
<b>200028.3</b>	Advanced Calculus

**Spring session**

<b>300938.1</b>	Advanced Science Project B
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Choose at least three of

<b>300848.1</b>	Metabolism
<b>300896.1</b>	Microbiology 2
<b>300817.1</b>	Molecular Biology
<b>300838.1</b>	Comparative Physiology
<b>300839.1</b>	Ecology
<b>300876.1</b>	Organic Chemistry
<b>300832.1</b>	Analytical Chemistry
<b>200030.3</b>	Differential Equations
<b>200033.4</b>	Applied Statistics
<b>300847.1</b>	Immunology

**Year 3****Autumn session**

Choose at least one capstone unit in your final year of study; capstone units are listed below. The capstone unit selected should come from your Major.

<b>300910.1</b>	Advanced Science Project C
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Choose at least two of

<b>300820.1</b>	Genes, Genomics and Human Health
<b>300850.1</b>	Advanced Cell Biology
<b>300819.1</b>	Topics in Physiology
<b>300907.1</b>	Advanced Inorganic Chemistry
<b>300912.1</b>	Molecular Pharmacokinetics
<b>200193.2</b>	Abstract Algebra

**200037.4** Regression Analysis & Experimental Design  
**200023.3** Analysis

And one Level 3 elective

### Spring session

**300924.1** Science Research Project

Choose at least two of

**300905.1** Advanced Immunology  
**300925.1** Advanced Analytical Chemistry  
**300906.1** Advanced Organic Chemistry  
**200038.3** Time Series and Forecasting  
**200022.3** Mathematical Modelling

### Capstone Units

**300927.1** Molecular Medicine

And one Level 3 elective

## Key Program - Bachelor of Science/Bachelor of Business and Commerce (Applied Finance)

### KP3011.1

### Unit Set Structure

Students in the Bachelor of Science /Bachelor of Business and Commerce (Applied Finance) will complete the following course structure.

#### Year 1

##### Autumn session

**200336.3** Business Academic Skills  
**200525.2** Principles of Economics

**Non-mathematics majors choose two science units as follows**

#### Biochemistry and Molecular Biology major choose

**300802.1** Biodiversity  
**300800.1** Essential Chemistry 1

#### General Biology major choose

**300802.1** Biodiversity

And one unit from the list below

#### Chemistry major choose

**300800.1** Essential Chemistry 1

And one unit from the list below

#### Science Units

**300800.1** Essential Chemistry 1  
**300802.1** Biodiversity  
**300822.1** Introduction to Earth Science  
**300580.2** Programming Fundamentals  
**300828.1** Physics 1

#### Mathematics major choose

**300672.2** Mathematics 1A  
**200025.2** Discrete Mathematics

#### Spring session

**200083.2** Marketing Principles  
**200101.3** Accounting Information for Managers

**Non-mathematics majors choose two science units as follows**

#### Biochemistry and Molecular Biology or General Biology major choose

**300816.1** Cell Biology  
**300803.1** Essential Chemistry 2

#### Chemistry major choose

**300803.1** Essential Chemistry 2

And one science unit from the list below

#### Science Units

**300816.1** Cell Biology  
**300818.1** Introduction to Physiology  
**300580.2** Programming Fundamentals  
**300829.1** Physics 2  
**300809.1** Introductory Geochemistry

#### Mathematics major choose

**300673.2** Mathematics 1B  
**200263.4** Biometry

#### Year 2

##### Autumn session

**200571.2** Management Dynamics

**Non-mathematics Majors: choose at least one level 1 mathematics unit from the list below in either semester in second year:**

#### Mathematics units

**300831.1** Quantitative Thinking  
**300830.1** Analysis of Change  
**300672.2** Mathematics 1A  
**200263.4** Biometry  
**200025.2** Discrete Mathematics

**Either choose two more science units if completing a mathematics unit in Autumn or three science units:**

#### Science units

**300936.1** Functional Proteins and Genes  
**300845.1** Genetics  
**300865.1** Plant Physiology

(Parramatta Only)

**300833.1** Microbiology 1

300899.1 Inorganic Chemistry  
300849.1 Physical Chemistry

**Mathematics Major choose**

200027.2 Linear Algebra  
200028.3 Advanced Calculus

**And one more science unit from the list below:**

300800.1 Essential Chemistry 1  
300802.1 Biodiversity  
300822.1 Introduction to Earth Science  
300580.2 Programming Fundamentals  
300828.1 Physics 1

**Spring session**

200184.3 Introduction to Business Law

**Non-mathematics Majors: choose either one mathematics unit and two science units, or three science units (if mathematics unit completed in Autumn)**

**Science Units**

300848.1 Metabolism  
300847.1 Immunology  
300838.1 Comparative Physiology  
300896.1 Microbiology 2  
300839.1 Ecology  
300817.1 Molecular Biology  
300876.1 Organic Chemistry  
300832.1 Analytical Chemistry  
300846.1 Geochemical Systems

**Mathematics Major**

200030.3 Differential Equations  
200033.4 Applied Statistics

And one Science unit from the following

300816.1 Cell Biology  
300803.1 Essential Chemistry 2  
300829.1 Physics 2  
300809.1 Introductory Geochemistry

**Year 3****Autumn session****One Level 3 elective**

**Non-mathematics Majors: choose three units from:**

300907.1 Advanced Inorganic Chemistry  
300926.1 Advanced Physical Chemistry  
300857.1 Environmental Geochemistry  
300820.1 Genes, Genomics and Human Health  
300850.1 Advanced Cell Biology  
300866.1 Analytical Microbiology

**Mathematics Major**

200193.2 Abstract Algebra  
200023.3 Analysis  
200037.4 Regression Analysis & Experimental Design

**Spring session**

200488.3 Corporate Financial Management

**Non-mathematics Majors: choose three units from the list below at least one must be a capstone unit appropriate for your Major:**

**Major Capstone units**

300927.1 Molecular Medicine  
300855.1 Conservation Biology  
300924.1 Science Research Project  
300883.1 Laboratory Quality Management

**Alternate Science units**

300925.1 Advanced Analytical Chemistry  
300906.1 Advanced Organic Chemistry  
300826.1 Medical Microbiology  
300905.1 Advanced Immunology

**Mathematics Major**

200022.3 Mathematical Modelling  
200193.2 Abstract Algebra  
200023.3 Analysis

**Year 4**

Autumn session

200549.2 The Australian Macroeconomy  
200048.2 Financial Institutions and Markets  
200537.3 Economics and Finance Engagement Project

And one alternate unit

**Spring session**

200053.3 Economic Modelling  
200057.3 Investment Management

And two alternate units

**Alternate Units**

200078.2 Portfolio Management  
200055.4 International Finance  
200077.2 The Superannuation Industry  
200079.2 Derivatives  
200518.2 Behavioural Finance  
200059.2 Financial Economics

## Key Program - Bachelor of Science/Bachelor of Business and Commerce (Hospitality Management)

**KP3012.1****Unit Set Structure**

Students in the Bachelor of Science /Bachelor of Business and Commerce (Hospitality Management) will complete the following course structure.

**Year 1****Autumn session**

- 200336.3** Business Academic Skills  
**200273.4** Managing Service and Experience

**Non-mathematics majors choose two science units as follows****Biochemistry and Molecular Biology major choose**

- 300802.1** Biodiversity  
**300800.1** Essential Chemistry 1

**General Biology major choose**

- 300802.1** Biodiversity

And one unit from the list below

**Chemistry major choose**

- 300800.1** Essential Chemistry 1

And one unit from the list below

**Science Units**

- 300800.1** Essential Chemistry 1  
**300802.1** Biodiversity  
**300822.1** Introduction to Earth Science  
**300580.2** Programming Fundamentals  
**300828.1** Physics 1

**Mathematics major choose**

- 300672.2** Mathematics 1A  
**200025.2** Discrete Mathematics

**Spring session**

- 200571.2** Management Dynamics  
**200083.2** Marketing Principles

**Non-mathematics majors choose two science units as follows****Biochemistry and Molecular Biology or General Biology major choose**

- 300816.1** Cell Biology  
**300803.1** Essential Chemistry 2

**Chemistry major choose**

- 300803.1** Essential Chemistry 2

And one science unit from the list below

**Science Units**

- 300816.1** Cell Biology  
**300818.1** Introduction to Physiology  
**300580.2** Programming Fundamentals  
**300829.1** Physics 2  
**300809.1** Introductory Geochemistry

**Mathematics major choose**

- 300673.2** Mathematics 1B  
**200263.4** Biometry

**Year 2****Autumn session**

- 200710.2** Managing the Food and Beverage Experience

**Non-mathematics Majors: choose at least one level 1 mathematics unit from the list below in either semester in second year****Mathematics units**

- 300831.1** Quantitative Thinking  
**300830.1** Analysis of Change  
**300672.2** Mathematics 1A  
**200263.4** Biometry  
**200025.2** Discrete Mathematics

**Either choose two more science units if completing a mathematics unit in Autumn, or three science units****Science units**

- 300936.1** Functional Proteins and Genes  
**300845.1** Genetics  
**300865.1** Plant Physiology

(Parramatta Only)

- 300833.1** Microbiology 1  
**300899.1** Inorganic Chemistry  
**300849.1** Physical Chemistry

**Mathematics Major choose**

- 200027.2** Linear Algebra  
**200028.3** Advanced Calculus

**And one more science unit from the list below**

- 300800.1** Essential Chemistry 1  
**300802.1** Biodiversity  
**300822.1** Introduction to Earth Science  
**300580.2** Programming Fundamentals  
**300828.1** Physics 1

**Spring session**

- 200101.3** Accounting Information for Managers

**Non-mathematics Majors: choose either one mathematics unit and two science units, or three science units (if mathematics unit completed in Autumn)****Science Units**

- 300848.1** Metabolism  
**300847.1** Immunology  
**300838.1** Comparative Physiology  
**300896.1** Microbiology 2  
**300839.1** Ecology  
**300817.1** Molecular Biology

- 300876.1 Organic Chemistry  
 300832.1 Analytical Chemistry  
 300846.1 Geochemical Systems

**Mathematics Major**

- 200030.3 Differential Equations  
 200033.4 Applied Statistics

And one Science unit from the following

- 300816.1 Cell Biology  
 300803.1 Essential Chemistry 2  
 300829.1 Physics 2  
 300809.1 Introductory Geochemistry

**Year 3****Autumn session****One Level 3 elective****Non-mathematics Majors: choose three units from**

- 300907.1 Advanced Inorganic Chemistry  
 300926.1 Advanced Physical Chemistry  
 300857.1 Environmental Geochemistry  
 300820.1 Genes, Genomics and Human Health  
 300850.1 Advanced Cell Biology  
 300866.1 Analytical Microbiology

**Mathematics Major**

- 200193.2 Abstract Algebra  
 200023.3 Analysis  
 200037.4 Regression Analysis & Experimental Design

**Spring session**

- 200742.2 Sport and Hospitality Event Management

**Non-mathematics Majors: choose three units from the list below: at least one must be a capstone unit appropriate for your Major**

**Major capstone units**

- 300927.1 Molecular Medicine  
 300855.1 Conservation Biology  
 300924.1 Science Research Project  
 300883.1 Laboratory Quality Management

**Alternate Science units**

- 300925.1 Advanced Analytical Chemistry  
 300906.1 Advanced Organic Chemistry  
 300826.1 Medical Microbiology  
 300905.1 Advanced Immunology

**Mathematics Major**

- 200022.3 Mathematical Modelling  
 200193.2 Abstract Algebra  
 200023.3 Analysis

**Year 4****Autumn session**

- 200525.2 Principles of Economics  
 200709.2 Managing the Accommodation Experience  
 200708.2 Hospitality Industry  
 200707.2 Service Industry Studies

**Spring session**

- 200184.3 Introduction to Business Law  
 200584.3 Hospitality Management Operations  
 200148.2 Planning and Design of Hospitality Facilities  
 200561.3 Hospitality Management Applied Project

**Key Program - Bachelor of Science/Bachelor of Business and Commerce (HRM & IR)****KP3013.1****Unit Set Structure**

Students in the Bachelor of Science /Bachelor of Business and Commerce (Human Resource Management and Industrial Relations) will complete the following course structure.

**Year 1****Autumn session**

- 200336.3 Business Academic Skills  
 200571.2 Management Dynamics

**Non-mathematics majors choose two science units as follows**

**Biochemistry and Molecular Biology major choose**

- 300802.1 Biodiversity  
 300800.1 Essential Chemistry 1

**General Biology major choose**

- 300802.1 Biodiversity

And one science unit from the list below

**Chemistry major choose**

- 300800.1 Essential Chemistry 1

And one science unit from the list below

**Science Units**

- 300800.1 Essential Chemistry 1  
 300802.1 Biodiversity  
 300822.1 Introduction to Earth Science  
 300580.2 Programming Fundamentals  
 300828.1 Physics 1

**Mathematics major choose**

- 300672.2 Mathematics 1A  
 200025.2 Discrete Mathematics

**Spring session**

- 200300.2** Managing People at Work  
**200184.3** Introduction to Business Law

**Non-mathematics majors choose two science units as follows****Biochemistry and Molecular Biology or General Biology major choose**

- 300816.1** Cell Biology  
**300803.1** Essential Chemistry 2

**Chemistry major choose**

- 300803.1** Essential Chemistry 2

And one science unit from the list below

**Science Units**

- 300816.1** Cell Biology  
**300818.1** Introduction to Physiology  
**300580.2** Programming Fundamentals  
**300829.1** Physics 2  
**300809.1** Introductory Geochemistry

**Mathematics major choose**

- 300673.2** Mathematics 1B  
**200263.4** Biometry

**Year 2****Autumn session**

- 200614.2** Enterprise Industrial Relations

**Non-mathematics Majors: choose at least one level 1 mathematics unit from the list below in either semester in second year****Mathematics Units**

- 300831.1** Quantitative Thinking  
**300830.1** Analysis of Change  
**300672.2** Mathematics 1A  
**200263.4** Biometry  
**200025.2** Discrete Mathematics

**Either choose two more science units if completing a mathematics unit in Autumn, or three science units****Science Units**

- 300936.1** Functional Proteins and Genes  
**300845.1** Genetics  
**300865.1** Plant Physiology

(Parramatta Only)

- 300833.1** Microbiology 1  
**300899.1** Inorganic Chemistry  
**300849.1** Physical Chemistry

**Mathematics Major choose**

- 200027.2** Linear Algebra  
**200028.3** Advanced Calculus

**And one more science unit from the list below:**

- 300800.1** Essential Chemistry 1  
**300802.1** Biodiversity  
**300822.1** Introduction to Earth Science  
**300580.2** Programming Fundamentals  
**300558.1** Physics 1

**Spring session**

- 200083.2** Marketing Principles

**Non-mathematics Majors: choose either one mathematics unit and two science units, or three science units (if mathematics unit completed in Autumn)****Science Units**

- 300848.1** Metabolism  
**300847.1** Immunology  
**300838.1** Comparative Physiology  
**300896.1** Microbiology 2  
**300839.1** Ecology  
**300927.1** Molecular Medicine  
**300876.1** Organic Chemistry  
**300832.1** Analytical Chemistry  
**300846.1** Geochemical Systems

**Mathematics Major**

- 200030.3** Differential Equations  
**200033.4** Applied Statistics

And one science unit from the following:

- 300816.1** Cell Biology  
**300803.1** Essential Chemistry 2  
**300829.1** Physics 2  
**300809.1** Introductory Geochemistry

**Year 3****Autumn session****One Level 3 elective****Non-mathematics Majors: choose three units from**

- 300907.1** Advanced Inorganic Chemistry  
**300926.1** Advanced Physical Chemistry  
**300857.1** Environmental Geochemistry  
**300820.1** Genes, Genomics and Human Health  
**300850.1** Advanced Cell Biology  
**300866.1** Analytical Microbiology

**Mathematics Major**

- 200193.2** Abstract Algebra  
**200023.3** Analysis  
**200037.4** Regression Analysis & Experimental Design

**Spring session**

- 200739.2** Reward and Performance Management

**Non-mathematics Majors: choose three units from the list below: at least one must be a capstone unit appropriate for your Major:**

**Major capstone units:**

<b>300927.1</b>	Molecular Medicine
<b>300855.1</b>	Conservation Biology
<b>300924.1</b>	Science Research Project
<b>300883.1</b>	Laboratory Quality Management

**Alternate Science units:**

<b>300925.1</b>	Advanced Analytical Chemistry
<b>300906.1</b>	Advanced Organic Chemistry
<b>300826.1</b>	Medical Microbiology
<b>300905.1</b>	Advanced Immunology

**Mathematics Major**

<b>200022.3</b>	Mathematical Modelling
<b>200193.2</b>	Abstract Algebra
<b>200023.3</b>	Analysis

**Year 4**

**Autumn session**

<b>200525.2</b>	Principles of Economics
<b>200621.3</b>	International Human Resource Management
<b>200616.3</b>	Workplace Behaviour
<b>200613.2</b>	Negotiation, Bargaining and Advocacy

**Spring session**

<b>200101.3</b>	Accounting Information for Managers
<b>200575.3</b>	Processes and Evaluation in Employment Relations
<b>200740.2</b>	Human Resource and Industrial Relations Strategy

**Choose one of the following**

<b>200610.2</b>	Employee Training and Development
<b>200150.2</b>	Managing Diversity
<b>200753.2</b>	Occupational Health and Safety

**Key Program - Bachelor of Science/Bachelor of Business and Commerce (Management)**

**KP3014.1**

**Unit Set Structure**

Students in the Bachelor of Science /Bachelor of Business and Commerce (Management) will complete the following course structure.

**Year 1**

**Autumn session**

<b>200336.3</b>	Business Academic Skills
<b>200571.2</b>	Management Dynamics

**Non-mathematics majors choose two science units as follows**

**Biochemistry and Molecular Biology major choose**

<b>300802.1</b>	Biodiversity
<b>300800.1</b>	Essential Chemistry 1

**General Biology major choose**

<b>300802.1</b>	Biodiversity
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And one of

**Chemistry major choose**

<b>300800.1</b>	Essential Chemistry 1
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And one of

**Science Units**

<b>300800.1</b>	Essential Chemistry 1
<b>300802.1</b>	Biodiversity
<b>300822.1</b>	Introduction to Earth Science
<b>300580.2</b>	Programming Fundamentals
<b>300828.1</b>	Physics 1

**Mathematics major choose**

<b>300672.2</b>	Mathematics 1A
<b>200025.2</b>	Discrete Mathematics

**Spring session**

<b>200585.2</b>	Organisational Behaviour
<b>200083.2</b>	Marketing Principles

**Non-mathematics majors choose two science units as follows**

**Biochemistry and Molecular Biology or General Biology major choose**

<b>300816.1</b>	Cell Biology
<b>300803.1</b>	Essential Chemistry 2

**Chemistry major choose**

<b>300803.1</b>	Essential Chemistry 2
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And one of

**Science Units**

<b>300816.1</b>	Cell Biology
<b>300818.1</b>	Introduction to Physiology
<b>300580.2</b>	Programming Fundamentals
<b>300829.1</b>	Physics 2
<b>300809.1</b>	Introductory Geochemistry

**Mathematics major choose**

<b>300673.2</b>	Mathematics 1B
<b>200263.4</b>	Biometry



**Year 2****Autumn session**

**200158.3** Business, Society and Policy

**Non-mathematics Majors: choose at least one level 1 mathematics unit from the list below in either semester in second year**

**Mathematics units**

**300831.1** Quantitative Thinking  
**300830.1** Analysis of Change  
**300672.2** Mathematics 1A  
**200263.4** Biometry  
**200025.2** Discrete Mathematics

**Either choose two more science units if completing a mathematics unit in Autumn, or three science units:**

**Science Units**

**300936.1** Functional Proteins and Genes  
**300845.1** Genetics  
**300865.1** Plant Physiology

(Parramatta Only)

**300833.1** Microbiology 1  
**300899.1** Inorganic Chemistry  
**300849.1** Physical Chemistry

**Mathematics Major choose**

**200027.2** Linear Algebra  
**200028.3** Advanced Calculus

And one of

**300800.1** Essential Chemistry 1  
**300802.1** Biodiversity  
**300822.1** Introduction to Earth Science  
**300580.2** Programming Fundamentals  
**300828.1** Physics 1

**Spring session**

**200101.3** Accounting Information for Managers

**Non-mathematics Majors: choose either one mathematics unit and two science units, or three science units (if mathematics unit completed in Autumn)**

**Science Units**

**300848.1** Metabolism  
**300847.1** Immunology  
**300838.1** Comparative Physiology  
**300896.1** Microbiology 2  
**300839.1** Ecology  
**300817.1** Molecular Biology  
**300876.1** Organic Chemistry  
**300832.1** Analytical Chemistry  
**300846.1** Geochemical Systems

**Mathematics Major**

**200030.3** Differential Equations  
**200033.4** Applied Statistics

And one of

**300816.1** Cell Biology  
**300803.1** Essential Chemistry 2  
**300829.1** Physics 2  
**300809.1** Introductory Geochemistry

**Year 3****Autumn session****One level 3 elective**

**Non-mathematics Majors: choose three units from**

**300907.1** Advanced Inorganic Chemistry  
**300926.1** Advanced Physical Chemistry  
**300857.1** Environmental Geochemistry  
**300820.1** Genes, Genomics and Human Health  
**300850.1** Advanced Cell Biology  
**300866.1** Analytical Microbiology

**Mathematics Major**

**200193.2** Abstract Algebra  
**200023.3** Analysis  
**200037.4** Regression Analysis & Experimental Design

**Spring session**

**200588.2** Global Operations and Logistics Management

**Non-mathematics Majors: choose three units from the list below: at least one must be a capstone unit appropriate for your Major**

**Major capstone units**

**300927.1** Molecular Medicine  
**300855.1** Conservation Biology  
**300924.1** Science Research Project  
**300883.1** Laboratory Quality Management

**Alternate Science units:**

**300925.1** Advanced Analytical Chemistry  
**300906.1** Advanced Organic Chemistry  
**300826.1** Medical Microbiology  
**300905.1** Advanced Immunology

**Mathematics Major**

**200022.3** Mathematical Modelling  
**200193.2** Abstract Algebra  
**200023.3** Analysis

**Year 4****Autumn session**

**200525.2** Principles of Economics  
**200586.2** Cross Cultural Management  
**200570.3** Management of Change  
**200752.2** Power, Politics and Knowledge

**Spring session**

<b>200184.3</b>	Introduction to Business Law
<b>200568.3</b>	Contemporary Management Issues
<b>200587.2</b>	Strategic Management

**Choose one of**

<b>200157.3</b>	Organisational Learning and Development
<b>200159.3</b>	Organisation Analysis and Design

## Key Program - Bachelor of Science/Bachelor of Business and Commerce (Sport Management)

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**KP3015.1****Unit Set Structure**

Students in the Bachelor of Science /Bachelor of Business and Commerce (Sport Management) will complete the following course structure.

**Year 1****Autumn session**

<b>200336.3</b>	Business Academic Skills
<b>200705.2</b>	The World of Sport Management

**Non-mathematics majors choose two science units as follows**

**Biochemistry and Molecular Biology major choose**

<b>300802.1</b>	Biodiversity
<b>300800.1</b>	Essential Chemistry 1

**General Biology major choose**

<b>300802.1</b>	Biodiversity
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And one of

**Chemistry major choose**

<b>300800.1</b>	Essential Chemistry 1
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And one of

**Science Units**

<b>300800.1</b>	Essential Chemistry 1
<b>300802.1</b>	Biodiversity
<b>300822.1</b>	Introduction to Earth Science
<b>300580.2</b>	Programming Fundamentals
<b>300828.1</b>	Physics 1

**Mathematics major choose**

<b>300672.2</b>	Mathematics 1A
<b>200025.2</b>	Discrete Mathematics

**Spring session**

<b>200571.2</b>	Management Dynamics
<b>200083.2</b>	Marketing Principles

**Non-mathematics majors choose two science units as follows**

**Biochemistry and Molecular Biology or General Biology major choose**

<b>300816.1</b>	Cell Biology
<b>300803.1</b>	Essential Chemistry 2

**Chemistry major choose**

<b>300803.1</b>	Essential Chemistry 2
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And one of

**Science Units**

<b>300816.1</b>	Cell Biology
<b>300818.1</b>	Introduction to Physiology
<b>300580.2</b>	Programming Fundamentals
<b>300829.1</b>	Physics 2
<b>300809.1</b>	Introductory Geochemistry

**Mathematics major choose**

<b>300673.2</b>	Mathematics 1B
<b>200263.4</b>	Biometry

**Year 2****Autumn session**

<b>200273.4</b>	Managing Service and Experience
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**Non-mathematics Majors: choose at least one level 1 mathematics unit from the list below in either semester in second year**

**Mathematics units**

<b>300831.1</b>	Quantitative Thinking
<b>300830.1</b>	Analysis of Change
<b>300672.2</b>	Mathematics 1A
<b>200263.4</b>	Biometry
<b>200025.2</b>	Discrete Mathematics

**Either choose two more science units if completing a mathematics unit in Autumn, or three science units**

**Science Units:**

<b>300936.1</b>	Functional Proteins and Genes
<b>300845.1</b>	Genetics
<b>300865.1</b>	Plant Physiology

(Parramatta Only)

<b>300833.1</b>	Microbiology 1
<b>300899.1</b>	Inorganic Chemistry
<b>300849.1</b>	Physical Chemistry

**Mathematics Major choose**

<b>200027.2</b>	Linear Algebra
<b>200028.3</b>	Advanced Calculus

**And one of**

<b>300800.1</b>	Essential Chemistry 1
<b>300802.1</b>	Biodiversity
<b>300822.1</b>	Introduction to Earth Science
<b>300580.2</b>	Programming Fundamentals
<b>300828.1</b>	Physics 1

**Spring session**

<b>200101.3</b>	Accounting Information for Managers
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**Non-mathematics Majors: choose either one mathematics unit and two science units, or three science units (if mathematics unit completed in Autumn)**

**Science Units:**

<b>300848.1</b>	Metabolism
<b>300847.1</b>	Immunology
<b>300838.1</b>	Comparative Physiology
<b>300896.1</b>	Microbiology 2
<b>300839.1</b>	Ecology
<b>300817.1</b>	Molecular Biology
<b>300876.1</b>	Organic Chemistry
<b>300832.1</b>	Analytical Chemistry
<b>300846.1</b>	Geochemical Systems

**Mathematics Major**

<b>200030.3</b>	Differential Equations
<b>200033.4</b>	Applied Statistics

And one of

<b>300816.1</b>	Cell Biology
<b>300803.1</b>	Essential Chemistry 2
<b>300829.1</b>	Physics 2
<b>300809.1</b>	Introductory Geochemistry

**Year 3****Autumn session****One level 3 elective**

**Non-mathematics Majors: choose three of**

<b>300907.1</b>	Advanced Inorganic Chemistry
<b>300926.1</b>	Advanced Physical Chemistry
<b>300857.1</b>	Environmental Geochemistry
<b>300820.1</b>	Genes, Genomics and Human Health
<b>300850.1</b>	Advanced Cell Biology
<b>300866.1</b>	Analytical Microbiology

**Mathematics Major**

<b>200193.2</b>	Abstract Algebra
<b>200023.3</b>	Analysis
<b>200037.4</b>	Regression Analysis & Experimental Design

**Spring session**

<b>200742.2</b>	Sport and Hospitality Event Management
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**Non-mathematics Majors: choose three units from the list below: at least one must be a capstone unit appropriate for your Major**

**Major capstone units**

<b>300927.1</b>	Molecular Medicine
<b>300855.1</b>	Conservation Biology
<b>300924.1</b>	Science Research Project
<b>300883.1</b>	Laboratory Quality Management

**Alternate Science units:**

<b>300925.1</b>	Advanced Analytical Chemistry
<b>300906.1</b>	Advanced Organic Chemistry
<b>300826.1</b>	Medical Microbiology
<b>300905.1</b>	Advanced Immunology

**Mathematics Major**

<b>200022.3</b>	Mathematical Modelling
<b>200193.2</b>	Abstract Algebra
<b>200023.3</b>	Analysis

**Year 4****Autumn session**

<b>200525.2</b>	Principles of Economics
<b>200665.2</b>	Strategic Communication in Sport
<b>200754.2</b>	Sports Management - Planning and Development
<b>200707.2</b>	Service Industry Studies

**Spring session**

<b>200184.3</b>	Introduction to Business Law
<b>200664.2</b>	Sport Management Internship
<b>200751.2</b>	Sport Management Applied Project
<b>400335.3</b>	Contemporary Issues in Sport Management

### Key Program - Bachelor of Science/Bachelor of Business and Commerce (International Business)

**KP3016.1****Unit Set Structure**

Students in the Bachelor of Science /Bachelor of Business and Commerce (International Business) will complete the following course structure.

**Year 1****Autumn session**

<b>200336.3</b>	Business Academic Skills
<b>200083.2</b>	Marketing Principles

**Non-mathematics majors choose two science units as follows**

**Biochemistry and Molecular Biology major choose**

- 300802.1** Biodiversity  
**300800.1** Essential Chemistry 1

**General Biology major choose**

- 300802.1** Biodiversity

And one science unit from the list below

**Chemistry major choose**

- 300800.1** Essential Chemistry 1

And one science unit from the list below

**Science Units**

- 300800.1** Essential Chemistry 1  
**300802.1** Biodiversity  
**300822.1** Introduction to Earth Science  
**300580.2** Programming Fundamentals  
**300828.1** Physics 1

**Mathematics major choose**

- 300672.2** Mathematics 1A  
**200025.2** Discrete Mathematics

**Spring session**

- 200591.2** Introduction to International Business  
**200571.2** Management Dynamics

**Non-mathematics majors choose two science units as follows**

**Biochemistry and Molecular Biology or General Biology major choose**

- 300816.1** Cell Biology  
**300803.1** Essential Chemistry 2

**Chemistry major choose**

- 300803.1** Essential Chemistry 2

And one science unit from the list below

**Science Units**

- 300816.1** Cell Biology  
**300818.1** Introduction to Physiology  
**300580.2** Programming Fundamentals  
**300829.1** Physics 2  
**300809.1** Introductory Geochemistry

**Mathematics major choose**

- 300673.2** Mathematics 1B  
**200263.4** Biometry

**Year 2****Autumn session**

- 200525.2** Principles of Economics

**Non-mathematics Majors: choose at least one level 1 mathematics unit from the list below in either semester in second year**

**Mathematics units**

- 300831.1** Quantitative Thinking  
**300830.1** Analysis of Change  
**300672.2** Mathematics 1A  
**200263.4** Biometry  
**200025.2** Discrete Mathematics

**Either choose two more science units if completing a mathematics unit in Autumn, or three science units:**

**Science Units**

- 300936.1** Functional Proteins and Genes  
**300845.1** Genetics  
**300865.1** Plant Physiology

(Parramatta Only)

- 300833.1** Microbiology 1  
**300899.1** Inorganic Chemistry  
**300849.1** Physical Chemistry

**Mathematics Major choose**

- 200027.2** Linear Algebra  
**200028.3** Advanced Calculus

**And one more science unit from the list below**

- 300800.1** Essential Chemistry 1  
**300802.1** Biodiversity  
**300822.1** Introduction to Earth Science  
**300580.2** Programming Fundamentals  
**300828.1** Physics 1

**Spring session**

- 200101.3** Accounting Information for Managers

**Non-mathematics Majors: choose either one mathematics unit and two science units or, three science units (if mathematics unit completed in Autumn)**

**Science Units**

- 300848.1** Metabolism  
**300847.1** Immunology  
**300838.1** Comparative Physiology  
**300896.1** Microbiology 2  
**300839.1** Ecology  
**300817.1** Molecular Biology  
**300876.1** Organic Chemistry  
**300832.1** Analytical Chemistry  
**300846.1** Geochemical Systems

**Mathematics Major**

- 200030.3** Differential Equations  
**200033.4** Applied Statistics

And one of

- 300816.1** Cell Biology

**300803.1** Essential Chemistry 2  
**300829.1** Physics 2  
**300809.1** Introductory Geochemistry

**Year 3****Autumn session****One level 3 elective****Non-mathematics Major: choose three of**

**300907.1** Advanced Inorganic Chemistry  
**300926.1** Advanced Physical Chemistry  
**300857.1** Environmental Geochemistry  
**300820.1** Genes, Genomics and Human Health  
**300850.1** Advanced Cell Biology  
**300866.1** Analytical Microbiology

**Mathematics Major**

**200193.2** Abstract Algebra  
**200023.3** Analysis  
**200037.4** Regression Analysis & Experimental Design

**Spring session**

**200374.3** International Marketing Research

**Non-mathematics Majors: choose three units from the list below: at least one must be a capstone unit appropriate for your Major**

**Major capstone units**

**300927.1** Molecular Medicine  
**300855.1** Conservation Biology  
**300924.1** Science Research Project  
**300883.1** Laboratory Quality Management

**Alternate Science units**

**300925.1** Advanced Analytical Chemistry  
**300906.1** Advanced Organic Chemistry  
**300826.1** Medical Microbiology  
**300905.1** Advanced Immunology

**Mathematics Major**

**200022.3** Mathematical Modelling  
**200193.2** Abstract Algebra  
**200023.3** Analysis

**Year 4****Autumn session**

**200541.2** Globalisation and Trade  
**200626.2** International Business Strategy  
**200595.3** International Business Finance

**Choose one of the following**

**200094.2** International Marketing  
**200623.3** International Management

**Spring session**

**200184.3** Introduction to Business Law  
**200589.2** Export Strategy and Applications  
**200590.2** International Business Project

**Choose one of**

**200098.2** The Markets of Asia  
**200099.3** The Markets of Europe

**Key Program - Bachelor of Science/Bachelor of Business and Commerce (Marketing)****KP3017.1****Unit Set Structure**

Students in the Bachelor of Science /Bachelor of Business and Commerce (Marketing) will complete the following course structure.

**Year 1****Autumn session**

**200336.3** Business Academic Skills  
**200083.2** Marketing Principles

**Non-mathematics majors choose two science units as follows**

**Biochemistry and Molecular Biology major choose**

**300802.1** Biodiversity  
**300800.1** Essential Chemistry 1

**General Biology major choose**

**300802.1** Biodiversity

And one science unit from the list below

**Chemistry major choose**

**300800.1** Essential Chemistry 1

And one science unit from the list below

**Science Units**

**300800.1** Essential Chemistry 1  
**300802.1** Biodiversity  
**300822.1** Introduction to Earth Science  
**300580.2** Programming Fundamentals  
**300828.1** Physics 1

**Mathematics major choose**

**300672.2** Mathematics 1A  
**200025.2** Discrete Mathematics

**Spring session**

**200084.2** Consumer Behaviour  
**200571.2** Management Dynamics

**Non-mathematics majors choose two science units as follows**

**Biochemistry and Molecular Biology or General Biology major choose**

**300816.1** Cell Biology  
**300803.1** Essential Chemistry 2

**Chemistry major choose**

**300803.1** Essential Chemistry 2

And one science unit from the list below

**Science Units**

**300816.1** Cell Biology  
**300818.1** Introduction to Physiology  
**300580.2** Programming Fundamentals  
**300829.1** Physics 2  
**300809.1** Introductory Geochemistry

**Mathematics major choose**

**300673.2** Mathematics 1B  
**200263.4** Biometry

**Year2**

**Autumn session**

**200592.2** Marketing Research

**Non-mathematics Majors: choose at least one level 1 mathematics unit from the list below in either semester in second year**

**Mathematics units**

**300831.1** Quantitative Thinking  
**300830.1** Analysis of Change  
**300672.2** Mathematics 1A  
**200263.4** Biometry  
**200025.2** Discrete Mathematics

**Either choose two more science units if completing a mathematics unit in Autumn, or three science units**

**Science Units**

**300936.1** Functional Proteins and Genes  
**300845.1** Genetics  
**300865.1** Plant Physiology

(Parramatta Only)

**300833.1** Microbiology 1  
**300899.1** Inorganic Chemistry  
**300849.1** Physical Chemistry

**Mathematics Major choose**

**200027.2** Linear Algebra  
**200028.3** Advanced Calculus

**And one more science unit from the list below**

**300800.1** Essential Chemistry 1  
**300802.1** Biodiversity  
**300822.1** Introduction to Earth Science  
**300580.2** Programming Fundamentals  
**300828.1** Physics 1

**Spring session**

**200101.3** Accounting Information for Managers

**Non-mathematics Majors: choose either one mathematics unit and two science units, or three science units (if mathematics unit completed in Autumn)**

**Science units**

**300848.1** Metabolism  
**300847.1** Immunology  
**300838.1** Comparative Physiology  
**300896.1** Microbiology 2  
**300839.1** Ecology  
**300817.1** Molecular Biology  
**300876.1** Organic Chemistry  
**300832.1** Analytical Chemistry  
**300846.1** Geochemical Systems

**Mathematics Major**

**200030.3** Differential Equations  
**200033.4** Applied Statistics

**And one science unit from the following**

**300816.1** Cell Biology  
**300803.1** Essential Chemistry 2  
**300829.1** Physics 2  
**300809.1** Introductory Geochemistry

**Year 3**

**Autumn session**

**200088.2** Brand and Product Management

**Non-mathematics Majors: choose three of**

**300907.1** Advanced Inorganic Chemistry  
**300926.1** Advanced Physical Chemistry  
**300857.1** Environmental Geochemistry  
**300820.1** Genes, Genomics and Human Health  
**300850.1** Advanced Cell Biology  
**300866.1** Analytical Microbiology

**Mathematics Major**

**200193.2** Abstract Algebra  
**200023.3** Analysis  
**200037.4** Regression Analysis & Experimental Design

**Spring session**

**200086.3** Marketing Communications

**Non-mathematics Majors: choose three units from the list below: at least one must be a capstone unit appropriate for your Major**

#### Major capstone units

<b>300927.1</b>	Molecular Medicine
<b>300855.1</b>	Conservation Biology
<b>300924.1</b>	Science Research Project
<b>300883.1</b>	Laboratory Quality Management

#### Alternate science units

<b>300925.1</b>	Advanced Analytical Chemistry
<b>300906.1</b>	Advanced Organic Chemistry
<b>300826.1</b>	Medical Microbiology
<b>300905.1</b>	Advanced Immunology

#### Mathematics Major

<b>200022.3</b>	Mathematical Modelling
<b>200193.2</b>	Abstract Algebra
<b>200023.3</b>	Analysis

#### Year 4

##### Autumn session

<b>200525.2</b>	Principles of Economics
<b>200090.3</b>	Marketing of Services
<b>200087.3</b>	Strategic Marketing Management
<b>200094.2</b>	International Marketing

##### Spring session

<b>200184.3</b>	Introduction to Business Law
<b>200096.3</b>	Marketing Planning Project
<b>200091.3</b>	Business to Business Marketing

And one level 3 elective

### Key Program - Information Systems

#### KT3000.1

The Key Program in Information Systems focuses on computing and information technology in the context of business.

#### Location

Campus	Mode
Parramatta Campus	Internal

#### Unit Set Structure

##### Start of Year Intake

##### Year 1

##### Autumn session

<b>300580.2</b>	Programming Fundamentals
<b>100483.2</b>	Principles of Professional Communication 1
<b>300585.2</b>	Systems Analysis and Design

**300573.2** Information Systems in Context

##### Spring session

<b>300565.2</b>	Computer Networking
<b>300104.4</b>	Database Design and Development
<b>300144.4</b>	Object Oriented Analysis

And one elective

##### Year 2

##### Autumn session

<b>300582.2</b>	Technologies for Web Applications
<b>300570.3</b>	Human-Computer Interaction
<b>300581.2</b>	Programming Techniques
<b>200032.5</b>	Statistics for Business

##### Spring session

<b>300583.2</b>	Web Systems Development
<b>300569.2</b>	Computer Security
<b>300572.2</b>	Information Systems Deployment and Management
<b>300089.5</b>	Commercial Applications Development

##### Year 3

##### Autumn session

<b>300578.3</b>	Professional Development
<b>300584.3</b>	Emerging Trends in Information Systems

And two electives

##### Spring session

<b>300579.3</b>	Professional Experience
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And three electives

##### Mid Year Intake

##### Year 1

##### Spring session

<b>300565.2</b>	Computer Networking
<b>300104.4</b>	Database Design and Development
<b>300144.4</b>	Object Oriented Analysis

And one elective

##### Year 2

##### Autumn session

<b>300580.2</b>	Programming Fundamentals
<b>100483.2</b>	Principles of Professional Communication 1
<b>300585.2</b>	Systems Analysis and Design
<b>300573.2</b>	Information Systems in Context

##### Spring session

<b>300569.2</b>	Computer Security
<b>300572.2</b>	Information Systems Deployment and Management
<b>300089.5</b>	Commercial Applications Development

And one elective

**Year 3****Autumn session**

<b>300582.2</b>	Technologies for Web Applications
<b>300570.3</b>	Human-Computer Interaction
<b>300581.2</b>	Programming Techniques
<b>200032.5</b>	Statistics for Business

**Spring session**

<b>300579.3</b>	Professional Experience
<b>300583.2</b>	Web Systems Development

And two electives

**Year 4****Autumn session**

<b>300578.3</b>	Professional Development
<b>300584.3</b>	Emerging Trends in Information Systems

And two electives

**Sub-major elective spaces**

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

**Key Program - Construction****KT3026.1**

The Construction Key Program consists of core subjects in structural engineering, project management and construction technologies. Graduates will work in the fields of construction, structural design, project management, quantity surveying and estimation. Career opportunities include those in the private or public sector on projects covering roads, bridges, airports, and residential and commercial buildings.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure****Full time - Autumn intake****Year 2****Autumn session**

<b>300731.2</b>	Soil Engineering
<b>300040.2</b>	Mechanics of Materials
<b>200486.2</b>	Quantity Surveying 1
<b>300482.2</b>	Engineering Geology and Concrete Materials

**Spring session**

<b>300733.2</b>	Introduction to Structural Engineering
<b>MG102A.3</b>	Management Foundations
<b>300738.3</b>	Surveying for Engineers
<b>200468.2</b>	Estimating 1

**Year 3****Autumn session**

<b>300732.2</b>	Structural Analysis
<b>300727.2</b>	Project Management
<b>300728.2</b>	Construction Planning

And one elective

**Spring session**

<b>300053.3</b>	Professional Practice
<b>300730.2</b>	Steel Structures
<b>300736.2</b>	Concrete Structures (UG)

And one elective

**Industrial Experience**

<b>300741.2</b>	Industrial Experience (Engineering)
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**Year 4 (Non-Honours stream)****Autumn session**

<b>300483.3</b>	Engineering Project
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**Please note: Students must enrol in 300483 Engineering Project in both Autumn and Spring sessions.**

<b>200471.3</b>	Construction Technology 5 (Envelope)
<b>300488.3</b>	Numerical Methods in Engineering

And one elective

**Spring session**

<b>300483.3</b>	Engineering Project
<b>300725.2</b>	Construction Technology 6 (Services)
<b>300485.3</b>	Foundation Engineering

And one elective

**Honours Stream**

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

**Year 4 (Honours stream)****Autumn session**

<b>300675.2</b>	Honours Thesis
<b>300488.3</b>	Numerical Methods in Engineering

And one elective

**Spring session**

<b>300675.2</b>	Honours Thesis
<b>300485.3</b>	Foundation Engineering



And one elective

### Full-time - Spring intake

#### Year 1

##### Spring session

<b>200237.3</b>	Mathematics for Engineers 1
<b>300463.2</b>	Fundamentals of Mechanics
<b>300021.2</b>	Electrical Fundamentals
<b>300462.2</b>	Engineering and Design Concepts

##### Autumn session

<b>200238.2</b>	Mathematics for Engineers 2
<b>300464.2</b>	Physics and Materials
<b>300040.2</b>	Mechanics of Materials
<b>300674.2</b>	Engineering, Design and Construction Practice

#### Year 2

##### Spring session

<b>300733.2</b>	Introduction to Structural Engineering
<b>MG102A.3</b>	Management Foundations
<b>300738.3</b>	Surveying for Engineers
<b>200468.2</b>	Estimating 1

##### Autumn session

<b>300731.2</b>	Soil Engineering
<b>300027.2</b>	Engineering Computing
<b>200486.2</b>	Quantity Surveying 1
<b>300482.2</b>	Engineering Geology and Concrete Materials

#### Year 3

##### Spring session

<b>300053.3</b>	Professional Practice
<b>300730.2</b>	Steel Structures
<b>300736.2</b>	Concrete Structures (UG)

And one elective

##### Autumn session

<b>300732.2</b>	Structural Analysis
<b>300727.2</b>	Project Management
<b>300728.2</b>	Construction Planning

And one elective

#### Industrial Experience

<b>300741.2</b>	Industrial Experience (Engineering)
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#### Year 4 (Non-Honours stream)

##### Spring session

<b>300483.3</b>	Engineering Project
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**Please note: Students must enrol in 300483 Engineering Project in both Spring and Autumn sessions.**

<b>300725.2</b>	Construction Technology 6 (Services)
<b>300485.3</b>	Foundation Engineering

And one elective

##### Autumn session

<b>300483.3</b>	Engineering Project
<b>200471.3</b>	Construction Technology 5 (Envelope)
<b>300488.3</b>	Numerical Methods in Engineering

And one elective

#### Honours Stream

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

#### Year 4 (Honours stream)

##### Spring session

<b>300675.2</b>	Honours Thesis
<b>300485.3</b>	Foundation Engineering

And one elective

##### Autumn session

<b>300675.2</b>	Honours Thesis
<b>300488.3</b>	Numerical Methods in Engineering

And one elective

**Although students may choose any unit offered by the University as an elective, it is recommended that electives are chosen from the following list.**

<b>300706.2</b>	Building 1
<b>300707.2</b>	Building 2
<b>300748.2</b>	Quality and Value Management
<b>300723.2</b>	Development Control
<b>300722.2</b>	Building Regulations Studies
<b>200482.2</b>	Construction in Practice 1
<b>200484.3</b>	Construction in Practice 3
<b>300762.2</b>	Fluid Mechanics
<b>300486.2</b>	Infrastructure Engineering
<b>200471.3</b>	Construction Technology 5 (Envelope)
<b>300725.2</b>	Construction Technology 6 (Services)

#### Sub-major elective spaces

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

## Key Program - Telecommunications

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### KT3034.1

This program emphasises the hardware issues related to telecommunications, including digital systems, antenna design, communication hardware, data transfer and management and signal processing. Graduates will work in a variety of situations, such as communications in offices, communications between machines, and intercontinental communication issues. There is a high demand for telecommunications engineers as providers struggle to meet the rapid increase demand for both personal and business use of different modes of communications, including the mobile telephone and Internet.

### Location

Campus	Mode
Penrith Campus	Internal

### Unit Set Structure

#### Professional Accreditation

This Key Program has received full accreditation from Engineers Australia at the level of Professional Engineer.

#### Full-time - Autumn intake

##### Year 2

##### Autumn session

<b>200242.3</b>	Mathematics for Engineers 3
<b>300018.2</b>	Digital Systems 1
<b>300005.2</b>	Circuit Theory
<b>300025.3</b>	Electronics

##### Spring session

<b>300076.3</b>	Microprocessor Systems
<b>300057.3</b>	Signals and Systems
<b>300481.2</b>	Engineering Electromagnetics
<b>300052.2</b>	Power and Machines

##### Year 3

##### Autumn session

<b>300007.2</b>	Communication Systems
<b>300167.3</b>	Systems Programming 1
<b>300029.3</b>	Engineering Visualization

And one elective

##### Spring session

<b>300065.4</b>	Wireless Communications
<b>300053.3</b>	Professional Practice
<b>300069.3</b>	Digital Signal Processing

And one elective

Elective in Year 3 must be at least a Level 3 unit.

#### Industrial Experience:

**300741.2** Industrial Experience (Engineering)

#### Year 4 (Non-honours stream)

##### Autumn session

**300483.3** Engineering Project

**Please note: Students must enrol in 300483 Engineering Project in both Autumn and Spring sessions.**

**300075.4** Instrumentation and Measurement  
**300010.3** Data Networks

Choose one of

**300019.3** Digital Systems 2  
**300046.2** Multimedia Signal Processing

##### Spring session

**300483.3** Engineering Project

Choose one of

**300068.3** Communication Electronics  
**300489.2** Radio and Satellite Communication

Please note: Even years students choose 300068 Communications Electronics. Odd years students choose 300489 Radio Satellite Communication.

And two electives

#### Honours Stream

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

#### Year 4 (Honours stream)

##### Autumn session

**300675.2** Honours Thesis  
**300010.3** Data Networks

And one elective

##### Spring session

**300675.2** Honours Thesis

Choose one of

**300068.3** Communication Electronics  
**300489.2** Radio and Satellite Communication

Please note: Even years students choose 300068 Communications Electronics. Odd years students choose 300489 Radio Satellite Communication.

And one elective

**Full-time - Spring intake****Year 1****Spring intake**

<b>200237.3</b>	Mathematics for Engineers 1
<b>300463.2</b>	Fundamentals of Mechanics
<b>300021.2</b>	Electrical Fundamentals
<b>300462.2</b>	Engineering and Design Concepts

**Autumn session**

<b>200238.2</b>	Mathematics for Engineers 2
<b>300464.2</b>	Physics and Materials
<b>300027.2</b>	Engineering Computing
<b>300005.2</b>	Circuit Theory

**Year 2****Spring session**

<b>200242.3</b>	Mathematics for Engineers 3
<b>300057.3</b>	Signals and Systems
<b>300481.2</b>	Engineering Electromagnetics
<b>300052.2</b>	Power and Machines

**Autumn session**

<b>300007.2</b>	Communication Systems
<b>300018.2</b>	Digital Systems 1
<b>300674.2</b>	Engineering, Design and Construction Practice
<b>300025.3</b>	Electronics

**Year 3****Spring session**

<b>300076.3</b>	Microprocessor Systems
<b>300053.3</b>	Professional Practice
<b>300069.3</b>	Digital Signal Processing
<b>300065.4</b>	Wireless Communications

**Autumn session**

<b>300167.3</b>	Systems Programming 1
<b>300029.3</b>	Engineering Visualization

And two electives

One elective in Year 3 must be at least a Level 3 unit

**Industrial Experience:**

<b>300741.2</b>	Industrial Experience (Engineering)
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**Year 4 (Non-Honours stream)****Spring session**

<b>300483.3</b>	Engineering Project
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**Please note: Students must enrol in 300483 Engineering Project in both Spring and Autumn sessions.**

And choose one of

<b>300068.3</b>	Communication Electronics
<b>300489.2</b>	Radio and Satellite Communication

Please note: Even years students choose 300068 Communications Electronics. Odd years students choose 300489 Radio Satellite Communication.

And two electives

**Autumn session**

<b>300483.3</b>	Engineering Project
<b>300075.4</b>	Instrumentation and Measurement
<b>300010.3</b>	Data Networks

Choose one of

<b>300019.3</b>	Digital Systems 2
<b>300046.2</b>	Multimedia Signal Processing

**Honours Stream**

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

**Year 4 (Honours stream)****Spring session**

<b>300675.2</b>	Honours Thesis
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Choose one of

<b>300068.3</b>	Communication Electronics
<b>300489.2</b>	Radio and Satellite Communication

Please note: Even years students choose 300068 Communications Electronics. Odd years students choose 300489 Radio Satellite Communication.

And one elective

**Autumn session**

<b>300675.2</b>	Honours Thesis
<b>300010.3</b>	Data Networks

And one elective

**Sub-major elective spaces**

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

**Key Program - Construction****KT3037.1**

The Construction Key Program consists of core subjects in structural engineering, project management and construction technologies. Graduates will work in the fields of construction, structural design, project management, quantity surveying and estimation. Career opportunities include those in the private or public sector on projects

covering roads, bridges, airports, and residential and commercial buildings.

## Location

Campus	Mode
Penrith Campus	Internal

## Unit Set Structure

### Full-time

#### Year 1

##### Autumn session

<a href="#">200237.3</a>	Mathematics for Engineers 1
<a href="#">300464.2</a>	Physics and Materials
<a href="#">300027.2</a>	Engineering Computing
<a href="#">300674.2</a>	Engineering, Design and Construction Practice

##### Spring session

<a href="#">200238.2</a>	Mathematics for Engineers 2
<a href="#">300463.2</a>	Fundamentals of Mechanics
<a href="#">300021.2</a>	Electrical Fundamentals
<a href="#">300462.2</a>	Engineering and Design Concepts

#### Year 2

##### Autumn session

<a href="#">300731.2</a>	Soil Engineering
<a href="#">300040.2</a>	Mechanics of Materials
<a href="#">200486.2</a>	Quantity Surveying 1
<a href="#">300482.2</a>	Engineering Geology and Concrete Materials

##### Spring session

<a href="#">300733.2</a>	Introduction to Structural Engineering
<a href="#">MG102A.3</a>	Management Foundations
<a href="#">300738.3</a>	Surveying for Engineers
<a href="#">200468.2</a>	Estimating 1

#### Year 3

##### Autumn session

<a href="#">300732.2</a>	Structural Analysis
<a href="#">300488.3</a>	Numerical Methods in Engineering
<a href="#">300728.2</a>	Construction Planning
<a href="#">300666.2</a>	Advanced Engineering Topic 1

##### Spring session

<a href="#">300053.3</a>	Professional Practice
<a href="#">300730.2</a>	Steel Structures
<a href="#">300736.2</a>	Concrete Structures (UG)
<a href="#">300485.3</a>	Foundation Engineering

### Industrial experience

<a href="#">300741.2</a>	Industrial Experience (Engineering)
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## Honours Stream

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

### Year 4 (Honours stream)

#### Autumn session

<a href="#">300668.2</a>	Advanced Engineering Thesis
<a href="#">300727.2</a>	Project Management

#### Spring session

<a href="#">300668.2</a>	Advanced Engineering Thesis
<a href="#">300667.2</a>	Advanced Engineering Topic 2

## Key Program - Electrical

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### KT3038.1

This program includes core subjects from all branches of electrical engineering. Graduates will work in the fields of electronic components, computers, electro-magnetics, power generation and distribution systems, power and control in public utilities, telecommunications, manufacturing, and electrical systems.

## Location

Campus	Mode
Penrith Campus	Internal

## Unit Set Structure

## Professional Accreditation

This Key Program has received full accreditation from Engineers Australia at the level of Professional Engineer

### Full-time

#### Year 1

##### Autumn session

<a href="#">200237.3</a>	Mathematics for Engineers 1
<a href="#">300464.2</a>	Physics and Materials
<a href="#">300027.2</a>	Engineering Computing
<a href="#">300674.2</a>	Engineering, Design and Construction Practice

##### Spring session

<a href="#">200238.2</a>	Mathematics for Engineers 2
<a href="#">300463.2</a>	Fundamentals of Mechanics
<a href="#">300021.2</a>	Electrical Fundamentals
<a href="#">300462.2</a>	Engineering and Design Concepts

#### Year 2

##### Autumn session

<b>200242.3</b>	Mathematics for Engineers 3
<b>300018.2</b>	Digital Systems 1
<b>300005.2</b>	Circuit Theory
<b>300025.3</b>	Electronics

**Spring session**

<b>300076.3</b>	Microprocessor Systems
<b>300057.3</b>	Signals and Systems
<b>300481.2</b>	Engineering Electromagnetics
<b>300052.2</b>	Power and Machines

**Year 3****Autumn session**

<b>300007.2</b>	Communication Systems
<b>300666.2</b>	Advanced Engineering Topic 1
<b>300071.2</b>	Electrical Machines 1
<b>300009.3</b>	Control Systems

**Spring session**

<b>300026.3</b>	Energy Systems
<b>300053.3</b>	Professional Practice
<b>300070.4</b>	Electrical Drives
<b>300069.3</b>	Digital Signal Processing

**Industrial experience**

<b>300741.2</b>	Industrial Experience (Engineering)
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**Honours Stream**

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

**Year 4 (Honours stream)****Autumn session**

<b>300668.2</b>	Advanced Engineering Thesis
<b>300075.4</b>	Instrumentation and Measurement

**Spring session**

<b>300668.2</b>	Advanced Engineering Thesis
<b>300667.2</b>	Advanced Engineering Topic 2

**Key Program - Telecommunications****KT3041.1**

This program emphasises the hardware issues related to telecommunications, including digital systems, antenna design, communication hardware, data transfer and management and signal processing. Graduates will work in a variety of situations, such as communications in offices, communications between machines, and intercontinental communication issues. There is a high demand for telecommunications engineers as providers struggle to meet the rapid increase demand for both personal and

business use of different modes of communications, including the mobile telephone and Internet.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure****Professional Accreditation**

This Key Program has received full accreditation from Engineers Australia at the level of Professional Engineer

**Full-time****Year 1****Autumn session**

<b>200237.3</b>	Mathematics for Engineers 1
<b>300464.2</b>	Physics and Materials
<b>300027.2</b>	Engineering Computing
<b>300674.2</b>	Engineering, Design and Construction Practice

**Spring session**

<b>200238.2</b>	Mathematics for Engineers 2
<b>300463.2</b>	Fundamentals of Mechanics
<b>300021.2</b>	Electrical Fundamentals
<b>300462.2</b>	Engineering and Design Concepts

**Year 2****Autumn session**

<b>200242.3</b>	Mathematics for Engineers 3
<b>300018.2</b>	Digital Systems 1
<b>300005.2</b>	Circuit Theory
<b>300025.3</b>	Electronics

**Spring session**

<b>300076.3</b>	Microprocessor Systems
<b>300057.3</b>	Signals and Systems
<b>300481.2</b>	Engineering Electromagnetics
<b>300052.2</b>	Power and Machines

**Year 3****Autumn session**

<b>300007.2</b>	Communication Systems
<b>300069.3</b>	Digital Signal Processing
<b>300167.3</b>	Systems Programming 1
<b>300029.3</b>	Engineering Visualization

**Spring session**

<b>300065.4</b>	Wireless Communications
<b>300053.3</b>	Professional Practice
<b>300010.3</b>	Data Networks
<b>300666.2</b>	Advanced Engineering Topic 1

**Industrial experience**

**300741.2** Industrial Experience (Engineering)

**Honours Stream**

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

**Year 4 (Honours stream)****Autumn session**

**300668.2** Advanced Engineering Thesis  
**300667.2** Advanced Engineering Topic 2

**Spring session**

**300668.2** Advanced Engineering Thesis

Choose one of

**300068.3** Communication Electronics  
**300489.2** Radio and Satellite Communication

**Key Program - Mechanical****KT3042.1**

In addition to providing training in conventional mechanical engineering subjects, the course structure introduces students to units of study that address sustainability including sustainable design and sustainable energy engineering. Graduates will be well equipped with broad-based skills that meet the demand of Australian industries and are conscious of the need to promote sustainable design and practices. Examples include mechanical and machinery design; manufacturing; energy production; and marketing and management activities. Skills gained are required in industries such as manufacturing, materials handling, automobile, aerospace, mining, building services and infrastructure development.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure****Full-time - Autumn Intake****Year 2****Autumn session**

**300282.2** Industrial Graphics 2: Transition  
**300035.3** Kinematics and Kinetics of Machines  
**300040.2** Mechanics of Materials  
**300762.2** Fluid Mechanics

**Spring session**

**300044.2** Microcontrollers and PLCs

**300480.2** Dynamics of Mechanical Systems  
**300735.2** Automated Manufacturing

Choose one of

**300760.1** Thermodynamics and Heat Transfer  
**300761.1** Advanced Mechanics of Materials

**Year 3****Autumn session**

**300056.3** Robotics  
**300764.1** Mechanical Design

Choose one of

**300763.1** Advanced Dynamics  
**300759.1** Thermal and Fluid Engineering

And one elective

**Spring session**

**300043.3** Mobile Robotics  
**300053.3** Professional Practice

Choose one of

**300760.1** Thermodynamics and Heat Transfer  
**300761.1** Advanced Mechanics of Materials

And one elective

**Industrial Experience**

**300741.2** Industrial Experience (Engineering)

**Year 4 (Non-Honours stream)****Autumn session**

**300483.3** Engineering Project

**Please note: Students must enrol in 300483 Engineering Project in both Autumn and Spring sessions.**

**300025.3** Electronics

Choose one of

**300763.1** Advanced Dynamics  
**300759.1** Thermal and Fluid Engineering

And one elective

**Spring session**

**300483.3** Engineering Project  
**300304.3** Sustainable Design: Materials Technology  
**300487.2** Mechatronic Design

And one elective

**Honours Stream**

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

**Year 4 (Honours stream)****Autumn session****300675.2** Honours Thesis

Choose one of

**300763.1** Advanced Dynamics  
**300759.1** Thermal and Fluid Engineering

And one elective

**Spring session****300675.2** Honours Thesis  
**300487.2** Mechatronic Design

And one elective

**Full-time - Spring Intake****Year 1****Spring session****200237.3** Mathematics for Engineers 1  
**300463.2** Fundamentals of Mechanics  
**300021.2** Electrical Fundamentals  
**300462.2** Engineering and Design Concepts**Autumn session****200238.2** Mathematics for Engineers 2  
**300464.2** Physics and Materials  
**300040.2** Mechanics of Materials  
**300762.2** Fluid Mechanics**Year 2****Spring session****300735.2** Automated Manufacturing  
**300044.2** Microcontrollers and PLCs

Choose one of

**300760.1** Thermodynamics and Heat Transfer  
**300761.1** Advanced Mechanics of Materials

And one elective

**Autumn session****300282.2** Industrial Graphics 2: Transition  
**300027.2** Engineering Computing  
**300674.2** Engineering, Design and Construction Practice  
**300035.3** Kinematics and Kinetics of Machines**Year 3****Spring session****300053.3** Professional Practice  
**300480.2** Dynamics of Mechanical Systems  
**300043.3** Mobile Robotics

Choose one of

**300760.1** Thermodynamics and Heat Transfer**300761.1** Advanced Mechanics of Materials**Autumn session****300764.1** Mechanical Design  
**300056.3** Robotics

Choose one of

**300763.1** Advanced Dynamics  
**300759.1** Thermal and Fluid Engineering

And one elective

**Industrial Experience****300741.2** Industrial Experience (Engineering)**Year 4 (Non-Honours stream)****Spring session****300483.3** Engineering Project**Please note: Students must enrol in 300483 Engineering Project in both Spring and Autumn sessions.****300304.3** Sustainable Design: Materials Technology  
**300487.2** Mechatronic Design

And one elective

**Autumn session****300483.3** Engineering Project  
**300025.3** Electronics

Choose one of

**300763.1** Advanced Dynamics  
**300759.1** Thermal and Fluid Engineering

And one elective

**Honours Stream**

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

**Year 4 (Honours stream)****Spring session****300675.2** Honours Thesis  
**300487.2** Mechatronic Design

And one elective

**Autumn session****300675.2** Honours Thesis

Choose one of

**300763.1** Advanced Dynamics  
**300759.1** Thermal and Fluid Engineering

And one elective

Although students may choose any unit offered by the University as an elective, students are recommended to choose their electives from the following list.

<b>300725.2</b>	Construction Technology 6 (Services)
<b>300733.2</b>	Introduction to Structural Engineering
<b>300052.2</b>	Power and Machines
<b>300005.2</b>	Circuit Theory
<b>300071.2</b>	Electrical Machines 1
<b>300075.4</b>	Instrumentation and Measurement
<b>300732.2</b>	Structural Analysis

### Sub-major elective spaces

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

### Key Program - Civil

#### KT3043.1

Civil engineering covers the fields of structural design, construction management and water engineering, together with quality assurance and environmental engineering. Graduates will work in the fields of design, construction and management. Projects may cover roads, airports, water supply and sewerage schemes, and large buildings. You may be an engineer in private industry, government departments, or in city, municipal or shire councils.

#### Location

Campus	Mode
Penrith Campus	Internal

#### Unit Set Structure

##### Full-time - Autumn Intake

###### Year 2

###### Autumn session

<b>300731.2</b>	Soil Engineering
<b>300040.2</b>	Mechanics of Materials
<b>300762.2</b>	Fluid Mechanics
<b>300482.2</b>	Engineering Geology and Concrete Materials

###### Spring session

<b>300733.2</b>	Introduction to Structural Engineering
<b>MG102A.3</b>	Management Foundations
<b>300738.3</b>	Surveying for Engineers
<b>300765.2</b>	Hydraulics

###### Year 3

###### Autumn session

<b>300732.2</b>	Structural Analysis
<b>300486.2</b>	Infrastructure Engineering
<b>300766.2</b>	Hydrology

And one elective

###### Spring session

<b>300053.3</b>	Professional Practice
<b>300730.2</b>	Steel Structures
<b>300736.2</b>	Concrete Structures (UG)

And one elective

###### Industrial Experience

<b>300741.2</b>	Industrial Experience (Engineering)
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###### Year 4 (Non-Honours stream)

###### Autumn session

<b>300483.3</b>	Engineering Project
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**Please note: Students must enrol in 300483 Engineering Project in both Autumn and Spring sessions.**

<b>300739.2</b>	Timber Structures (UG)
<b>300488.3</b>	Numerical Methods in Engineering

And one elective

###### Spring session

<b>300483.3</b>	Engineering Project
<b>300737.3</b>	Environmental Engineering
<b>300485.3</b>	Foundation Engineering

And one elective

###### Honours Stream

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

###### Year 4 (Honours stream)

###### Autumn session

<b>300675.2</b>	Honours Thesis
<b>300488.3</b>	Numerical Methods in Engineering

And one elective

###### Spring session

<b>300675.2</b>	Honours Thesis
<b>300485.3</b>	Foundation Engineering

And one elective

###### Full-time - Spring Intake

###### Year 1

###### Spring session

<b>200237.3</b>	Mathematics for Engineers 1
<b>300463.2</b>	Fundamentals of Mechanics
<b>300021.2</b>	Electrical Fundamentals



**300462.2** Engineering and Design Concepts**Autumn session**

<b>200238.2</b>	Mathematics for Engineers 2
<b>300464.2</b>	Physics and Materials
<b>300040.2</b>	Mechanics of Materials
<b>300762.2</b>	Fluid Mechanics

**Year 2****Spring session**

<b>300733.2</b>	Introduction to Structural Engineering
<b>300765.2</b>	Hydraulics
<b>300738.3</b>	Surveying for Engineers
<b>MG102A.3</b>	Management Foundations

**Autumn session**

<b>300731.2</b>	Soil Engineering
<b>300027.2</b>	Engineering Computing
<b>300674.2</b>	Engineering, Design and Construction Practice
<b>300482.2</b>	Engineering Geology and Concrete Materials

**Year 3****Spring session**

<b>300053.3</b>	Professional Practice
<b>300730.2</b>	Steel Structures
<b>300736.2</b>	Concrete Structures (UG)

And one elective

**Autumn session**

<b>300732.2</b>	Structural Analysis
<b>300486.2</b>	Infrastructure Engineering
<b>300766.2</b>	Hydrology

And one elective

**Industrial Experience**

<b>300741.2</b>	Industrial Experience (Engineering)
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**Year 4 (Non-Honours stream)****Spring session**

<b>300483.3</b>	Engineering Project
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**Please note: Students must enrol in 300483 Engineering Project in both Spring and Autumn sessions.**

<b>300737.3</b>	Environmental Engineering
<b>300485.3</b>	Foundation Engineering

And one elective

**Autumn session**

<b>300483.3</b>	Engineering Project
<b>300739.2</b>	Timber Structures (UG)
<b>300488.3</b>	Numerical Methods in Engineering

And one elective

**Honours Stream**

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

**Year 4 (Honours stream)****Spring session**

<b>300675.2</b>	Honours Thesis
<b>300485.3</b>	Foundation Engineering

And one elective

**Autumn session**

<b>300675.2</b>	Honours Thesis
<b>300488.3</b>	Numerical Methods in Engineering

And one elective

**Sub-major elective spaces**

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

**Key Program - Robotics and Mechatronics****KT3045.1**

This program provides the skills necessary for the design of smart machines of all types: cruise control in automobiles, pilotless spacecraft, automated factories and medical telerobotics. The course, accompanied by an extensive and integrated hands-on laboratory program, is essentially concerned with the design of intelligent mechanical systems and automation, and includes the study of robotics, computer control, automated manufacturing, microprocessor applications and machine design. Graduates in the program acquire the combined skills of mechanical and computer/electrical engineering that are needed in leading-edge industries such as aerospace systems, the car industry, automation and robotic applications, biomedical engineering, laser systems, and building materials manufacture.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure****Full-time - Autumn intake****Year 2****Autumn session**

<b>300025.3</b>	Electronics
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**300035.3** Kinematics and Kinetics of Machines  
**300040.2** Mechanics of Materials  
**300005.2** Circuit Theory

**Spring session**

**300044.2** Microcontrollers and PLCs  
**300480.2** Dynamics of Mechanical Systems  
**300735.2** Automated Manufacturing  
**300052.2** Power and Machines

**Year 3****Autumn session**

**300764.1** Mechanical Design  
**300056.3** Robotics

Choose one of

**300763.1** Advanced Dynamics  
**300018.2** Digital Systems 1

Or one elective

**Spring session**

**300043.3** Mobile Robotics  
**300053.3** Professional Practice  
**300487.2** Mechatronic Design

And one elective

**Industrial Experience:**

**300741.2** Industrial Experience (Engineering)

**Year 4 (Non-Honours stream)****Autumn session**

**300483.3** Engineering Project

**Please note: Students must enrol in 300483 Engineering Project in both Autumn and Spring sessions.**

**300075.4** Instrumentation and Measurement  
**300071.2** Electrical Machines 1

Choose one of

**300763.1** Advanced Dynamics  
**300018.2** Digital Systems 1

**Spring session**

**300483.3** Engineering Project  
**300304.3** Sustainable Design: Materials Technology

And two electives

**Honours Stream**

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

**Year 4 (Honours stream)****Autumn session**

**300675.2** Honours Thesis  
**300071.2** Electrical Machines 1

Choose one of

**300763.1** Advanced Dynamics  
**300018.2** Digital Systems 1

**Spring session**

**300675.2** Honours Thesis

And two electives

**Full-time - Spring Intake****Year 1****Spring session**

**200237.3** Mathematics for Engineers 1  
**300463.2** Fundamentals of Mechanics  
**300021.2** Electrical Fundamentals  
**300462.2** Engineering and Design Concepts

**Autumn session**

**200238.2** Mathematics for Engineers 2  
**300464.2** Physics and Materials  
**300040.2** Mechanics of Materials  
**300005.2** Circuit Theory

**Year 2****Spring session**

**300735.2** Automated Manufacturing  
**300044.2** Microcontrollers and PLCs  
**300052.2** Power and Machines

And one elective

**Autumn session**

**300027.2** Engineering Computing  
**300674.2** Engineering, Design and Construction Practice  
**300035.3** Kinematics and Kinetics of Machines

And one elective

**Year 3****Spring session**

**300053.3** Professional Practice  
**300480.2** Dynamics of Mechanical Systems  
**300487.2** Mechatronic Design  
**300043.3** Mobile Robotics

**Autumn session**

**300025.3** Electronics  
**300764.1** Mechanical Design  
**300056.3** Robotics

Choose one of

- 300763.1** Advanced Dynamics  
**300018.2** Digital Systems 1

### Industrial Experience

- 300741.2** Industrial Experience (Engineering)

### Year 4 (Non-Honours stream)

#### Spring session

- 300483.3** Engineering Project

**Please note: Students must enrol in 300483 Engineering Project in both Spring and Autumn sessions.**

- 300304.3** Sustainable Design: Materials Technology

And two electives

#### Autumn session

- 300483.3** Engineering Project  
**300075.4** Instrumentation and Measurement  
**300071.2** Electrical Machines 1

Choose one of

- 300763.1** Advanced Dynamics  
**300018.2** Digital Systems 1

### Honours Stream

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

### Year 4 (Honours stream)

#### Spring session

- 300675.2** Honours Thesis

And two electives

#### Autumn session

- 300675.2** Honours Thesis  
**300071.2** Electrical Machines 1

Choose one of

- 300763.1** Advanced Dynamics  
**300018.2** Digital Systems 1

**Although students may choose any unit offered by the University as an elective, students are recommended to choose their electives from the following:**

- 300761.1** Advanced Mechanics of Materials  
**300762.2** Fluid Mechanics  
**300760.1** Thermodynamics and Heat Transfer  
**300759.1** Thermal and Fluid Engineering

### Sub-major elective spaces

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

### Key Program - Computer

#### KT3046.1

Computer engineering is a specialist area that relates to computers and communication systems that process information and control physical processes and to designing faster computers. Subjects include computer networks, digital systems and communications, microprocessors and embedded micro-controllers. Graduates will work in hardware and software development, in supervisory and data acquisition systems, in industrial applications of computer controlled equipment, in networking and data communications and in developing networking technologies. You will primarily be a problem-solver and organiser, with specialist knowledge of computer hardware, software, communications, computer networking, computer control and real-time computer systems.

### Location

Campus	Mode
Penrith Campus	Internal

### Unit Set Structure

#### Full-time - Autumn session

##### Year 2

#### Autumn session

- 200242.3** Mathematics for Engineers 3  
**300018.2** Digital Systems 1  
**300005.2** Circuit Theory  
**300025.3** Electronics

#### Spring session

- 300076.3** Microprocessor Systems  
**300057.3** Signals and Systems  
**300096.5** Computer Organisation  
**300052.2** Power and Machines

##### Year 3

#### Autumn session

- 300167.3** Systems Programming 1  
**300075.4** Instrumentation and Measurement  
**300009.3** Control Systems

And one elective

**Spring session**

- 300149.2 Operating Systems  
 300053.3 Professional Practice  
 300069.3 Digital Signal Processing

And one elective

**Industrial Experience**

- 300741.2 Industrial Experience (Engineering)

**Year 4 (Non-Honours stream)****Autumn session**

- 300483.3 Engineering Project

**Please note: Students must enrol in 300483 Engineering Project in both Autumn and Spring sessions.**

- 300095.4 Computer Networks and Internets  
 300010.3 Data Networks

Choose one of

- 300019.3 Digital Systems 2  
 300029.3 Engineering Visualization

Please note: Even years students choose 300019 Digital Systems 2. Odd years students choose 300029 Engineering Visualization.

**Spring session**

- 300483.3 Engineering Project

Choose one of

- 300370.1 Digital Control Systems  
 300044.2 Microcontrollers and PLCs

Please note: Even years students choose 300370 Digital Control Systems. Odd years students choose 300044 - Microcontrollers and PLCs.

And two electives

**Honours Stream**

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

**Year 4 (Honours stream)****Autumn session**

- 300675.2 Honours Thesis  
 300095.4 Computer Networks and Internets  
 300010.3 Data Networks

**Spring session**

- 300675.2 Honours Thesis

And two electives

**Full-time - Spring intake****Year 1****Spring session**

- 200237.3 Mathematics for Engineers 1  
 300463.2 Fundamentals of Mechanics  
 300021.2 Electrical Fundamentals  
 300462.2 Engineering and Design Concepts

**Autumn session**

- 200238.2 Mathematics for Engineers 2  
 300464.2 Physics and Materials  
 300027.2 Engineering Computing  
 300005.2 Circuit Theory

**Year 2****Spring session**

- 200242.3 Mathematics for Engineers 3  
 300057.3 Signals and Systems  
 300096.5 Computer Organisation  
 300052.2 Power and Machines

**Autumn session**

- 300167.3 Systems Programming 1  
 300018.2 Digital Systems 1  
 300674.2 Engineering, Design and Construction Practice  
 300025.3 Electronics

**Year 3****Spring session**

- 300069.3 Digital Signal Processing  
 300053.3 Professional Practice  
 300149.2 Operating Systems  
 300076.3 Microprocessor Systems

**Autumn session**

- 300075.4 Instrumentation and Measurement  
 300009.3 Control Systems

And two electives

**Industrial Experience:**

- 300741.2 Industrial Experience (Engineering)

**Year 4 (Non-Honours stream)****Spring session**

- 300483.3 Engineering Project

**Please note: Students must enrol in 300483 Engineering Project in both Spring and Autumn sessions.**

And choose one of

- 300370.1 Digital Control Systems  
 300044.2 Microcontrollers and PLCs

Please note: Even years students choose 300370 Digital Control Systems. Odd years students choose 300044 Microcontrollers and PLCs.

And two electives

#### Autumn session

<b>300483.3</b>	Engineering Project
<b>300095.4</b>	Computer Networks and Internets
<b>300010.3</b>	Data Networks

Choose one of

<b>300019.3</b>	Digital Systems 2
<b>300029.3</b>	Engineering Visualization

Please note: Even years students choose 300019 Digital Systems 2. Odd years students choose 300029 Engineering Visualization.

#### Honours Stream

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

#### Year 4 (Honours stream)

##### Spring session

<b>300675.2</b>	Honours Thesis
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And two electives

##### Autumn session

<b>300675.2</b>	Honours Thesis
<b>300095.4</b>	Computer Networks and Internets
<b>300010.3</b>	Data Networks

#### Sub-major elective spaces

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

#### Key Program - Mechanical

##### KT3047.1

In addition to providing training in conventional mechanical engineering subjects, the course structure introduces students to units of study that address sustainability including sustainable design and sustainable energy engineering. Graduates will be well equipped with broad-based skills that meet the demand of Australian industries and are conscious of the need to promote sustainable design and practices. Skills gained are required in industries such as manufacturing, materials handling, automobile, aerospace, mining, building services and infrastructure development.

#### Location

Campus	Mode
Penrith Campus	Internal

#### Unit Set Structure

##### Full-time

##### Year 1

##### Autumn session

<b>200237.3</b>	Mathematics for Engineers 1
<b>300464.2</b>	Physics and Materials
<b>300027.2</b>	Engineering Computing
<b>300674.2</b>	Engineering, Design and Construction Practice

##### Spring session

<b>200238.2</b>	Mathematics for Engineers 2
<b>300463.2</b>	Fundamentals of Mechanics
<b>300021.2</b>	Electrical Fundamentals
<b>300462.2</b>	Engineering and Design Concepts

##### Year 2

##### Autumn session

<b>300040.2</b>	Mechanics of Materials
<b>300035.3</b>	Kinematics and Kinetics of Machines
<b>300282.2</b>	Industrial Graphics 2: Transition
<b>300762.2</b>	Fluid Mechanics

##### Spring session

<b>300735.2</b>	Automated Manufacturing
<b>300480.2</b>	Dynamics of Mechanical Systems
<b>300044.2</b>	Microcontrollers and PLCs

Choose one of

<b>300760.1</b>	Thermodynamics and Heat Transfer
<b>300761.1</b>	Advanced Mechanics of Materials

##### Year 3

##### Autumn session

<b>300056.3</b>	Robotics
<b>300666.2</b>	Advanced Engineering Topic 1
<b>300764.1</b>	Mechanical Design

Choose one of

<b>300763.1</b>	Advanced Dynamics
<b>300759.1</b>	Thermal and Fluid Engineering

##### Spring session

<b>300053.3</b>	Professional Practice
<b>300043.3</b>	Mobile Robotics
<b>300487.2</b>	Mechatronic Design

Choose one of

<b>300760.1</b>	Thermodynamics and Heat Transfer
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**300761.1** Advanced Mechanics of Materials

### Industrial experience

**300741.2** Industrial Experience (Engineering)

### Honours Stream

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

#### Year 4 (Honours stream)

##### Autumn session

**300668.2** Advanced Engineering Thesis

Choose one of

**300763.1** Advanced Dynamics  
**300759.1** Thermal and Fluid Engineering

Spring session

**300668.2** Advanced Engineering Thesis  
**300667.2** Advanced Engineering Topic 2

### Key Program - Civil

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#### KT3048.1

Civil engineering covers the fields of structural design, construction management and water engineering, together with quality assurance and environmental engineering. Graduates will work in the fields of design, construction and management. Projects may cover roads, airports, water supply and sewerage schemes, and large buildings. You may be an engineer in private industry, government departments, or in city, municipal or shire councils.

### Location

Campus	Mode
Penrith Campus	Internal

### Unit Set Structure

#### Full-time

##### Year 1

##### Autumn session

**200237.3** Mathematics for Engineers 1  
**300464.2** Physics and Materials  
**300027.2** Engineering Computing  
**300674.2** Engineering, Design and Construction Practice

##### Spring session

**200238.2** Mathematics for Engineers 2  
**300463.2** Fundamentals of Mechanics  
**300021.2** Electrical Fundamentals  
**300462.2** Engineering and Design Concepts

##### Year 2

##### Autumn session

**300731.2** Soil Engineering  
**300040.2** Mechanics of Materials  
**300482.2** Engineering Geology and Concrete Materials  
**300762.2** Fluid Mechanics

##### Spring session

**300733.2** Introduction to Structural Engineering  
**300738.3** Surveying for Engineers  
**300737.3** Environmental Engineering  
**300765.2** Hydraulics

##### Year 3

##### Autumn session

**300732.2** Structural Analysis  
**300488.3** Numerical Methods in Engineering  
**300666.2** Advanced Engineering Topic 1

Choose one of

**300486.2** Infrastructure Engineering  
**300766.2** Hydrology

##### Spring session

**300053.3** Professional Practice  
**300730.2** Steel Structures  
**300736.2** Concrete Structures (UG)  
**300485.3** Foundation Engineering

##### Industrial experience:

**300741.2** Industrial Experience (Engineering)

### Honours Stream

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

#### Year 4 (Honours stream)

##### Autumn session

**300668.2** Advanced Engineering Thesis

Choose one of

**300739.2** Timber Structures (UG)  
**MG102A.3** Management Foundations

##### Spring session

**300668.2** Advanced Engineering Thesis  
**300667.2** Advanced Engineering Topic 2

## Key Program - Robotics and Mechatronics

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### KT3050.1

An intensive hands-on laboratory program is an essential part of the course. Mechatronics provides skills necessary for the design of smart machines of all types: from cruise control in automobiles to pilotless spacecraft, from automated factories to medical telerobotics. It is especially concerned with design of intelligent mechanical systems. Examples include design and development of automated machinery and their control; design of mechanical equipment and integrated systems; and marketing and management activities. Skills gained are required in all sections of industry, including manufacturing, packaging, materials handling, aerospace and mining.

### Location

Campus	Mode
Penrith Campus	Internal

### Unit Set Structure

#### Full-time

##### Year 1

##### Autumn session

200237.3	Mathematics for Engineers 1
300464.2	Physics and Materials
300027.2	Engineering Computing
300674.2	Engineering, Design and Construction Practice

##### Spring session

200238.2	Mathematics for Engineers 2
300463.2	Fundamentals of Mechanics
300021.2	Electrical Fundamentals
300462.2	Engineering and Design Concepts

##### Year 2

##### Autumn session

300040.2	Mechanics of Materials
300035.3	Kinematics and Kinetics of Machines
300025.3	Electronics
300005.2	Circuit Theory

##### Spring session

300735.2	Automated Manufacturing
300480.2	Dynamics of Mechanical Systems
300044.2	Microcontrollers and PLCs
300052.2	Power and Machines

##### Year 3

##### Autumn session

300071.2	Electrical Machines 1
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300056.3	Robotics
300764.1	Mechanical Design

Choose one of

300763.1	Advanced Dynamics
300018.2	Digital Systems 1

##### Spring session

300053.3	Professional Practice
300666.2	Advanced Engineering Topic 1
300487.2	Mechatronic Design
300043.3	Mobile Robotics

##### Industrial experience

300741.2	Industrial Experience (Engineering)
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### Honours Stream

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

#### Year 4 (Honours stream)

##### Autumn session

300668.2	Advanced Engineering Thesis
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Choose one of

300763.1	Advanced Dynamics
300018.2	Digital Systems 1

##### Spring session

300668.2	Advanced Engineering Thesis
300667.2	Advanced Engineering Topic 2

## Key Program - Computer

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### KT3051.1

Computer engineering is a specialist area that relates to computers and communication systems that process information and control physical processes and to designing faster computers. Subjects include computer networks, digital systems and communications, microprocessors and embedded micro-controllers. Graduates will work in hardware and software development, in supervisory and data acquisition systems, in industrial applications of computer controlled equipment, in networking and data communications and in developing networking technologies. You will primarily be a problem-solver and organiser, with specialist knowledge of computer hardware, software, communications, computer networking, computer control and real-time computer systems.

### Location

Campus	Mode
Penrith Campus	Internal

## Unit Set Structure

### Full-time

#### Year 1

#### Autumn session

<b>200237.3</b>	Mathematics for Engineers 1
<b>300464.2</b>	Physics and Materials
<b>300027.2</b>	Engineering Computing
<b>300674.2</b>	Engineering, Design and Construction Practice

#### Spring session

<b>200238.2</b>	Mathematics for Engineers 2
<b>300463.2</b>	Fundamentals of Mechanics
<b>300021.2</b>	Electrical Fundamentals
<b>300462.2</b>	Engineering and Design Concepts

#### Year 2

#### Autumn session

<b>200242.3</b>	Mathematics for Engineers 3
<b>300018.2</b>	Digital Systems 1
<b>300005.2</b>	Circuit Theory
<b>300025.3</b>	Electronics

#### Spring session

<b>300076.3</b>	Microprocessor Systems
<b>300057.3</b>	Signals and Systems
<b>300096.5</b>	Computer Organisation
<b>300052.2</b>	Power and Machines

#### Year 3

#### Autumn session

<b>300167.3</b>	Systems Programming 1
<b>300010.3</b>	Data Networks
<b>300075.4</b>	Instrumentation and Measurement
<b>300009.3</b>	Control Systems

#### Spring session

<b>300149.2</b>	Operating Systems
<b>300053.3</b>	Professional Practice
<b>300069.3</b>	Digital Signal Processing
<b>300666.2</b>	Advanced Engineering Topic 1

#### Industrial experience:

<b>300741.2</b>	Industrial Experience (Engineering)
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## Honours Stream

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

#### Year 4 (Honours stream)

#### Autumn session

<b>300668.2</b>	Advanced Engineering Thesis
<b>300095.4</b>	Computer Networks and Internets

#### Spring session

<b>300668.2</b>	Advanced Engineering Thesis
<b>300667.2</b>	Advanced Engineering Topic 2

## Key Program - Nanotechnology

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### KT3065.1

#### Location

Campus	Mode
Campbelltown Campus	Internal

## Unit Set Structure

Students completing the Bachelor of Medical Science (Advanced) Nanotechnology will complete the following course structure.

#### Year 1

#### Autumn session

<b>300828.1</b>	Physics 1
<b>300811.1</b>	Scientific Literacy
<b>300800.1</b>	Essential Chemistry 1
<b>300672.2</b>	Mathematics 1A

#### Spring session

<b>300827.1</b>	Nanotechnology
<b>300803.1</b>	Essential Chemistry 2
<b>300829.1</b>	Physics 2
<b>300673.2</b>	Mathematics 1B

#### Year 2

#### Autumn session

<b>300930.1</b>	Classical Physics and Advanced Technologies
<b>300849.1</b>	Physical Chemistry
<b>300899.1</b>	Inorganic Chemistry
<b>300937.1</b>	Advanced Science Project A

#### Spring session

<b>300818.1</b>	Introduction to Physiology
<b>300816.1</b>	Cell Biology
<b>300923.1</b>	Quantum Physics
<b>300938.1</b>	Advanced Science Project B

#### Year 3

#### Autumn session

<b>300890.1</b>	Biodevices
<b>300936.1</b>	Functional Proteins and Genes
<b>300819.1</b>	Topics in Physiology
<b>300910.1</b>	Advanced Science Project C



**Spring session**

<b>300893.1</b>	Topics in Medical Science
<b>300895.1</b>	Nanochemistry
<b>300889.1</b>	Pathological Basis of Disease
<b>300892.1</b>	Medical Science Project

**Key Program - Civil****KT3075.1**

Civil engineering covers the fields of structural design, construction management and water engineering, together with quality assurance and environmental engineering. Graduates will work in the fields of design, construction and management. Projects may cover roads, airports, water supply and sewerage schemes, and large buildings. You may be an engineering technologist in private industry, government departments, or in city, municipal or shire councils.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure****Full-time - Autumn Intake****Year 2****Autumn session**

<b>300731.2</b>	Soil Engineering
<b>300040.2</b>	Mechanics of Materials
<b>300762.2</b>	Fluid Mechanics
<b>200238.2</b>	Mathematics for Engineers 2

**Spring session**

<b>300733.2</b>	Introduction to Structural Engineering
<b>MG102A.3</b>	Management Foundations
<b>300738.3</b>	Surveying for Engineers
<b>300765.2</b>	Hydraulics

**Industrial Experience**

<b>300741.2</b>	Industrial Experience (Engineering)
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**Year 3****Autumn session**

<b>300732.2</b>	Structural Analysis
<b>300486.2</b>	Infrastructure Engineering
<b>300766.2</b>	Hydrology
<b>300482.2</b>	Engineering Geology and Concrete Materials

**Spring session**

<b>300053.3</b>	Professional Practice
<b>300730.2</b>	Steel Structures
<b>300736.2</b>	Concrete Structures (UG)

And one elective

**Full-time - Spring Intake****Year 1****Spring session**

<b>300743.2</b>	Mathematics for Engineers Preliminary
or Elective*	
<b>300463.2</b>	Fundamentals of Mechanics
<b>300021.2</b>	Electrical Fundamentals
<b>300462.2</b>	Engineering and Design Concepts

**\*Elective - Students without a HSC Mathematics band 5 or higher should complete 300743 Mathematics for Engineers Preliminary as an elective**

**Autumn session**

<b>200237.3</b>	Mathematics for Engineers 1
<b>300464.2</b>	Physics and Materials
<b>300040.2</b>	Mechanics of Materials
<b>300762.2</b>	Fluid Mechanics

**Year 2****Spring session**

<b>300733.2</b>	Introduction to Structural Engineering
<b>300765.2</b>	Hydraulics
<b>300738.3</b>	Surveying for Engineers
<b>200238.2</b>	Mathematics for Engineers 2

**Autumn session**

<b>300731.2</b>	Soil Engineering
<b>300027.2</b>	Engineering Computing
<b>300674.2</b>	Engineering, Design and Construction Practice
<b>300482.2</b>	Engineering Geology and Concrete Materials

**Industrial Experience**

<b>300741.2</b>	Industrial Experience (Engineering)
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**Year 3****Spring session**

<b>300053.3</b>	Professional Practice
<b>300730.2</b>	Steel Structures
<b>300736.2</b>	Concrete Structures (UG)
<b>MG102A.3</b>	Management Foundations

**Autumn session**

<b>300732.2</b>	Structural Analysis
<b>300486.2</b>	Infrastructure Engineering
<b>300766.2</b>	Hydrology

And one elective

## Key Program - Computer

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### KT3076.1

Computer engineering is a specialist area that relates to computers and communication systems that process information and control physical processes and to designing faster computers. Subjects include computer networks, digital systems and communications, microprocessors and embedded micro-controllers. Graduates will work in hardware and software development, in supervisory and data acquisition systems, in industrial applications of computer controlled equipment, in networking and data communications and in developing networking technologies. You will primarily be a problem-solver and organiser, with specialist knowledge of computer hardware, software, communications, computer networking, computer control and real-time computer systems.

### Location

Campus	Mode
Penrith Campus	Internal

### Unit Set Structure

#### Full Time Autumn Intake

#### Year 2

##### Autumn session

<b>200238.2</b>	Mathematics for Engineers 2
<b>300018.2</b>	Digital Systems 1
<b>300005.2</b>	Circuit Theory
<b>300025.3</b>	Electronics

##### Spring session

<b>200242.3</b>	Mathematics for Engineers 3
<b>300057.3</b>	Signals and Systems
<b>300096.5</b>	Computer Organisation
<b>300052.2</b>	Power and Machines

#### Year 3

##### Autumn session

<b>300167.3</b>	Systems Programming 1
<b>300075.4</b>	Instrumentation and Measurement
<b>300009.3</b>	Control Systems

And one elective

##### Spring session

<b>300149.2</b>	Operating Systems
<b>300053.3</b>	Professional Practice
<b>300069.3</b>	Digital Signal Processing
<b>300076.3</b>	Microprocessor Systems

### Industrial Experience

<b>300741.2</b>	Industrial Experience (Engineering)
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## Full-time - Spring Intake

### Year 1

#### Spring session

<b>300743.2</b>	Mathematics for Engineers Preliminary
or Elective*	
<b>300463.2</b>	Fundamentals of Mechanics
<b>300021.2</b>	Electrical Fundamentals
<b>300462.2</b>	Engineering and Design Concepts

**\*Elective - Students without a HSC Mathematics band 5 or higher should complete 300743 Mathematics for Engineers Preliminary as an elective**

#### Autumn session

<b>200237.3</b>	Mathematics for Engineers 1
<b>300464.2</b>	Physics and Materials
<b>300027.2</b>	Engineering Computing
<b>300005.2</b>	Circuit Theory

### Year 2

#### Spring session

<b>200238.2</b>	Mathematics for Engineers 2
<b>300057.3</b>	Signals and Systems
<b>300096.5</b>	Computer Organisation
<b>300052.2</b>	Power and Machines

#### Autumn session

<b>300167.3</b>	Systems Programming 1
<b>300018.2</b>	Digital Systems 1
<b>300674.2</b>	Engineering, Design and Construction Practice
<b>300025.3</b>	Electronics

### Year 3

#### Spring session

<b>300069.3</b>	Digital Signal Processing
<b>300053.3</b>	Professional Practice
<b>300149.2</b>	Operating Systems
<b>300076.3</b>	Microprocessor Systems

#### Autumn session

<b>200242.3</b>	Mathematics for Engineers 3
<b>300075.4</b>	Instrumentation and Measurement
<b>300009.3</b>	Control Systems

And one elective

### Industrial Experience

<b>300741.2</b>	Industrial Experience (Engineering)
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## Key Program - Construction

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### KT3077.1

The Construction Key Program consists of core subjects in structural engineering, project management and construction technologies. Graduates will work in the fields of construction, structural design, project management, quantity surveying and estimation. Career opportunities include those in the private or public sector on projects covering roads, bridges, airports, and residential and commercial buildings.

### Location

Campus	Mode
Penrith Campus	Internal

### Unit Set Structure

#### Full-time - Autumn Intake

##### Year 2

##### Autumn session

<b>300731.2</b>	Soil Engineering
<b>300040.2</b>	Mechanics of Materials
<b>200486.2</b>	Quantity Surveying 1
<b>200238.2</b>	Mathematics for Engineers 2

##### Spring session

<b>300733.2</b>	Introduction to Structural Engineering
<b>MG102A.3</b>	Management Foundations
<b>300738.3</b>	Surveying for Engineers
<b>200468.2</b>	Estimating 1

##### Industrial Experience

<b>300741.2</b>	Industrial Experience (Engineering)
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##### Year 3

##### Autumn session

<b>300732.2</b>	Structural Analysis
<b>300727.2</b>	Project Management
<b>300728.2</b>	Construction Planning
<b>300482.2</b>	Engineering Geology and Concrete Materials

##### Spring session

<b>300053.3</b>	Professional Practice
<b>300730.2</b>	Steel Structures
<b>300736.2</b>	Concrete Structures (UG)

And one elective

#### Full-time - Spring Intake

##### Year 1

##### Spring session

<b>300743.2</b>	Mathematics for Engineers Preliminary
or Elective*	
<b>300463.2</b>	Fundamentals of Mechanics
<b>300021.2</b>	Electrical Fundamentals
<b>300462.2</b>	Engineering and Design Concepts

**\*Elective - Students without a HSC Mathematics band 5 or higher should complete 300743 Mathematics for Engineers Preliminary as an elective**

##### Autumn session

<b>200237.3</b>	Mathematics for Engineers 1
<b>300464.2</b>	Physics and Materials
<b>300040.2</b>	Mechanics of Materials
<b>300674.2</b>	Engineering, Design and Construction Practice

##### Year 2

##### Spring session

<b>300733.2</b>	Introduction to Structural Engineering
<b>MG102A.3</b>	Management Foundations
<b>300738.3</b>	Surveying for Engineers
<b>200238.2</b>	Mathematics for Engineers 2

##### Autumn session

<b>300731.2</b>	Soil Engineering
<b>300027.2</b>	Engineering Computing
<b>200486.2</b>	Quantity Surveying 1
<b>300482.2</b>	Engineering Geology and Concrete Materials

##### Industrial Experience

<b>300741.2</b>	Industrial Experience (Engineering)
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##### Year 3

##### Spring session

<b>300053.3</b>	Professional Practice
<b>300730.2</b>	Steel Structures
<b>300736.2</b>	Concrete Structures (UG)
<b>200468.2</b>	Estimating 1

##### Autumn session

<b>300732.2</b>	Structural Analysis
<b>300727.2</b>	Project Management
<b>300728.2</b>	Construction Planning

And one elective

## Key Program - Electrical

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### KT3078.1

This program includes core subjects from all branches of electrical engineering. Graduates will work in the fields of electronic components, computers, electro-magnetics, power generation and distribution systems, power and control in public utilities, telecommunications, manufacturing, and electrical systems.

### Location

Campus	Mode
Penrith Campus	Internal

### Unit Set Structure

#### Full-time - Autumn Intake

##### Year 2

##### Autumn session

200238.2	Mathematics for Engineers 2
300018.2	Digital Systems 1
300005.2	Circuit Theory
300025.3	Electronics

##### Spring session

200242.3	Mathematics for Engineers 3
300057.3	Signals and Systems
300481.2	Engineering Electromagnetics
300052.2	Power and Machines

##### Year 3

##### Autumn session

300007.2	Communication Systems
300071.2	Electrical Machines 1
300009.3	Control Systems

And one elective

##### Spring session

300026.3	Energy Systems
300053.3	Professional Practice
300069.3	Digital Signal Processing
300076.3	Microprocessor Systems

##### Industrial Experience

300741.2	Industrial Experience (Engineering)
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#### Full-time - Spring Intake

##### Year 1

##### Spring session

300743.2	Mathematics for Engineers Preliminary
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or Elective\*

300463.2	Fundamentals of Mechanics
300021.2	Electrical Fundamentals
300462.2	Engineering and Design Concepts

**\*Elective - Students without a HSC Mathematics band 5 or higher should complete 300743 Mathematics for Engineers Preliminary as an elective**

##### Autumn session

200237.3	Mathematics for Engineers 1
300464.2	Physics and Materials
300027.2	Engineering Computing
300005.2	Circuit Theory

##### Year 2

##### Spring session

200238.2	Mathematics for Engineers 2
300057.3	Signals and Systems
300481.2	Engineering Electromagnetics
300052.2	Power and Machines

##### Autumn session

200242.3	Mathematics for Engineers 3
300018.2	Digital Systems 1
300674.2	Engineering, Design and Construction Practice
300025.3	Electronics

##### Year 3

##### Spring session

300026.3	Energy Systems
300053.3	Professional Practice
300069.3	Digital Signal Processing
300076.3	Microprocessor Systems

##### Autumn session

300007.2	Communication Systems
300071.2	Electrical Machines 1
300009.3	Control Systems

And one elective

##### Industrial Experience

300741.2	Industrial Experience (Engineering)
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## Key Program - Environmental

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### KT3079.1

This program provides an essential grounding in ecology, civil engineering and environmental management. Environmental engineers are concerned with ensuring a sustainable and better future for the community by developing and managing systems that integrate with and protect our environment. Graduates will work as environmental engineering technologists in private,

industrial, and mining companies; government departments; and city, municipal and shire councils.

### Location

Campus	Mode
Penrith Campus	Internal

### Unit Set Structure

#### Full-time - Autumn Intake

##### Year 2

##### Autumn session

<b>300731.2</b>	Soil Engineering
<b>300040.2</b>	Mechanics of Materials
<b>300762.2</b>	Fluid Mechanics
<b>300469.2</b>	Introductory Chemistry

##### Spring session

<b>300733.2</b>	Introduction to Structural Engineering
<b>300738.3</b>	Surveying for Engineers
<b>200238.2</b>	Mathematics for Engineers 2
<b>300765.2</b>	Hydraulics

##### Industrial Experience

<b>300741.2</b>	Industrial Experience (Engineering)
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##### Year 3

##### Autumn session

<b>300777.2</b>	Air Quality and Climate Change
<b>300482.2</b>	Engineering Geology and Concrete Materials
<b>300486.2</b>	Infrastructure Engineering
<b>300766.2</b>	Hydrology

##### Spring session

<b>300737.3</b>	Environmental Engineering
<b>300663.2</b>	Resource Sustainability
<b>300053.3</b>	Professional Practice

And one elective (elective must be at least a Level 3 unit)

#### Full-time - Spring Intake

##### Year 1

##### Spring session

<b>300743.2</b>	Mathematics for Engineers Preliminary
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or Elective\*

<b>300463.2</b>	Fundamentals of Mechanics
<b>300021.2</b>	Electrical Fundamentals
<b>300462.2</b>	Engineering and Design Concepts

\*Elective - Students without a HSC Mathematics band 5 or higher should complete 300743 Mathematics for Engineers Preliminary as an elective

##### Autumn session

<b>200237.3</b>	Mathematics for Engineers 1
<b>300464.2</b>	Physics and Materials
<b>300040.2</b>	Mechanics of Materials
<b>300762.2</b>	Fluid Mechanics

##### Year 2

##### Spring session

<b>300733.2</b>	Introduction to Structural Engineering
<b>300738.3</b>	Surveying for Engineers
<b>200238.2</b>	Mathematics for Engineers 2
<b>300765.2</b>	Hydraulics

##### Autumn session

<b>300731.2</b>	Soil Engineering
<b>300027.2</b>	Engineering Computing
<b>300674.2</b>	Engineering, Design and Construction Practice
<b>300469.2</b>	Introductory Chemistry

##### Industrial Experience

<b>300741.2</b>	Industrial Experience (Engineering)
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##### Year 3

##### Spring session

<b>300737.3</b>	Environmental Engineering
<b>300663.2</b>	Resource Sustainability
<b>300053.3</b>	Professional Practice

And one elective (elective must be at least a Level 3 unit)

##### Autumn session

<b>300777.2</b>	Air Quality and Climate Change
<b>300482.2</b>	Engineering Geology and Concrete Materials
<b>300486.2</b>	Infrastructure Engineering
<b>300766.2</b>	Hydrology

#### Key Program - Mechanical

##### KT3080.1

In addition to providing training in conventional mechanical engineering subjects, the course structure introduces students to units of study that address sustainability including sustainable design and sustainable energy engineering. Graduates will be well equipped with broad-based skills that meet the demand of Australian industries and are conscious of the need to promote sustainable design and practices. Examples include mechanical and machinery design; manufacturing; energy production; and marketing and management activities. Skills gained are required in industries such as manufacturing, materials

handling, automobile, aerospace, mining, building services and infrastructure development.

## Location

Campus	Mode
Penrith Campus	Internal

## Unit Set Structure

### Full-time - Autumn Intake

#### Year 2

##### Autumn session

<b>200238.2</b>	Mathematics for Engineers 2
<b>300035.3</b>	Kinematics and Kinetics of Machines
<b>300040.2</b>	Mechanics of Materials
<b>300762.2</b>	Fluid Mechanics

##### Spring session

<b>300044.2</b>	Microcontrollers and PLCs
<b>300480.2</b>	Dynamics of Mechanical Systems
<b>300735.2</b>	Automated Manufacturing

Choose one of

<b>300760.1</b>	Thermodynamics and Heat Transfer
<b>300761.1</b>	Advanced Mechanics of Materials

#### Industrial Experience

<b>300741.2</b>	Industrial Experience (Engineering)
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#### Year 3

##### Autumn session

<b>300282.2</b>	Industrial Graphics 2: Transition
<b>300764.1</b>	Mechanical Design
<b>300056.3</b>	Robotics

Choose one of

<b>300763.1</b>	Advanced Dynamics
<b>300759.1</b>	Thermal and Fluid Engineering

##### Spring session

<b>300043.3</b>	Mobile Robotics
<b>300053.3</b>	Professional Practice

Choose one of

<b>300760.1</b>	Thermodynamics and Heat Transfer
<b>300761.1</b>	Advanced Mechanics of Materials

And one elective

### Full-time - Spring Intake

#### Year 1

##### Spring session

<b>300743.2</b>	Mathematics for Engineers Preliminary
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or Elective\*

<b>300463.2</b>	Fundamentals of Mechanics
<b>300021.2</b>	Electrical Fundamentals
<b>300462.2</b>	Engineering and Design Concepts

**\*Elective - Students without a HSC Mathematics band 5 or higher should complete 300743 Mathematics for Engineers Preliminary as an elective**

##### Autumn session

<b>200237.3</b>	Mathematics for Engineers 1
<b>300464.2</b>	Physics and Materials
<b>300040.2</b>	Mechanics of Materials
<b>300762.2</b>	Fluid Mechanics

#### Year 2

##### Spring session

<b>200238.2</b>	Mathematics for Engineers 2
<b>300735.2</b>	Automated Manufacturing
<b>300044.2</b>	Microcontrollers and PLCs

Choose one of

<b>300760.1</b>	Thermodynamics and Heat Transfer
<b>300761.1</b>	Advanced Mechanics of Materials

##### Autumn session

<b>300282.2</b>	Industrial Graphics 2: Transition
<b>300027.2</b>	Engineering Computing
<b>300674.2</b>	Engineering, Design and Construction Practice
<b>300035.3</b>	Kinematics and Kinetics of Machines

#### Industrial Experience

<b>300741.2</b>	Industrial Experience (Engineering)
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#### Year 3

##### Spring session

<b>300053.3</b>	Professional Practice
<b>300480.2</b>	Dynamics of Mechanical Systems
<b>300043.3</b>	Mobile Robotics

Choose one of

<b>300760.1</b>	Thermodynamics and Heat Transfer
<b>300761.1</b>	Advanced Mechanics of Materials

##### Autumn session

<b>300764.1</b>	Mechanical Design
<b>300056.3</b>	Robotics

Choose one of

<b>300763.1</b>	Advanced Dynamics
<b>300759.1</b>	Thermal and Fluid Engineering

And one elective

## Key Program - Robotics and Mechatronics

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### KT3081.1

This program provides the skills necessary for the design of smart machines of all types: cruise control in automobiles, pilotless spacecraft, automated factories and medical telerobotics. The course, accompanied by an extensive and integrated hands-on laboratory program, is essentially concerned with the design of intelligent mechanical systems and automation, and includes the study of robotics, computer control, automated manufacturing, microprocessor applications and machine design. Graduates in the program acquire the combined skills of mechanical and computer/electrical engineering that are needed in leading-edge industries such as aerospace systems, the car industry, automation and robotic applications, biomedical engineering, laser systems, and building materials manufacture.

### Location

Campus	Mode
Penrith Campus	Internal

### Unit Set Structure

#### Full-time - Autumn Intake

##### Year 2

##### Autumn session

<b>200238.2</b>	Mathematics for Engineers 2
<b>300035.3</b>	Kinematics and Kinetics of Machines
<b>300040.2</b>	Mechanics of Materials
<b>300005.2</b>	Circuit Theory

##### Spring session

<b>300044.2</b>	Microcontrollers and PLCs
<b>300480.2</b>	Dynamics of Mechanical Systems
<b>300735.2</b>	Automated Manufacturing
<b>300052.2</b>	Power and Machines

##### Industrial Experience

<b>300741.2</b>	Industrial Experience (Engineering)
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##### Year 3

##### Autumn session

<b>300025.3</b>	Electronics
<b>300764.1</b>	Mechanical Design
<b>300056.3</b>	Robotics

Choose one of

<b>300763.1</b>	Advanced Dynamics
<b>300018.2</b>	Digital Systems 1

##### Spring session

<b>300043.3</b>	Mobile Robotics
<b>300053.3</b>	Professional Practice
<b>300487.2</b>	Mechatronic Design

And one elective

#### Full-time - Spring Intake

##### Year 1

##### Spring session

<b>300743.2</b>	Mathematics for Engineers Preliminary
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or Elective\*

<b>300463.2</b>	Fundamentals of Mechanics
<b>300021.2</b>	Electrical Fundamentals
<b>300462.2</b>	Engineering and Design Concepts

**\*Elective - Students without a HSC Mathematics band 5 or higher should complete 300743 Mathematics for Engineers Preliminary as an elective**

##### Autumn session

<b>200237.3</b>	Mathematics for Engineers 1
<b>300464.2</b>	Physics and Materials
<b>300040.2</b>	Mechanics of Materials
<b>300005.2</b>	Circuit Theory

##### Year 2

##### Spring session

<b>200238.2</b>	Mathematics for Engineers 2
<b>300735.2</b>	Automated Manufacturing
<b>300044.2</b>	Microcontrollers and PLCs
<b>300052.2</b>	Power and Machines

##### Autumn session

<b>300027.2</b>	Engineering Computing
<b>300674.2</b>	Engineering, Design and Construction Practice
<b>300035.3</b>	Kinematics and Kinetics of Machines

And one elective

##### Industrial Experience

<b>300741.2</b>	Industrial Experience (Engineering)
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##### Year 3

##### Spring session

<b>300053.3</b>	Professional Practice
<b>300480.2</b>	Dynamics of Mechanical Systems
<b>300487.2</b>	Mechatronic Design
<b>300043.3</b>	Mobile Robotics

##### Autumn session

<b>300025.3</b>	Electronics
<b>300764.1</b>	Mechanical Design
<b>300056.3</b>	Robotics

Choose one of

**300763.1** Advanced Dynamics  
**300018.2** Digital Systems 1

## Key Program - Telecommunications

### KT3082.1

This program emphasises the hardware issues related to telecommunications, including digital systems, antenna design, communication hardware, data transfer and management and signal processing. Graduates will work in a variety of situations, such as communications in offices, communications between machines, and intercontinental communication issues. There is a high demand for telecommunications engineering technologists as providers struggle to meet the rapid increase demand for both personal and business use of different modes of communications, including the mobile telephone and Internet.

### Location

Campus	Mode
Penrith Campus	Internal

### Unit Set Structure

#### Full-time - Autumn Intake

##### Year 2

##### Autumn session

**200238.2** Mathematics for Engineers 2  
**300018.2** Digital Systems 1  
**300005.2** Circuit Theory  
**300025.3** Electronics

##### Spring session

**200242.3** Mathematics for Engineers 3  
**300057.3** Signals and Systems  
**300481.2** Engineering Electromagnetics  
**300052.2** Power and Machines

##### Year 3

##### Autumn session

**300007.2** Communication Systems  
**300167.3** Systems Programming 1  
**300029.3** Engineering Visualization

and one elective (elective must be at least a Level 3 unit)

##### Spring session

**300065.4** Wireless Communications  
**300053.3** Professional Practice  
**300069.3** Digital Signal Processing  
**300076.3** Microprocessor Systems

### Industrial Experience

**300741.2** Industrial Experience (Engineering)

## Full-time - Spring Intake

### Year 1

#### Spring session

**300743.2** Mathematics for Engineers Preliminary

or Elective\*

**300463.2** Fundamentals of Mechanics  
**300021.2** Electrical Fundamentals  
**300462.2** Engineering and Design Concepts

**\*Elective - Students without a HSC Mathematics band 5 or higher should complete 300743 Mathematics for Engineers Preliminary as an elective**

#### Autumn session

**200237.3** Mathematics for Engineers 1  
**300464.2** Physics and Materials  
**300027.2** Engineering Computing  
**300005.2** Circuit Theory

### Year 2

#### Spring session

**200238.2** Mathematics for Engineers 2  
**300057.3** Signals and Systems  
**300481.2** Engineering Electromagnetics  
**300052.2** Power and Machines

#### Autumn session

**300007.2** Communication Systems  
**300018.2** Digital Systems 1  
**300674.2** Engineering, Design and Construction Practice  
**300025.3** Electronics

### Year 3

#### Spring session

**300076.3** Microprocessor Systems  
**300053.3** Professional Practice  
**300069.3** Digital Signal Processing  
**300065.4** Wireless Communications

#### Autumn session

**200242.3** Mathematics for Engineers 3  
**300167.3** Systems Programming 1  
**300029.3** Engineering Visualization

and one elective (elective must be at least a Level 3 unit)

### Industrial Experience

**300741.2** Industrial Experience (Engineering)



## Key Program - Environmental

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### KT3087.1

This program provides an essential grounding in ecology, civil engineering and environmental management. Environmental engineers are concerned with ensuring a sustainable and better future for the community by developing and managing systems that integrate with and protect our environment. Graduates will work as environmental engineers in private, industrial, and mining companies; government departments; and city, municipal and shire councils.

### Location

Campus	Mode
Penrith Campus	Internal

### Unit Set Structure

#### Full-time

##### Year 1

##### Autumn session

<b>200237.3</b>	Mathematics for Engineers 1
<b>300464.2</b>	Physics and Materials
<b>300027.2</b>	Engineering Computing
<b>300674.2</b>	Engineering, Design and Construction Practice

##### Spring session

<b>200238.2</b>	Mathematics for Engineers 2
<b>300463.2</b>	Fundamentals of Mechanics
<b>300021.2</b>	Electrical Fundamentals
<b>300462.2</b>	Engineering and Design Concepts

##### Year 2

##### Autumn session

<b>300731.2</b>	Soil Engineering
<b>300040.2</b>	Mechanics of Materials
<b>300762.2</b>	Fluid Mechanics
<b>300469.2</b>	Introductory Chemistry

##### Spring session

<b>300733.2</b>	Introduction to Structural Engineering
<b>300738.3</b>	Surveying for Engineers
<b>300663.2</b>	Resource Sustainability
<b>300765.2</b>	Hydraulics

##### Year 3

##### Autumn session

<b>300633.1</b>	Management of Aquatic Environments
<b>300482.2</b>	Engineering Geology and Concrete Materials
<b>300766.2</b>	Hydrology
<b>300284.4</b>	Environmental Risk Management

#### Spring session

<b>300737.3</b>	Environmental Engineering
<b>300666.2</b>	Advanced Engineering Topic 1
<b>300053.3</b>	Professional Practice
<b>MG102A.3</b>	Management Foundations

#### Industrial experience

<b>300741.2</b>	Industrial Experience (Engineering)
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### Honours Stream

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

#### Year 4 (Honours stream)

##### Autumn session

<b>300668.2</b>	Advanced Engineering Thesis
<b>300777.2</b>	Air Quality and Climate Change

##### Spring session

<b>300668.2</b>	Advanced Engineering Thesis
<b>300667.2</b>	Advanced Engineering Topic 2

## Key Program - Electrical

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### KT3088.1

This program includes core subjects from all branches of electrical engineering. Graduates will work in the fields of electronic components, computers, electro-magnetics, power generation and distribution systems, power and control in public utilities, telecommunications, manufacturing, and electrical systems.

### Location

Campus	Mode
Penrith Campus	Internal

### Unit Set Structure

#### Full-time - Autumn intake

##### Year 2

##### Autumn session

<b>200242.3</b>	Mathematics for Engineers 3
<b>300018.2</b>	Digital Systems 1
<b>300005.2</b>	Circuit Theory
<b>300025.3</b>	Electronics

##### Spring session

<b>300076.3</b>	Microprocessor Systems
<b>300057.3</b>	Signals and Systems
<b>300481.2</b>	Engineering Electromagnetics
<b>300052.2</b>	Power and Machines

**Year 3****Autumn session**

<b>300007.2</b>	Communication Systems
<b>300071.2</b>	Electrical Machines 1
<b>300009.3</b>	Control Systems

And one elective

**Spring session**

<b>300026.3</b>	Energy Systems
<b>300053.3</b>	Professional Practice
<b>300069.3</b>	Digital Signal Processing

And one elective

**Industrial Experience:**

<b>300741.2</b>	Industrial Experience (Engineering)
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**Year 4 (Non-honours stream)****Autumn session**

<b>300483.3</b>	Engineering Project
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**Please note: Students must enrol in 300483 Engineering Project in both Autumn and Spring sessions.**

<b>300075.4</b>	Instrumentation and Measurement
<b>300010.3</b>	Data Networks

Choose one of

<b>300019.3</b>	Digital Systems 2
<b>300024.1</b>	Electronic Systems Design

**Spring session**

<b>300483.3</b>	Engineering Project
<b>300070.4</b>	Electrical Drives

And two electives

**Honours Stream**

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

**Year 4 (Honours stream)****Autumn session**

<b>300675.2</b>	Honours Thesis
<b>300075.4</b>	Instrumentation and Measurement

And one elective

**Spring session**

<b>300675.2</b>	Honours Thesis
<b>300070.4</b>	Electrical Drives

And one elective

**Full-time - Spring intake****Year 1****Spring intake**

<b>200237.3</b>	Mathematics for Engineers 1
<b>300463.2</b>	Fundamentals of Mechanics
<b>300021.2</b>	Electrical Fundamentals
<b>300462.2</b>	Engineering and Design Concepts

**Autumn session**

<b>200238.2</b>	Mathematics for Engineers 2
<b>300464.2</b>	Physics and Materials
<b>300027.2</b>	Engineering Computing
<b>300005.2</b>	Circuit Theory

**Year 2****Spring session**

<b>200242.3</b>	Mathematics for Engineers 3
<b>300057.3</b>	Signals and Systems
<b>300481.2</b>	Engineering Electromagnetics
<b>300052.2</b>	Power and Machines

**Autumn session**

<b>300071.2</b>	Electrical Machines 1
<b>300018.2</b>	Digital Systems 1
<b>300674.2</b>	Engineering, Design and Construction Practice
<b>300025.3</b>	Electronics

**Year 3****Spring session**

<b>300026.3</b>	Energy Systems
<b>300053.3</b>	Professional Practice
<b>300069.3</b>	Digital Signal Processing
<b>300076.3</b>	Microprocessor Systems

**Autumn session**

<b>300007.2</b>	Communication Systems
<b>300009.3</b>	Control Systems

And two electives

**Industrial Experience**

<b>300741.2</b>	Industrial Experience (Engineering)
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**Year 4 (Non-Honours stream)****Spring session**

<b>300483.3</b>	Engineering Project
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**Please note: Students must enrol in 300483 Engineering Project in both Spring and Autumn sessions.**

<b>300070.4</b>	Electrical Drives
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And two electives

**Autumn session**

<b>300483.3</b>	Engineering Project
<b>300075.4</b>	Instrumentation and Measurement
<b>300010.3</b>	Data Networks

Choose one of

<b>300019.2</b>	Digital Systems 2
<b>300024.2</b>	Electronic Systems Design

**Honours Stream**

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

**Year 4 (Honours stream)****Spring session**

<b>300675.2</b>	Honours Thesis
<b>300070.4</b>	Electrical Drives

And one elective

**Autumn session**

<b>300675.2</b>	Honours Thesis
<b>300075.4</b>	Instrumentation and Measurement

And one elective

**Sub-major elective spaces**

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

**Key Program - Environmental****KT3089.1**

This program provides an essential grounding in ecology, civil engineering and environmental management. Environmental engineers are concerned with ensuring a sustainable and better future for the community by developing and managing systems that integrate with and protect our environment. Graduates will work as environmental engineers in private, industrial, and mining companies; government departments; and city, municipal and shire councils.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure****Full-time - Autumn intake****Year 2****Autumn session**

<b>300731.2</b>	Soil Engineering
<b>300040.2</b>	Mechanics of Materials
<b>300762.2</b>	Fluid Mechanics
<b>300469.2</b>	Introductory Chemistry

**Spring session**

<b>300733.2</b>	Introduction to Structural Engineering
<b>300738.3</b>	Surveying for Engineers
<b>300663.2</b>	Resource Sustainability
<b>300765.2</b>	Hydraulics

**Year 3****Autumn session**

<b>300777.2</b>	Air Quality and Climate Change
<b>300482.2</b>	Engineering Geology and Concrete Materials
<b>300486.2</b>	Infrastructure Engineering
<b>300766.2</b>	Hydrology

**Spring session**

<b>300737.3</b>	Environmental Engineering
<b>300053.3</b>	Professional Practice

And two electives

Note: one of the Year 3 Electives must be at least a Level 3 unit.

**Industrial Experience**

<b>300741.2</b>	Industrial Experience (Engineering)
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**Year 4 (Non-Honours stream)****Autumn session**

<b>300483.3</b>	Engineering Project
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**Please note: Students must enrol in 300483 Engineering Project in both Autumn and Spring sessions.**

<b>300633.1</b>	Management of Aquatic Environments
<b>300284.4</b>	Environmental Risk Management
<b>300488.3</b>	Numerical Methods in Engineering

**Spring session**

<b>300483.3</b>	Engineering Project
<b>MG102A.3</b>	Management Foundations

And two electives

**Honours Stream**

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

**Year 4 (Honours stream)****Autumn session**

**300675.2** Honours Thesis  
**300633.1** Management of Aquatic Environments

And one elective

**Spring session**

**300675.2** Honours Thesis  
**MG102A.3** Management Foundations

And one elective

**Full-time - Spring Intake****Year 1****Spring session**

**200237.3** Mathematics for Engineers 1  
**300463.2** Fundamentals of Mechanics  
**300021.2** Electrical Fundamentals  
**300462.2** Engineering and Design Concepts

**Autumn session**

**200238.2** Mathematics for Engineers 2  
**300464.2** Physics and Materials  
**300040.2** Mechanics of Materials  
**300762.2** Fluid Mechanics

**Year 2****Spring session**

**300733.2** Introduction to Structural Engineering  
**300738.3** Surveying for Engineers  
**300663.2** Resource Sustainability  
**300765.2** Hydraulics

**Autumn session**

**300731.2** Soil Engineering  
**300027.2** Engineering Computing  
**300674.2** Engineering, Design and Construction Practice  
**300469.2** Introductory Chemistry

**Year 3****Spring session**

**300737.3** Environmental Engineering  
**300053.3** Professional Practice

And two electives

Note: one of the Year 3 Electives must be at least a Level 3 unit.

**Autumn session**

**300777.2** Air Quality and Climate Change  
**300482.2** Engineering Geology and Concrete Materials  
**300486.2** Infrastructure Engineering  
**300766.2** Hydrology

**Industrial Experience**

**300741.2** Industrial Experience (Engineering)

**Year 4 (Non-Honours stream)****Spring session**

**300483.3** Engineering Project

**Please note: Students must enrol in 300483 Engineering Project in both Spring and Autumn sessions.**

**MG102A.3** Management Foundations

And two electives

**Autumn session**

**300483.3** Engineering Project  
**300633.1** Management of Aquatic Environments  
**300284.4** Environmental Risk Management  
**300488.3** Numerical Methods in Engineering

**Honours Stream**

An Honours stream is offered - see the Honours in Bachelors Awards Policy and associated College Guidelines for the admission criteria.

**Year 4 (Honours stream)**

**300675.2** Honours Thesis  
**MG102A.3** Management Foundations

And one elective

**Autumn session**

**300675.2** Honours Thesis  
**300633.1** Management of Aquatic Environments

And one elective

**Sub-major elective spaces**

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

**Key Program - Biological Science****KT3090.1**

The biological sciences are diverse, fascinating, rapidly changing, and essential to our understanding of living systems at scales ranging from the molecular to the global. They play a vital role in our understanding of the environment, as well as animals, plants and micro-organisms, and are essential to a wide range of contemporary industries. A Bachelor of Science (Biological Science) offers a solid foundation in the basic sciences,

including biology, microbiology, biochemistry and environmental science. You will be equipped to enter government, industry or research-based employment in this area (e.g. biotechnology companies, pathology, quality assurance, university and hospital laboratories, scientific sales and government agencies).

### Unit Set Structure

Students completing the Bachelor of Science (Advanced Science) (Biological Science) will complete the following course structure.

**Note: At least 60 credit points must be at Level 3 or above**

#### Year 1

##### Autumn session

<b>300802.1</b>	Biodiversity
<b>300811.1</b>	Scientific Literacy
<b>300800.1</b>	Essential Chemistry 1

Choose one of

<b>300672.2</b>	Mathematics 1A
<b>200263.4</b>	Biometry

##### Spring session

<b>300816.1</b>	Cell Biology
<b>300803.1</b>	Essential Chemistry 2
<b>300818.1</b>	Introduction to Physiology

And one elective

#### Year 2

##### Autumn session

<b>300937.1</b>	Advanced Science Project A
<b>300936.1</b>	Functional Proteins and Genes
<b>300833.1</b>	Microbiology 1
<b>300845.1</b>	Genetics

##### Spring session

<b>300938.1</b>	Advanced Science Project B
<b>300839.1</b>	Ecology
<b>300817.1</b>	Molecular Biology

Choose one more level 2 science unit from the list below

<b>300848.1</b>	Metabolism
<b>300896.1</b>	Microbiology 2
<b>300838.1</b>	Comparative Physiology
<b>300876.1</b>	Organic Chemistry
<b>300832.1</b>	Analytical Chemistry
<b>200030.3</b>	Differential Equations
<b>200033.4</b>	Applied Statistics
<b>300847.1</b>	Immunology

#### Year 3

**Choose at least one capstone unit in your final year of study; capstone units are listed below.**

##### Autumn session

**300910.1** Advanced Science Project C

One level 3 elective unit

### Hawkesbury Campus

Choose at least two science units from the following

<b>300820.1</b>	Genes, Genomics and Human Health
<b>300850.1</b>	Advanced Cell Biology
<b>300856.1</b>	Ecosystem Carbon Accounting
<b>300921.1</b>	Plant Health and Biosecurity
<b>300919.1</b>	Occupational Health and Safety

##### Capstone units

<b>300857.1</b>	Environmental Geochemistry
<b>300866.1</b>	Analytical Microbiology
<b>300851.1</b>	Advanced Physiology
<b>300929.1</b>	Aquatic Ecology

### Parramatta Campus

Choose at least two science units from the following

<b>300820.1</b>	Genes, Genomics and Human Health
<b>300907.1</b>	Advanced Inorganic Chemistry
<b>200193.2</b>	Abstract Algebra
<b>200037.4</b>	Regression Analysis & Experimental Design
<b>200023.3</b>	Analysis

##### Capstone units

<b>300857.1</b>	Environmental Geochemistry
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### Campbelltown Campus

Choose at least two science units from the list below

<b>300820.1</b>	Genes, Genomics and Human Health
<b>300850.1</b>	Advanced Cell Biology
<b>300819.1</b>	Topics in Physiology
<b>300907.1</b>	Advanced Inorganic Chemistry
<b>200193.2</b>	Abstract Algebra
<b>200037.4</b>	Regression Analysis & Experimental Design
<b>200023.3</b>	Analysis

##### Spring session

<b>300924.1</b>	Science Research Project
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One Level 3 elective unit

### Hawkesbury Campus

Choose at least two science units from the following

<b>300905.1</b>	Advanced Immunology
<b>300826.1</b>	Medical Microbiology
<b>300861.1</b>	Vertebrate Biodiversity
<b>300918.1</b>	Invertebrate Biology

##### Capstone units

<b>300927.1</b>	Molecular Medicine
<b>300855.1</b>	Conservation Biology
<b>300909.1</b>	Biological Adaptation to Climate Change
<b>300883.1</b>	Laboratory Quality Management

**Parramatta Campus**

Choose at least two science units from the following

<b>300905.1</b>	Advanced Immunology
<b>300925.1</b>	Advanced Analytical Chemistry
<b>300906.1</b>	Advanced Organic Chemistry
<b>200038.3</b>	Time Series and Forecasting
<b>200022.3</b>	Mathematical Modelling
<b>300826.1</b>	Medical Microbiology

**Capstone units**

<b>300927.1</b>	Molecular Medicine
<b>300855.1</b>	Conservation Biology

**Campbelltown Campus**

Choose at least two units from below

<b>300905.1</b>	Advanced Immunology
<b>300925.1</b>	Advanced Analytical Chemistry
<b>300906.1</b>	Advanced Organic Chemistry
<b>200038.3</b>	Time Series and Forecasting
<b>200022.3</b>	Mathematical Modelling
<b>300826.1</b>	Medical Microbiology

**Capstone units**

<b>300927.1</b>	Molecular Medicine
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**Key Program - Chemistry****KT3091.1**

A Bachelor of Science (Chemistry) will prepare you to take part in a process of inquiry, by both contributing to it and by using scientific knowledge to solve current problems. The Chemistry program provides a strong background in the key topic areas of contemporary chemistry, including aspects of chemical theory in analytical, inorganic, organic and physical chemistry, with a strong emphasis on practical laboratory skills, and applications in contemporary research, industry and the environment. A research project is available to students in the final year of the degree preparing you for a professional career in a wide range of chemistry based industries.

**Unit Set Structure**

Students completing the Bachelor of Science (Advanced Science) (Chemistry) will complete the following course structure.

**Year 1****Autumn session**

<b>300800.1</b>	Essential Chemistry 1
<b>300811.1</b>	Scientific Literacy
<b>300828.1</b>	Physics 1

Choose one of

<b>300802.1</b>	Biodiversity
<b>300822.1</b>	Introduction to Earth Science

<b>300931.1</b>	Integrated Science
<b>300831.1</b>	Quantitative Thinking
<b>200263.4</b>	Biometry
<b>200025.2</b>	Discrete Mathematics
<b>300580.2</b>	Programming Fundamentals
<b>300134.2</b>	Introduction to Information Technology

**Spring session**

<b>300803.1</b>	Essential Chemistry 2
<b>300672.2</b>	Mathematics 1A

And one elective

Choose one of

<b>300816.1</b>	Cell Biology
<b>300818.1</b>	Introduction to Physiology
<b>300829.1</b>	Physics 2
<b>300809.1</b>	Introductory Geochemistry
<b>300672.2</b>	Mathematics 1A
<b>300673.2</b>	Mathematics 1B
<b>200263.4</b>	Biometry
<b>200025.2</b>	Discrete Mathematics
<b>300580.2</b>	Programming Fundamentals

**Year 2****Autumn session**

<b>300937.1</b>	Advanced Science Project A
<b>300899.1</b>	Inorganic Chemistry
<b>300849.1</b>	Physical Chemistry

Choose at least one science unit from the list below

<b>300936.1</b>	Functional Proteins and Genes
<b>300833.1</b>	Microbiology 1
<b>300845.1</b>	Genetics
<b>300865.1</b>	Plant Physiology
<b>200027.2</b>	Linear Algebra
<b>200028.3</b>	Advanced Calculus

**Spring session**

<b>300938.1</b>	Advanced Science Project B
<b>300876.1</b>	Organic Chemistry
<b>300832.1</b>	Analytical Chemistry

Choose at least one science unit from the list below

<b>300848.1</b>	Metabolism
<b>300896.1</b>	Microbiology 2
<b>300817.1</b>	Molecular Biology
<b>300838.1</b>	Comparative Physiology
<b>300839.1</b>	Ecology
<b>200030.3</b>	Differential Equations
<b>200033.4</b>	Applied Statistics
<b>300847.1</b>	Immunology

**Year 3****Autumn session**

<b>300910.1</b>	Advanced Science Project C
<b>300907.1</b>	Advanced Inorganic Chemistry

Choose one of

<b>300926.1</b>	Advanced Physical Chemistry
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**300912.1** Molecular Pharmacokinetics

And one level 3 elective

**Spring session**

<b>300924.1</b>	Science Research Project
<b>300925.1</b>	Advanced Analytical Chemistry
<b>300906.1</b>	Advanced Organic Chemistry

And one elective

**Key Program - Environmental Science****KT3092.1**

Solving the world's environmental problems will require professionals who are trained in the sciences underlying these issues and who understand the wider human and social contexts of the challenges faced. A Bachelor of Science (Environmental Science) will open up a wide range of career opportunities for those with environmental, conservation and ecological interests. A solid grounding in the underlying science is essential for people intending to work in this field, who will need to integrate knowledge across a range of disciplines, to devise solutions spanning the scientific and social issues involved. Some of the key areas in this degree include conservation biology, environmental analysis, regulation and policy, environmental chemistry, climate change science, microbiological and spatial data analysis, environmental geochemistry, biodiversity and adaptation, and ecology including aquatic ecology. There are a range of majors (climate change and environmental management) and sub-majors (sustainability) offered in Science that can add diversity and/or focus to your degree. There are also a range of sub-majors from other disciplines such as the arts, business, humanities and social sciences to choose from, although these may require cross campus study and are subject to availability and timetabling.

**Unit Set Structure**

Students completing the Bachelor of Science (Advanced Science) (Environmental Science) will complete the following course structure.

**Year 1****Autumn session**

<b>300802.1</b>	Biodiversity
<b>300811.1</b>	Scientific Literacy
<b>300800.1</b>	Essential Chemistry 1
<b>300824.1</b>	Management of Aquatic Environments

**Spring session**

<b>300816.1</b>	Cell Biology
<b>300803.1</b>	Essential Chemistry 2
<b>101646.2</b>	Analysis of Spatial Data
<b>300823.1</b>	Soils

**Year 2****Autumn session**

<b>300937.1</b>	Advanced Science Project A
<b>300837.1</b>	Climate Change Science
<b>300843.1</b>	Forensic and Environmental Analysis

Choose one of:

<b>300672.2</b>	Mathematics 1A
<b>200263.4</b>	Biometry

**Spring session**

<b>300938.1</b>	Advanced Science Project B
<b>300839.1</b>	Ecology
<b>300841.1</b>	Environmental Regulation and Policy

Choose one of:

<b>300836.1</b>	Botany
<b>300838.1</b>	Comparative Physiology

**Year 3****Autumn session**

<b>300910.1</b>	Advanced Science Project C
<b>300929.1</b>	Aquatic Ecology
<b>300857.1</b>	Environmental Geochemistry
<b>300833.1</b>	Microbiology 1

**Spring session**

<b>300924.1</b>	Science Research Project
<b>300855.1</b>	Conservation Biology
<b>300909.1</b>	Biological Adaptation to Climate Change

Choose one of:

<b>300861.1</b>	Vertebrate Biodiversity
<b>300918.1</b>	Invertebrate Biology

**Key Program - Forensic Science****KT3093.1**

This is a three year program that produces scientists who have a good background in the biological and chemical sciences, coupled with specialised expertise in forensic science, including methods of forensic analysis, crime scene investigation, forensic photography, forensic investigation, crime and criminal justice and complex case. Students may opt to further specialise in forensic biology, chemistry or microbiology by selecting additional electives or studies in a related or unrelated discipline. Career opportunities include forensic scientists, crime scene investigators, private investigators and consultants, police officers, drug analysts, researchers and academics, and specialised forensic science practitioners. The main employers of forensic scientists are State and Federal police services, State and Commonwealth Government Health Departments and analytical chemical laboratories. Graduates will be versatile with a wide skills base with (depending on their choice of electives) potential for

employment in analytical chemistry and microbiology, quality control and assurance, biochemistry and molecular biology, scientific research, education and the chemical industry.

**300877.1** Toxicology  
**300918.1** Invertebrate Biology

## Key Program - Nutrition and Food Science

### KT3094.1

Healthy eating is a vital part of good health. There is more to healthy eating than you realise. A Bachelor of Science (Nutrition and Food Science) will prepare you for the future by developing the skills and knowledge to solve future challenges in nutrition and health, food quality and security. The majors will allow further specialisation in your studies in Nutrition and Food Science and allow a wide range of careers in community nutrition and health promotion ensuring healthy diets and lifestyles for good health. The program has strong industry and community links, well-equipped facilities including food processing pilot plant and modern kitchen facilities. A major in Human Nutrition investigates healthy eating as a vital part of maintaining good health and health promotion. The major covers specialised studies in applied and community nutrition, metabolism and human physiology, preparing students for careers in community nutrition, health promotion and education, or work in a range of food and nutrition related businesses, including new product development of healthy foods. A major in Food Science explores the science behind food, its preparation, manufacture, storage and preservation. The major covers specialised topics in food processing, quality assurance, product development, postharvest, packaging, microbiological and chemical analysis of foods preparing you for a wide range of careers in the food and beverage related industries, including food product development, quality assurance, food regulations, research and development, plus management of fresh food supply. A major in Food Technology Secondary Teaching brings together food science and nutrition with education studies to meet the graduate requirements for teaching food technology. The major includes specialised studies in food processing, food product development, nutrition, contemporary food issues, and growing crops for school garden projects. It will also address issues in the food marketplace relevant to the Australian food industry and prepare you to teach biology, chemistry or design and technology as additional first or second teaching areas, or design and technology depending on electives selected.

### Unit Set Structure

Students completing the Bachelor of Science (Advanced Science) (Nutrition and Food Science) will complete the following course structure.

**Note: At least 60 credit points must be at Level 3 or above. (Some students may need to take an elective as a Level 3 unit)**

#### Year 1

##### Autumn session

**300802.1** Biodiversity  
**300811.1** Scientific Literacy  
**300800.1** Essential Chemistry 1

### Unit Set Structure

Students completing the Bachelor of Science (Advanced Science) (Forensic Science) will complete the following course structure.

#### Year 1

##### Autumn session

**300802.1** Biodiversity  
**300811.1** Scientific Literacy  
**300800.1** Essential Chemistry 1  
**300806.1** Forensic Science

##### Spring session

**300816.1** Cell Biology  
**300803.1** Essential Chemistry 2

Choose one of

**200263.4** Biometry  
**300672.2** Mathematics 1A

Choose one of

**101567.3** Evidence, Investigations and Police Intelligence  
**101568.3** Legislation, Courts and Policing

#### Year 2

##### Autumn session

**300937.1** Advanced Science Project A  
**300843.1** Forensic and Environmental Analysis  
**300845.1** Genetics  
**300874.1** Digital Forensic Photography

##### Spring session

**300938.1** Advanced Science Project B  
**300873.1** Crime Scene Investigation  
**300817.1** Molecular Biology

Choose one of

**300864.1** Imaging Science & Photographic Evidence  
**300823.1** Soils

#### Year 3

##### Autumn session

**300910.1** Advanced Science Project C  
**300881.1** Forensic Biology  
**300868.1** Forensic Chemistry  
**300882.1** Forensic Archaeology

##### Spring session

**300924.1** Science Research Project  
**300911.1** Complex Forensic Studies



Choose one of

- 300672.2** Mathematics 1A  
**200263.4** Biometry

### Spring session

- 300816.1** Cell Biology  
**300803.1** Essential Chemistry 2  
**300805.1** Food Science 1  
**300937.1** Advanced Science Project A

Note: 300937 Advanced Science Project A is situated in Semester 2 for administrative purposes only. This unit will be completed at an appropriate time in Semester 3 or 5 after consultation with the Director of Academic Programs.

### Year 2

#### Autumn session

- 300936.1** Functional Proteins and Genes  
**300833.1** Microbiology 1  
**300842.1** Food Science 2  
**300933.1** Nutrition and Health 1

#### Spring session

- 300938.1** Advanced Science Project B  
**300879.1** Experimental Foods

#### Human Nutrition Major

- 300934.1** Nutrition and Health 2  
**300818.1** Introduction to Physiology

#### Food Science Major

- 300859.1** Food Safety  
**300815.1** Crop Production

#### Food Technology Major

Choose one of

- 300859.1** Food Safety  
**300815.1** Crop Production

And one elective

### Year 3

#### Autumn session

- 300910.1** Advanced Science Project C  
**300922.1** Quality Assurance and Food Analysis

#### Human Nutrition Major

- 300928.1** Consumer Issues in Nutrition

Choose one of

- 300851.1** Advanced Physiology  
**300871.1** Culinary Science

#### Food Science Major

- 300869.1** Postharvest

Choose one of

- 300866.1** Analytical Microbiology  
**300843.1** Forensic and Environmental Analysis

#### Food Technology Major

- 300871.1** Culinary Science

And one elective

#### Spring session

- 300924.1** Science Research Project  
**300915.1** Food Product Development

#### Human Nutrition Major

- 300908.1** Applied Nutrition

Choose one of

- 300848.1** Metabolism  
**300917.1** Global Nutrition, Food and Community

#### Food Science Major

- 300904.1** Advanced Food Science and Technology  
**300883.1** Laboratory Quality Management

#### Food Technology Major

- 300904.1** Advanced Food Science and Technology

And one elective

**All students must satisfactorily complete the unit 300655 - Approved Industrial Experience (10 weeks), comprising a minimum of ten weeks Approved Industrial Experience.**

- 300655.1** Approved Industrial Experience

### Key Program - Mathematical Sciences

#### **KT3095.1**

A Bachelor of Science (Mathematical Science) provides you with a strong background in key analytical techniques that have contemporary applications such as the treatment and interpretation of data and the modelling of real-world problems such as global warming. You will develop skills that allow you to model and solve real world problems using mathematical techniques and have the opportunity to specialise in mathematics, statistics or a combination of both. This will provide you with a wide range of career options in commercial and government institutions, which require highly-skilled problem-solvers. There are also a range of majors (e.g. biology, chemistry) and sub-majors offered in Science that can add diversity and/or focus to your degree. There are also a range of sub-majors from other disciplines such as the arts, business, humanities and social sciences to choose from, although these may require cross campus study and are subject to availability and timetabling.

## Unit Set Structure

Students completing the Bachelor of Science (Advanced Science) (Mathematical Sciences) will complete the following course structure.

### Year 1

#### Autumn session

<b>300672.2</b>	Mathematics 1A
<b>300811.1</b>	Scientific Literacy
<b>200025.2</b>	Discrete Mathematics

#### Choose one of

<b>300802.1</b>	Biodiversity
<b>300800.1</b>	Essential Chemistry 1
<b>300828.1</b>	Physics 1
<b>300822.1</b>	Introduction to Earth Science

#### Spring session

Any IT unit except 300134 Introduction to Information Technology

<b>300673.2</b>	Mathematics 1B
<b>200263.4</b>	Biometry

And one elective

### Year 2

#### Autumn session

<b>300937.1</b>	Advanced Science Project A
<b>200027.2</b>	Linear Algebra
<b>200028.3</b>	Advanced Calculus
<b>300580.2</b>	Programming Fundamentals

#### Spring session

<b>300938.1</b>	Advanced Science Project B
<b>200030.3</b>	Differential Equations
<b>200033.4</b>	Applied Statistics

Choose one of the following

<b>300816.1</b>	Cell Biology
<b>300803.1</b>	Essential Chemistry 2
<b>300829.1</b>	Physics 2
<b>300809.1</b>	Introductory Geochemistry

### Year 3

#### Autumn session

<b>300910.1</b>	Advanced Science Project C
<b>200193.2</b>	Abstract Algebra
<b>200037.4</b>	Regression Analysis & Experimental Design
<b>200023.3</b>	Analysis

#### Spring session

<b>300924.1</b>	Science Research Project
<b>200038.3</b>	Time Series and Forecasting
<b>200022.3</b>	Mathematical Modelling

And one elective

## Key Program - Zoology

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### KT3096.1

A Bachelor of Science (Zoology) recognises the increased demand for scientific knowledge of how to conserve, protect and care for animals, including native wildlife, and companion and production animals. It will enable you to develop an in-depth scientific understanding of how animals function and interact with their environment; from their ecology and evolution; to physiology and biochemistry of tissues and major organs systems, as well as the structure and function of biomolecules and cells. The key learning and research areas embodied in this degree are ecology, evolution, physiology, growth, reproduction, genetics, and conservation biology. On-campus animal facilities include those for reptiles, small marsupials, small rodents, horses, sheep and cattle, as well as over 1,000ha of native, rural and aquatic habitats.

## Unit Set Structure

Students completing the Bachelor of Science (Advanced Science) (Zoology) will complete the following course structure.

**Note: At least 60 credit points must be at Level 3 or above**

### Year 1

#### Autumn session

<b>300802.1</b>	Biodiversity
<b>300811.1</b>	Scientific Literacy
<b>300800.1</b>	Essential Chemistry 1
<b>300813.1</b>	Wildlife Studies

#### Spring session

<b>300816.1</b>	Cell Biology
<b>300803.1</b>	Essential Chemistry 2
<b>300801.1</b>	Animal Science
<b>300672.2</b>	Mathematics 1A

### Year 2

#### Autumn session

<b>300834.1</b>	Animal Health and Welfare
<b>300936.1</b>	Functional Proteins and Genes
<b>200263.4</b>	Biometry
<b>300937.1</b>	Advanced Science Project A

#### Spring session

<b>300861.1</b>	Vertebrate Biodiversity
<b>300838.1</b>	Comparative Physiology
<b>300839.1</b>	Ecology
<b>300938.1</b>	Advanced Science Project B

### Year 3

#### Autumn session

<b>300910.1</b>	Advanced Science Project C
<b>300878.1</b>	Animal Behaviour
<b>300851.1</b>	Advanced Physiology

And one elective

#### Spring session

<b>300855.1</b>	Conservation Biology
<b>300909.1</b>	Biological Adaptation to Climate Change
<b>300918.1</b>	Invertebrate Biology
<b>300924.1</b>	Science Research Project

### Key Program - Animal Science

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#### KT3097.1

#### Unit Set Structure

Students completing the Bachelor of Natural Science (Advanced) (Animal Science) will complete the following course structure.

#### Year 1

##### Autumn session

<b>300802.1</b>	Biodiversity
<b>300811.1</b>	Scientific Literacy
<b>300807.1</b>	Human Animal Interactions
<b>300813.1</b>	Wildlife Studies

##### Spring session

<b>300810.1</b>	Resource Sustainability
<b>300801.1</b>	Animal Science

Choose one of

<b>300672.2</b>	Mathematics 1A
<b>200263.4</b>	Biometry

And one elective

#### Year 2

##### Autumn session

<b>300931.1</b>	Integrated Science
<b>300834.1</b>	Animal Health and Welfare
<b>300853.1</b>	Animal Nutrition and Feeding
<b>300937.1</b>	Advanced Science Project A

##### Spring session

<b>300932.1</b>	Natural Science Research Methods
<b>300835.1</b>	Animal Reproduction
<b>300938.1</b>	Advanced Science Project B

Choose one of

<b>300836.1</b>	Botany
<b>300838.1</b>	Comparative Physiology

#### Year 3

##### Autumn session

<b>300913.1</b>	Field Project 1
<b>300878.1</b>	Animal Behaviour
<b>300854.1</b>	Animal Production
<b>300910.1</b>	Advanced Science Project C

#### Spring session

<b>300914.1</b>	Field Project 2
<b>300861.1</b>	Vertebrate Biodiversity

And two electives

### Key Program - Environmental Management

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#### KT3098.1

#### Unit Set Structure

Students completing the Bachelor of Natural Science (Advanced) (Environmental Management) will complete the following course structure.

#### Year 1

##### Autumn session

<b>300802.1</b>	Biodiversity
<b>300811.1</b>	Scientific Literacy
<b>300813.1</b>	Wildlife Studies
<b>300824.1</b>	Management of Aquatic Environments

##### Spring session

<b>300810.1</b>	Resource Sustainability
<b>300814.1</b>	Water Quality Assessment and Management
<b>300812.1</b>	Understanding Landscape

Choose one of

<b>300672.2</b>	Mathematics 1A
<b>200263.4</b>	Biometry

#### Year 2

##### Autumn session

<b>300931.1</b>	Integrated Science
<b>101878.1</b>	Indigenous Landscapes
<b>300840.1</b>	Environmental Planning and Climate Change
<b>300937.1</b>	Advanced Science Project A

##### Spring session

<b>300932.1</b>	Natural Science Research Methods
<b>300875.1</b>	Landuse and the Environment
<b>300841.1</b>	Environmental Regulation and Policy
<b>300938.1</b>	Advanced Science Project B

#### Year 3

##### Autumn session

<b>300913.1</b>	Field Project 1
<b>300858.1</b>	Environmental Risk Management
<b>300910.1</b>	Advanced Science Project C

And one elective

**Spring session**

<b>300914.1</b>	Field Project 2
<b>300860.1</b>	Urban Environment
<b>300870.1</b>	Water in the Landscape

And one elective

**Key Program - Sustainable Agriculture and Food Security****KT3099.1****Unit Set Structure**

Students completing the Bachelor of Natural Science (Advanced) (Sustainable Agriculture and Food Security) will complete the following course structure.

**Year 1****Autumn session**

<b>300802.1</b>	Biodiversity
<b>300811.1</b>	Scientific Literacy
<b>300804.1</b>	Feeding the Planet
<b>300808.1</b>	Introductory Chemistry

**Spring session**

<b>300810.1</b>	Resource Sustainability
<b>300815.1</b>	Crop Production
<b>300805.1</b>	Food Science 1

Choose one of

<b>300672.2</b>	Mathematics 1A
<b>200263.4</b>	Biometry

**Year 2****Autumn session**

<b>300931.1</b>	Integrated Science
<b>300863.1</b>	Agronomy
<b>300937.1</b>	Advanced Science Project A

Choose one of

<b>300853.1</b>	Animal Nutrition and Feeding
<b>300865.1</b>	Plant Physiology

**Spring session**

<b>300932.1</b>	Natural Science Research Methods
<b>300823.1</b>	Soils
<b>300875.1</b>	Landuse and the Environment
<b>300938.1</b>	Advanced Science Project B

**Year 3****Autumn session**

<b>300913.1</b>	Field Project 1
<b>300869.1</b>	Postharvest
<b>300921.1</b>	Plant Health and Biosecurity
<b>300910.1</b>	Advanced Science Project C

**Spring session**

<b>300914.1</b>	Field Project 2
<b>300870.1</b>	Water in the Landscape
<b>300917.1</b>	Global Nutrition, Food and Community

And one elective

**Key Program - Health Promotion****KT4000.1**

Health Promotion extends beyond raising awareness of healthcare issues to developing and implementing strategies for communities, individuals and policy-makers to improve their health and wellbeing. Health Promotion graduates help communities and individuals to change their behaviour, working with employers, not-for-profit foundations, disability councils, the public health sector, community health centres, youth centres, schools and local government. Health promotion projects are as diverse as injury prevention, skin cancer prevention, HIV/AIDS awareness and community development. The program combines studies of health politics and planning, health promotion practice, injury prevention, public health with a comprehensive foundation of the health sciences to develop the professional competencies important for ethical and safe practice and high quality care and the skills to work in multidisciplinary teams. Evidence-based practice is one of the most important trends in healthcare today and a strong feature of the program. There is room for electives in particular areas of interest opening up a richer experience of university life or a double major in two of the areas of Health Promotion, Health Services Management or Therapeutic Recreation.

**Location**

Campus	Mode
Campbelltown Campus	Internal

**Unit Set Structure**

Qualification for this Key Program requires the successful completion of 240 credit points including the units listed in the recommended sequence below.

**Full-time - Start Year Intake****Year 1****Autumn session**

<b>400870.2</b>	Population Health and Society
<b>300361.3</b>	Introduction to Human Biology
<b>400783.2</b>	Professional Pathways in Health Science
<b>400871.2</b>	Professional Health Competencies

**Spring session**

<b>101614.2</b>	Psychology and Health
<b>400863.2</b>	Foundations of Research and Evidence-Based Practice
<b>400732.2</b>	Communication in Health

And one elective

Recommended elective

**400277.3** Health Services Management

## Year 2

### Autumn session

**400867.2** Approaches to Health Promotion  
**400864.3** Research Methods (Quantitative and Qualitative)  
**400866.3** Culture, Diversity and Health

And one elective

Recommended elective

**400244.2** Introduction to Leisure and Recreation Theory

### Spring session

**400966.2** Health Politics, Policy and Planning  
**400286.3** Injury Prevention  
**400285.2** Public Health

And one elective

## Year 3

### Autumn session

**400275.2** Health Planning Project  
**400784.2** Health Promotion Practice 1

And two electives

### Spring session

**400785.2** Health Promotion Practice 2  
**400249.2** Ethical and Legal Issues in Health Care  
**400786.2** Professional Transition Project

And one elective

## Full-time - Mid Year Intake

### Year 1

#### Spring session

**101614.2** Psychology and Health  
**400863.2** Foundations of Research and Evidence-Based Practice  
**400732.2** Communication in Health

And one elective

Recommended elective

**400277.3** Health Services Management

### Year 2

#### Autumn session

**300361.3** Introduction to Human Biology  
**400783.2** Professional Pathways in Health Science  
**400871.2** Professional Health Competencies

And one elective

### Spring session

**400966.2** Health Politics, Policy and Planning  
**400286.3** Injury Prevention  
**400285.2** Public Health

And one elective

## Year 3

### Autumn session

**400867.2** Approaches to Health Promotion  
**400870.2** Population Health and Society  
**400864.3** Research Methods (Quantitative and Qualitative)  
**400866.3** Culture, Diversity and Health

### Spring session

**400785.2** Health Promotion Practice 2  
**400249.2** Ethical and Legal Issues in Health Care  
**400786.2** Professional Transition Project

And one elective

## Year 4

### Autumn session

**400275.2** Health Planning Project  
**400784.2** Health Promotion Practice 1

And two electives

## Sub-major elective spaces

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

## Key Program - Health Services Management

### KT4001.1

Health Services Management plays a vital role in society, in ensuring that public investment in health is well spent, and that private healthcare businesses deliver effective, efficient services. It puts management studies in the distinctive context of the health sector to integrate clinical understanding, management skills and knowledge of the health care system and policy development. Health Services Management graduates are in demand to work in quality improvement, financial management and occupational health and safety. Two areas of growth are in mental health services and the aged care sector. Graduates will be skilled in managing and responding to rapid changes within the health care system and in areas that deal with policy initiative, development and evaluation. The program combines studies of managing people, resources and finances with a comprehensive foundation of the health sciences to develop the professional

competencies important for ethical and safe practice and high quality care and the skills to work in multidisciplinary teams. Evidence-based practice is one of the most important trends in healthcare today and a strong feature of the program. There is room for electives in particular areas of interest opening up a richer experience of university life or a double major in two of the areas of Health Promotion, Health Services Management or Therapeutic Recreation.

## Location

Campus	Mode
Campbelltown Campus	Internal

## Unit Set Structure

### Professional Accreditation

The Bachelor of Health Science (Health Service Management) has Professional Accreditation with the Australasian College of Health Service Management.

Qualification for this Key Program requires the successful completion of 240 credit points including the units listed in the recommended sequence below.

### Full-time - Start Year Intake

#### Year 1

##### Autumn session

<b>400870.2</b>	Population Health and Society
<b>300361.3</b>	Introduction to Human Biology
<b>400783.2</b>	Professional Pathways in Health Science
<b>400871.2</b>	Professional Health Competencies

##### Spring session

<b>101614.2</b>	Psychology and Health
<b>400277.3</b>	Health Services Management
<b>400863.2</b>	Foundations of Research and Evidence-Based Practice
<b>400732.2</b>	Communication in Health

#### Year 2

##### Autumn session

<b>400867.2</b>	Approaches to Health Promotion
<b>400864.3</b>	Research Methods (Quantitative and Qualitative)
<b>400866.3</b>	Culture, Diversity and Health

And one elective

Recommended elective

<b>400244.2</b>	Introduction to Leisure and Recreation Theory
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##### Spring session

<b>400966.2</b>	Health Politics, Policy and Planning
<b>400788.2</b>	Health Services Workforce Management

And two electives

#### Year 3

##### Autumn session

<b>400275.2</b>	Health Planning Project
<b>400787.2</b>	Health Services Management Practice

And two electives

##### Spring session

<b>400279.3</b>	Health Services Financial Management
<b>400249.2</b>	Ethical and Legal Issues in Health Care
<b>400786.2</b>	Professional Transition Project

And one elective

### Full-time - Mid Year Intake

#### Year 1

##### Spring session

<b>101614.2</b>	Psychology and Health
<b>400277.3</b>	Health Services Management
<b>400863.2</b>	Foundations of Research and Evidence-Based Practice
<b>400732.2</b>	Communication in Health

#### Year 2

##### Autumn session

<b>400870.2</b>	Population Health and Society
<b>300361.3</b>	Introduction to Human Biology
<b>400783.2</b>	Professional Pathways in Health Science
<b>400871.2</b>	Professional Health Competencies

##### Spring session

<b>400966.2</b>	Health Politics, Policy and Planning
<b>400788.2</b>	Health Services Workforce Management

And two electives

#### Year 3

##### Autumn session

<b>400867.2</b>	Approaches to Health Promotion
<b>400864.3</b>	Research Methods (Quantitative and Qualitative)
<b>400866.3</b>	Culture, Diversity and Health

And one elective

Recommended elective

<b>400244.2</b>	Introduction to Leisure and Recreation Theory
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##### Spring session

<b>400279.3</b>	Health Services Financial Management
<b>400249.2</b>	Ethical and Legal Issues in Health Care
<b>400786.2</b>	Professional Transition Project

And one elective

**Year 4****Autumn session**

- 400275.2** Health Planning Project  
**400787.2** Health Services Management Practice

And two electives

**Sub-major elective spaces**

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

**Key Program - Therapeutic Recreation****KT4002.1**

Therapeutic Recreation is the link between leisure and health improvement, using recreation as a way to improve quality of life. Therapeutic Recreation graduates work with patients to use leisure activities to improve health and life quality, for example in rehabilitation centres and psychiatric units, special schools, day care centres, aged care facilities, or in local government or community settings. The program combines theory and practice in learning, education programming, aged care, disability and mental health with a comprehensive foundation of the health sciences to develop the professional competencies important for ethical and safe practice and high quality care and the skills to work in multidisciplinary teams. Evidence-based practice is one of the most important trends in healthcare today and a strong feature of the program. There is room for electives in particular areas of interest opening up a richer experience of university life or a double major in two of the areas of Health Promotion, Health Services Management or Therapeutic Recreation.

**Location**

Campus	Mode
Campbelltown Campus	Internal

**Unit Set Structure****Professional Accreditation**

Accreditation from the Diversional Therapy Association of Australia (for Therapeutic Recreation Key Program) has been granted.

Qualification for this Key Program requires the successful completion of 240 credit points including the units listed in the recommended sequence below.

**Recommended Sequence****Full-time - Start Year Intake****Year 1****Autumn session**

- 400870.2** Population Health and Society  
**300361.3** Introduction to Human Biology  
**400783.2** Professional Pathways in Health Science  
**400871.2** Professional Health Competencies

**Spring session**

- 101614.2** Psychology and Health  
**400863.2** Foundations of Research and Evidence-Based Practice  
**400732.2** Communication in Health

And one elective

Recommended elective

- 400277.3** Health Services Management

**Year 2****Autumn session**

- 400867.2** Approaches to Health Promotion  
**400244.2** Introduction to Leisure and Recreation Theory  
**400864.3** Research Methods (Quantitative and Qualitative)  
**400866.3** Culture, Diversity and Health

**Spring session**

- 400968.2** Professional Practice in Aged Care and Disability  
**400246.3** Workplace Learning 1 (Therapeutic Recreation)

And two electives

**Year 3****Autumn session**

- 400789.3** Leisure Education Programming and Mental Health  
**400252.2** Workplace Learning 2 (Community Placement)

And two electives

**Spring session**

- 400786.2** Professional Transition Project  
**400249.2** Ethical and Legal Issues in Health Care  
**400254.2** Therapeutic Recreation Professional Project

And one elective

**Full-time - Mid Year Intake****Year 1****Spring session**

- 101614.2** Psychology and Health  
**400863.2** Foundations of Research and Evidence-Based Practice  
**400732.2** Communication in Health

And one elective

Recommended elective

- 400277.3** Health Services Management

**Year 2****Autumn session**

- 300361.3** Introduction to Human Biology  
**400244.2** Introduction to Leisure and Recreation Theory  
**400783.2** Professional Pathways in Health Science  
**400871.2** Professional Health Competencies

**Spring session**

- 400968.2** Professional Practice in Aged Care and Disability  
**400246.3** Workplace Learning 1 (Therapeutic Recreation)

And two electives

**Year 3****Autumn session**

- 400867.2** Approaches to Health Promotion  
**400870.2** Population Health and Society  
**400864.3** Research Methods (Quantitative and Qualitative)  
**400866.3** Culture, Diversity and Health

**Spring session**

- 400786.2** Professional Transition Project  
**400249.2** Ethical and Legal Issues in Health Care  
**400254.2** Therapeutic Recreation Professional Project

And one elective

**Year 4****Autumn session**

- 400789.3** Leisure Education Programming and Mental Health  
**400252.2** Workplace Learning 2 (Community Placement)

And two electives

**Sub-major elective spaces**

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-

majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

**Major - Religion, Anthropology and Philosophy****M1024.1**

This multidisciplinary major pursues critical and rational analysis of questions about individuals and societies; about human knowledge, culture and existence. It inquires into issues about human nature; the scope and limits of knowledge and belief; God and ethics; conflict and violence; ritual and myth; and religion, politics and culture. The major provides students with rigorous training in analytic and creative thinking, intellectual independence and cultural and ethical awareness.

**Location**

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal

**Unit Set Structure**

Students must complete the compulsory Level 1 unit

- 101686.2** Anthropology and Philosophy Look at Religion

and seven units from the following pools with no less than three units at Level 3

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

**Level 1 Unit Pool**

- 101462.2** Understanding Islam and Muslim Societies

**Level 2 Unit Pool**

- 101882.1** A History of Modern Global Buddhism  
**100850.2** Buddhism in the Contemporary World  
**100852.2** Classics of Modern Philosophy  
**101856.1** Film and Philosophy  
**101464.3** Great Texts of Islam: Qur'an and Hadith  
**101843.2** Philosophy and Environment  
**101881.1** Philosophy and the Good Life  
**101867.1** The Ethical Life  
**101294.3** The Western Philosophical Tradition

**Level 3 Unit Pool**

- 101295.2** Aesthetics  
**101688.2** Anthropology of Religion  
**400087.5** Applied Critical Methods  
**100863.3** Ethical Cultures  
**100998.4** Evolutionary Thinking  
**100961.4** Humanities Internship  
**101463.4** Islam in the Modern World



101467.2	Islam in Southeast Asia
101465.2	Islamic Law in a Changing World
101724.2	Literary Animals
100875.4	Literature and Philosophy
100275.4	Philosophies of Love and Death
101761.2	Philosophy and the Visual
100879.2	Philosophy Today
101665.3	Politics and Religion
101003.2	Religion and Culture
101359.5	Sociology of Religion
100969.2	Theories of Conflict and Violence
101880.1	The Space of Literature
101798.2	Understanding Freedom
101010.3	What is the Human?
101471.2	Women in Arabic and Islamic Literature

## Major - Media and Visual Cultures

### M1025.1

The rapid flow of visual images with which we communicate today – on the internet, by web and moblogs – is a contemporary manifestation of the importance of visual cultures in everyday life. The Media and Visual Cultures major area equips students with multidisciplinary knowledge and skills in critical art history and theory, digital media, film and television studies, philosophy, and cultural studies. It aims to create career ready graduates with the skills necessary to interpret the production and dissemination of visual images and their meanings in a variety of media as well as cultural and institutional contexts.

### Location

Campus	Mode
Bankstown Campus	Internal
Penrith Campus	Internal

### Unit Set Structure

Students must complete the compulsory Level 1 unit

101734.2 Media and Visual Cultures: Case Studies

and the Level 3 unit

101295.2 Aesthetics

Students must also complete six of the Level 2/3 units from the following pools with no less than two at Level 3:

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

### Level 2 Unit Pool

100245.2	Asian Cinema
101248.3	Australian Art 1
101626.3	Children's Literature: Image and Text
101250.3	Digital Futures
101856.1	Film and Philosophy
10157.2	History and Theory of the Avant-Garde
100964.2	Introduction to Film Studies
101254.3	The Animated Image: Histories and Theories
10371.3	The Art Museum - from the Prince to the Public

100890.2	The Art of Landscape
101795.2	The Musical
10158.2	Writings on Art

### Level 3 Unit Pool

400087.5	Applied Critical Methods
100959.2	Australian Art II
100989.2	Cinema and Realism
100990.2	Cinema, Culture, Memory
100256.4	Film and Affect
100866.3	Film and Drama
100961.4	Humanities Internship
101468.2	Islam, Media and Conflict
101732.2	Media, The Everyday and Uneven Modernities
101800.2	Media, Violence, Protest, Terror
101001.3	Modernity and Cinema
101761.2	Philosophy and the Visual
101253.3	Public Memory and Commemoration
101006.2	Social Semiotics
101738.2	The Art Game: Fraud, Forgery, Theft and Perfidy
101266.2	The Art of Modern Life
101717.2	The Italian Renaissance Unpacked
101668.2	World Cinema

## Major - Arabic

### M1026.1

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

### Location

Campus	Mode
Bankstown Campus	Internal

### Unit Set Structure

A major in Arabic comprises a sequence of 80 credit points with 60 credit points at Level 2 and 3 (with no less than 30 credit points of these at Level 3), however students commencing at beginner's level, that is units 101 and 102, and who follow the recommended course structure, are only required to complete 20 credit points at Level 3.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or

- take a Level 2 unit after passing a Level 3 unit in the same language.

**Level 1 unit pool**

<b>100041.2</b>	Arabic 101
<b>100042.2</b>	Arabic 102

**Level 2 unit pool**

<b>101699.2</b>	Language and Communication Skills 2A: Arabic
<b>101704.2</b>	Language and Communication Skills 2B: Arabic

**Level 3 unit pool**

<b>100048.2</b>	Arabic 302 - Arabic Advanced Language and Grammar
<b>100049.2</b>	Arabic 303: Advanced Writing Skills
<b>100050.2</b>	Arabic 304: Arabic Advanced Speaking
<b>100052.2</b>	Arabic 306: Arabic Novel and Short Story
<b>100054.2</b>	Arabic 308: Language Past and Present
<b>101709.2</b>	Languages and Grammatical Concepts 3A: Arabic
<b>101792.2</b>	Texts in Contemporary Arab Society and Culture
<b>101454.2</b>	Intercultural Pragmatics
<b>101668.2</b>	World Cinema
<b>400087.5</b>	Applied Critical Methods
<b>100961.4</b>	Humanities Internship

**Major - Chinese****M1027.1**

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

**Location**

Campus	Mode
Bankstown Campus	Internal

**Unit Set Structure**

A major in Chinese comprises a sequence of 80 credit points with 60 credit points at Level 2 and 3 (with no less than 30 credit points of these at Level 3), however students commencing at beginner's level, that is units 101 and 102, and who follow the recommended course structure, are only required to complete 20 credit points at Level 3.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or

- take a Level 2 unit after passing a Level 3 unit in the same language.

**Level 1 unit pool**

<b>100056.2</b>	Chinese 101
<b>100057.2</b>	Chinese 102

**Level 2 unit pool**

<b>101700.2</b>	Language and Communication Skills 2A: Chinese
<b>101705.2</b>	Language and Communication Skills 2B: Chinese

**Level 3 unit pool**

<b>100063.2</b>	Chinese 302
<b>100064.2</b>	Chinese 303: Twentieth-Century Chinese Literature
<b>100065.2</b>	Chinese 304: Chinese Classical Literature
<b>100066.2</b>	Chinese 305: Chinese Cinema
<b>100067.2</b>	Chinese 307: The Cultural Context of China
<b>101710.2</b>	Languages and Grammatical Concepts 3A: Chinese
<b>101454.2</b>	Intercultural Pragmatics
<b>400087.5</b>	Applied Critical Methods
<b>100961.4</b>	Humanities Internship
<b>101668.2</b>	World Cinema

**Major - Japanese****M1028.1**

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

**Location**

Campus	Mode
Bankstown Campus	Internal

**Unit Set Structure**

A major in Japanese comprises a sequence of 80 credit points with 60 credit points at Level 2 and 3 (with no less than 30 credit points of these at Level 3), however students commencing at beginner's level, that is units 101 and 102, and who follow the recommended course structure, are only required to complete 20 credit points at Level 3.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or

- take a Level 2 unit after passing a Level 3 unit in the same language.

#### Level 1 unit pool

**100085.2** Japanese 101  
**100086.2** Japanese 102

#### Level 2 unit pool

**101702.2** Language and Communication Skills 2A: Japanese  
**101707.2** Language and Communication Skills 2B: Japanese

#### Level 3 unit pool

**100092.2** Japanese 302  
**100093.2** Japanese 303: Contemporary Culture and Society  
**100094.1** Japanese 304: Discourse in Japanese  
**100096.2** Japanese 306: Japanese for Business  
**100098.1** Japanese 308: Japanese Textual Studies  
**101712.2** Languages and Grammatical Concepts 3A: Japanese  
**101454.2** Intercultural Pragmatics  
**101668.2** World Cinema  
**101669.2** World Literature in Translation  
**400087.5** Applied Critical Methods  
**100961.4** Humanities Internship

### Major - Italian

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#### **M1029.1**

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

#### Location

Campus	Mode
Bankstown Campus	Internal

#### Unit Set Structure

A major in Italian comprises a sequence of 80 credit points with 60 credit points at Level 2 and 3 (with no less than 30 credit points of these at Level 3), however students commencing at beginner's level, that is units 101 and 102, and who follow the recommended course structure, are only required to complete 20 credit points at Level 3.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or

- take a Level 2 unit after passing a Level 3 unit in the same language.

#### Level 1 unit pool

**100130.2** Italian 101  
**100131.2** Italian 102

#### Level 2 unit pool

**101701.2** Language and Communication Skills 2A: Italian  
**101706.2** Language and Communication Skills 2B: Italian

#### Level 3 unit pool

**100138.2** Italian 303: Contemporary Italy in European and International Contexts  
**100140.1** Italian 305: Modern Literature  
**100141.2** Italian 306: Classical Literature  
**100143.2** Italian 308: Italian Cinema  
**101711.2** Languages and Grammatical Concepts 3A: Italian  
**101454.2** Intercultural Pragmatics  
**101668.2** World Cinema  
**101669.2** World Literature in Translation  
**400087.5** Applied Critical Methods  
**100961.4** Humanities Internship

### Major - Spanish

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#### **M1030.1**

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

#### Location

Campus	Mode
Bankstown Campus	Internal

#### Unit Set Structure

A major in Spanish comprises a sequence of 80 credit points with 60 credit points at Level 2 and 3 (with no less than 30 credit points of these at Level 3), however students commencing at beginner's level, that is units 101 and 102, and who follow the recommended course structure, are only required to complete 20 credit points at Level 3.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or

- take a Level 2 unit after passing a Level 3 unit in the same language.

#### Level 1 unit pool

- 100145.2** Spanish 101  
**100146.2** Spanish 102

#### Level 2 unit pool

- 101703.2** Language and Communication Skills 2A: Spanish  
**101708.2** Language and Communication Skills 2B: Spanish

#### Level 3 unit pool

- 100153.2** Spanish 303: Advanced Writing Skills  
**100154.2** Spanish 304: Advanced Speaking Skills  
**100155.2** Spanish 305: Contemporary Literature  
**100156.2** Spanish 306: Contemporary History  
**100157.2** Spanish 307: Classical Literature  
**100158.2** Spanish 308: Spanish Sociolinguistics  
**101454.2** Intercultural Pragmatics  
**101669.2** World Literature in Translation  
**101668.2** World Cinema  
**101713.2** Languages and Grammatical Concepts 3A: Spanish  
**400087.5** Applied Critical Methods  
**100961.4** Humanities Internship  
**101791.2** Short Fiction in the Americas

### Major - Global Studies

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#### **M1031.1**

What does it mean to live in an increasingly globalised world? Global Studies offers students the opportunity to acquire key competencies in cross-cultural communication and global issues to act as socially aware global citizens in international settings. Global Studies addresses issues such as consumer and popular culture, global histories of food and technology, the interconnection of race, identity and transnational migration and intercultural pragmatics. Students have the opportunity to complete a semester of study abroad.

#### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal

#### Unit Set Structure

Students must complete the Level 1 unit

- 101673.2** The First Globalisation

And seven units from the following pools with no less than three Level 3 units in order to complete the major.

**Note: Not all units will be offered each year. Units will be offered on a rotational basis.**

#### Level 1 unit pool

- 101737.2** World Politics: An Introduction

#### Level 2 unit pool

- 101857.1** Doing Business in China  
**101543.2** India: Global Contexts  
**100871.3** International Texts and Contexts  
**101797.2** Political Terror

#### Level 3 unit pool

- 400087.5** Applied Critical Methods  
**101870.1** Climate Change and Culture  
**100992.3** Communication: Power and Practice  
**100994.2** Consumer Culture  
**100858.3** Culture and Globalisation  
**101674.2** Global Histories of Food  
**101735.2** Global Politics  
**101736.2** Governing the Globe  
**100961.4** Humanities Internship  
**101454.2** Intercultural Pragmatics  
**101468.2** Islam, Media and Conflict  
**101733.2** Looking at Global Politics Through Film  
**101732.2** Media, The Everyday and Uneven Modernities  
**101666.2** Race, Identity and Globalisation  
**101717.2** The Italian Renaissance Unpacked  
**101848.1** Transnationalism and Migration  
**101831.2** Transport and the Making of the Modern World  
**101668.2** World Cinema  
**101669.2** World Literature in Translation  
**101830.2** WWII in Asia and the Pacific

### Major - Asian Studies and International Relations

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#### **M1032.1**

This major has been designed to meet the needs of Australian government, business and society to engage the states and peoples of Asia at all levels in pursuit of national interests and as part of the globalisation process. It provides students with the opportunity to study modern and contemporary Asia, the rich and diverse histories, politics, cultures and languages of Asian countries and the international issues affecting Australia's interests and role in the region and in the world at large. The major area includes a range of units concerned with the United States, Europe and Australia as well as with Asia itself, and units in international relations. It seeks to produce graduates with a broad, liberal education with the skills to mediate between Australia and the world in general and Asia in particular through political, economic, commercial, cultural, diplomatic and strategic links. Students are encouraged to undertake a submajor in an Asian language in conjunction with the major. Employment opportunities may be found in the State and Commonwealth public service, overseas organisations,

trade and tourist organisations, business and industry, education and research.

### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal

### Unit Set Structure

Students must complete the compulsory Level 1 unit

**101442.2** Asia in the World

and seven units from the following pools with no less than three Level 3 units in order to pass the major:

#### Level 1 Unit Pool

**101737.2** World Politics: An Introduction

#### Level 2 Unit Pool

- 101882.1** A History of Modern Global Buddhism
- 100245.2** Asian Cinema
- 100847.2** Asia and the West: The Imperial Encounter
- 100850.2** Buddhism in the Contemporary World
- 100855.2** Contemporary Japan: Culture and Society
- 101857.1** Doing Business in China
- 100861.3** Empire: European Colonial Rule and its Subjects, 1750-1920
- 101543.2** India: Global Contexts
- 100872.2** International Politics of North Asia
- 100904.2** Politics and Business in Asia
- 100277.3** Politics of Australia and Asia Relations
- 63111.3** Special Topics in Asian and International Studies
- 101404.3** The History of Modern Indonesia
- 101871.1** War

#### Level 3 Unit Pool

- 100985.2** American Foreign Policy Since 1945
- 400087.5** Applied Critical Methods
- 101249.2** Culture and Thought in Twentieth-Century China
- 100903.2** Democracy in Asia
- 100507.4** History of Modern China to 1949
- 100961.4** Humanities Internship
- 100962.2** International Politics of the Southeast Asian Region
- 101467.2** Islam in Southeast Asia
- 101733.2** Looking at Global Politics Through Film
- 100271.3** Modern Japanese History
- 100278.2** Politics of Post-War Japan
- 63178.2** Social and Political Developments in Contemporary China
- 101667.3** The External Relations of the European Union
- 101782.2** The History and Politics of Contemporary Central Asia
- 101783.2** The International Relations of the Middle East Since 1945
- 101405.2** The Politics of Contemporary Indonesia
- 101866.1** United States Government and Politics
- 101375.3** War and Peace

- 100294.3** Warlords, Artists and Emperors: Power and Authority in Premodern Japan
- 100971.2** Which New World Order?
- 101830.2** WWII in Asia and the Pacific

### Major - History and Political Thought

#### M1033.1

Since the revival of humanist studies in Renaissance Europe in the 15th century, universities have placed history and political thought at the heart of studies in the humanities. Through study of the political thought and social, political and cultural history of Australian, Asian and European societies, students gain knowledge and critical skills relevant to a variety of careers in education, government and non-governmental organizations. Study of the writings of political thinkers from ancient Greece and Rome, such as Plato and Cicero, and the early modern period, such as Hobbes and Machiavelli, to noted 19th century figures, such as Hegel and Marx, prepare students to engage with contemporary issues of governance, such as sovereignty, power, opportunity, property, civic freedom and social justice.

#### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

#### Unit Set Structure

Students would be eligible for this major having successfully completed 80 credit points with no less than three Level 3 units.

Students must complete the compulsory Level 1 unit

**100873.3** Inventing Modernity

**Note: Not all units will be offered each year. Units will be offered on a rotational basis.**

#### Level 1 unit pool

- 100848.2** Australian Politics
- 100868.2** Foundations of Modern Australia
- 101737.2** World Politics: An Introduction

#### Level 2 unit pool

- 101882.1** A History of Modern Global Buddhism
- 100244.2** Ancient Western Culture: Periclean Athens
- 100861.3** Empire: European Colonial Rule and its Subjects, 1750-1920
- 100254.3** Exploring Local History
- 100869.2** Foundations of Modern Europe 1500-1800
- 101543.2** India: Global Contexts
- 100001.3** Keeping the Past
- 101843.2** Philosophy and Environment
- 101797.2** Political Terror
- 100904.2** Politics and Business in Asia

100277.3	Politics of Australia and Asia Relations
100882.2	Politics of Sex and Gender
63111.3	Special Topics in Asian and International Studies
101867.1	The Ethical Life
101404.3	The History of Modern Indonesia
101294.3	The Western Philosophical Tradition
101871.1	War
100293.3	War and Society: 20th Century Australia

**Level 3 unit pool**

400087.5	Applied Critical Methods
100966.3	American History, 1898-1945
100986.2	Australian History 1860-1920
100987.3	Australian History Since 1920
101685.3	Australian Indigenous History
101872.1	Australian Indigenous History from Federation to Reconciliation
100991.2	Citizenship Ancient and Modern
100852.2	Classics of Modern Philosophy
101799.2	Convicts and Settlers - Australian History 1788 - 1840
101249.2	Culture and Thought in Twentieth-Century China
100903.2	Democracy in Asia
100863.3	Ethical Cultures
100864.2	Europe in the Twentieth Century
101844.2	Feminist Theories
101674.2	Global Histories of Food
101735.2	Global Politics
100507.4	History of Modern China to 1949
100961.4	Humanities Internship
100963.3	Interpreting Australia: Australian Historians and Historiography
101801.2	Interpreting Fascism
101823.2	Lay Participation in Justice Processes
100875.4	Literature and Philosophy
101733.2	Looking at Global Politics Through Film
100271.3	Modern Japanese History
101665.3	Politics and Religion
100278.2	Politics of Post-War Japan
100908.2	Race Politics
63178.2	Social and Political Developments in Contemporary China
101667.3	The External Relations of the European Union
101782.2	The History and Politics of Contemporary Central Asia
101783.2	The International Relations of the Middle East Since 1945
101405.2	The Politics of Contemporary Indonesia
100969.2	Theories of Conflict and Violence
101831.2	Transport and the Making of the Modern World
101798.2	Understanding Freedom
101731.2	Understanding Power
101866.1	United States Government and Politics
101375.3	War and Peace
100294.3	Warlords, Artists and Emperors: Power and Authority in Premodern Japan
100971.2	Which New World Order?
101830.2	WWII in Asia and the Pacific

**Major - Cultural and Social Analysis****M1034.1**

Cultural and Social Analysis is an interdisciplinary major developing knowledge, research skills and analytic capacities relevant to understanding and interpreting landscapes of cultural diversity and social difference in our contemporary world, both in terms of the broad contours, as well as specific micro-social environments. This major provides grounding in contemporary debates and methodologies in cultural studies and social theory, and draws on various disciplines including history, sociology, communications, and linguistics. Topics include popular culture, everyday urban life, cultural and social impacts of scientific theories and new technologies, multiculturalism, and contemporary spirituality. Study in this area is relevant for work involving commentary and analysis of contemporary social issues and cultural practices (e.g. journalism, teaching, activism) and fields concerned with designing, delivering and evaluating cultural and artistic productions, and education, communication, welfare or health services, in culturally diverse communities.

**Location**

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

**Unit Set Structure**

Students must complete the compulsory Level 1 unit

**100897.2** Everyday Life

and seven units from the following pools with no less than three Level 3 units in order to complete the major.

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

**Level 2 Unit Pool**

101409.2	Aboriginal Cultural Texts
100854.3	Contemporary Popular Cultures
100871.3	International Texts and Contexts
101251.2	Introduction to Psychoanalysis
100273.3	New Ethnicities, Old Racisms
100882.2	Politics of Sex and Gender
100281.3	Sexual Culture/s
100884.2	Social Inequalities
100886.2	Special Topics in Cultural and Social Analysis
100889.2	Technocultures
101867.1	The Ethical Life
100291.4	Urban Life/Urban Culture
100298.2	Youth Cultures and Moral Panics
101879.1	Women with Muslim Identity

**Level 3 Unit Pool**

400087.5	Applied Critical Methods
101265.2	Children's Culture

100990.2	Cinema, Culture, Memory
101870.1	Climate Change and Culture
100992.3	Communication: Power and Practice
100858.3	Culture and Globalisation
100996.3	Death and Culture
100860.3	Emotions, Culture and Community
100998.4	Evolutionary Thinking
101844.2	Feminist Theories
101716.3	Healing and Culture
100961.4	Humanities Internship
101468.2	Islam, Media and Conflict
101739.3	Literature and Trauma
101732.2	Media, The Everyday and Uneven Modernities
101800.2	Media, Violence, Protest, Terror
100877.3	Multicultural Studies
101252.2	Psychoanalytic Criticism
101253.3	Public Memory and Commemoration
101003.2	Religion and Culture
101005.4	Representing Crime
101006.2	Social Semiotics
101832.2	Talking Normal: Sociolinguistics and Modern Literature
101008.2	Technologies of Racism
101009.3	The Body in Culture
101848.1	Transnationalism and Migration
101798.2	Understanding Freedom
101731.2	Understanding Power
101010.3	What is the Human?

## Major - English, Text and Writing

### M1035.1

The English, Text and Writing major invites students to explore contemporary approaches to language, literary study and writing, including literary criticism and theory, linguistic analysis, genre and textual study, and creative writing. English, Text and Writing focuses on the imaginative workings of language, and students can study a wide selection of modern and classic literature, as well as the relationships between written texts and other media such as film and information technology. Students also have the opportunity to produce their own creative writing and to edit and publish their work. Career prospects include publishing, editing, teaching, writing and advertising.

### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

### Unit Set Structure

Students must complete 80 credit points with no less than three Level 3 units.

Students must complete the compulsory Level 1 unit

100862.2	English, Text & Writing
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Note: Not all units will be offered each year. Units will be offered on a rotational basis.

### Level 1 unit pool

100641.3	Approaches to Text
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### Level 2 unit pool

101626.3	Children's Literature: Image and Text
100900.3	Comedy and Tragedy
101408.2	Critical Discourse Analysis
101452.2	History of the English Language
100870.2	Hypertext Fictions
100871.3	International Texts and Contexts
100964.2	Introduction to Film Studies
100505.2	Special Topics in English, Text and Writing
101795.2	The Musical
100893.3	The Novel
101455.3	The Structure of English
100896.3	Writing Fiction
101869.1	Studies in Postcolonial Literature
101873.1	The Sound of Language

### Level 3 unit pool

400087.5	Applied Critical Methods
100845.3	American Literature
100849.4	Australian Textual Studies
101242.3	Children's Literature
100856.4	Creative Non-Fiction
100859.3	Creative Writing Project
100256.4	Film and Affect
100866.3	Film and Drama
100961.4	Humanities Internship
101724.2	Literary Animals
100875.4	Literature and Philosophy
101739.3	Literature and Trauma
100874.4	Literature, History and Culture
101033.4	Modernism
101001.3	Modernity and Cinema
101406.2	Queering Text
101650.3	Race in Literature
101005.4	Representing Crime
101791.2	Short Fiction in the Americas
101832.2	Talking Normal: Sociolinguistics and Modern Literature
101453.2	Text and Discourse in English
101471.2	Women in Arabic and Islamic Literature
101668.2	World Cinema
101669.2	World Literature in Translation
101670.3	Writing and Society
100895.4	Writing For Performance
101011.3	Writing Poetry
100582.2	Writing Portfolio
101796.1	19th Century American Literature
101880.1	The Space of Literature

## Major - Islamic Studies

### M1036.1

Students engage in interdisciplinary study essential to an understanding of Islam, past and present. The area of

study balances historical and modern Islamic studies and research methods. One of the keys to Islamic Studies is 'relevance' to contemporary Australian society but relevance can only come from a sound comprehension of past traditions in Islamic scholarship and their socio-historical contexts. Preparation for graduate study is also a key objective of this program, with its focus on developing critical and interdisciplinary research skills through a combination of approaches. Students are encouraged to undertake a sub-major in Arabic to complement the Islamic Studies major.

### Location

Campus	Mode
Bankstown Campus	Internal

### Unit Set Structure

Students must complete 80 credit points as follows

An Islamic Studies major must include the following Level 1 unit

**101462.2** Understanding Islam and Muslim Societies

The remaining seven units must include at least three Level 3 units drawn from the following pools:

#### Level 2 unit pool

**101464.3** Great Texts of Islam: Qur'an and Hadith  
**100273.3** New Ethnicities, Old Racisms

#### Level 3 unit pool

**101688.2** Anthropology of Religion  
**400087.5** Applied Critical Methods  
**101466.2** Ethical Traditions in Islam  
**100961.4** Humanities Internship  
**101822.2** Islam in the West  
**101463.4** Islam in the Modern World  
**101467.2** Islam in Southeast Asia  
**101468.2** Islam, Media and Conflict  
**101465.2** Islamic Law in a Changing World  
**100877.3** Multicultural Studies  
**101359.5** Sociology of Religion  
**101792.2** Texts in Contemporary Arab Society and Culture  
**101783.2** The International Relations of the Middle East Since 1945  
**101471.2** Women in Arabic and Islamic Literature

## Major - Linguistics

### M1037.1

Through study of what language is and how it works, students gain conceptual tools and knowledge relevant to the relationship of language and society as well linguistics-related disciplines, such as Sociolinguistics, Psycholinguistics, Developmental Linguistics, Bilingualism, and other applied linguistics areas. Understanding of the relationship between language learning, communicative competence and cultural practices, both in the Australian context and in a global context, provides a foundation for

many careers including primary and secondary teaching, policy analysis, communication, social and welfare services in culturally diverse communities.

### Location

Campus	Mode
Bankstown Campus	Internal

### Unit Set Structure

Students must complete eight units from the following pools, with no less than three units at Level 3.

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

#### Level 1 unit pool

**100194.2** Introduction to Interpreting  
**100195.2** Introduction to Translation

#### Level 2 unit pool

**101452.2** History of the English Language  
**100928.3** Linguistics  
**101873.1** The Sound of Language  
**101302.2** Translation Technologies

#### Level 3 unit pool

**400087.5** Applied Critical Methods  
**101449.2** Bilingualism and Biculturalism  
**101441.2** English Semantics and Pragmatics  
**101454.2** Intercultural Pragmatics  
**101709.2** Languages and Grammatical Concepts 3A: Arabic  
**101710.2** Languages and Grammatical Concepts 3A: Chinese  
**101711.2** Languages and Grammatical Concepts 3A: Italian  
**101712.2** Languages and Grammatical Concepts 3A: Japanese  
**101713.2** Languages and Grammatical Concepts 3A: Spanish  
**101451.2** Second Language Acquisition  
**101721.2** Second Language Learning and Teaching  
**101450.2** Sociolinguistics  
**100201.2** Special Study in Languages and Linguistics  
**101832.2** Talking Normal: Sociolinguistics and Modern Literature  
**101453.2** Text and Discourse in English

## Major - Indigenous Australian Studies

### M1041.1

What does it mean to live in Indigenous Australia? The Indigenous Australian Studies Major offers students the exciting opportunity to acquire key cultural competencies that will enable them to understand and work more effectively with Indigenous Australians in professions such as the arts, communications, media industries; education; government and non-government; policy; health; sciences; and community services. The Indigenous Australian



Studies Major addresses the cultural, historical, social and economic issues affecting Indigenous and Non-Indigenous Australians and relationships.

### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

### Unit Set Structure

Students must complete 80 credit points as follows  
Students must complete the following level one unit:

**101751.2** Contextualising Indigenous Australia (Day Mode)

Choose seven of the following units including three Level 3 units

#### Level 1 units:

**101762.1** Who do you think you are? (Day Mode)  
**101878.1** Indigenous Landscapes

#### Level 2 units:

**101752.1** Pigments of the Imagination  
**101753.2** Revaluing Indigenous Economics (Day Mode)  
**101754.2** From Corroborees to Curtain Raisers (Day Mode)  
**101755.1** From Ochre to Acrylics to New Technologies

#### Level 3 units:

**101756.1** Bridging the Gap: Re-engaging Indigenous Learners  
**101757.1** The Making of the 'Aborigines'  
**101758.1** Learning through Indigenous Australian Community Service (Day Mode)

or

**101759.1** Rethinking Research with Indigenous Australians: Independent Study Project (Day Mode)

### Major - Psychological Studies

#### **M1050.1**

The Psychological Studies major comprises units in the discipline of psychology that focus on the field of inquiry that uses scientific techniques and methods to understand and explain behaviour and experience. Units in the program are drawn from the following core areas of psychology: brain and behaviour, learning, motivation and emotion, social psychology, lifespan development, perception, and cognitive processes. A Psychological Studies major does not meet APAC requirements for an accredited sequence in Psychology. Students wishing to enrol in an accredited

Psychology sequence need to complete the Psychology key program of 200 credit points.

### Location

Campus	Mode
Bankstown Campus	Internal
Penrith Campus	Internal

### Unit Set Structure

Students must complete the following eight units:

<b>101184.2</b>	Psychology: Human Behaviour
<b>101183.2</b>	Psychology: Behavioural Science
<b>100013.3</b>	Experimental Design and Analysis
<b>101680.3</b>	Perception
<b>101684.3</b>	Brain and Behaviour
<b>101676.2</b>	Human Learning
<b>101677.3</b>	Cognitive Processes
<b>101682.4</b>	Developmental Psychology

### Major - Computer Systems

#### **M3000.1**

This major is only available to students enrolled in the Bachelor of Computing or Bachelor of Information and Communications Technology courses.

### Location

Campus	Mode
Penrith Campus	Internal

### Unit Set Structure

Students must complete 80 credit points as follows

<b>300103.2</b>	Data Structures and Algorithms
<b>300096.5</b>	Computer Organisation
<b>300092.1</b>	Computer Architecture
<b>300167.3</b>	Systems Programming 1
<b>300149.2</b>	Operating Systems
<b>300121.2</b>	Formal Languages and Automata

And choose two of

<b>300128.3</b>	Information Security
<b>300165.3</b>	Systems Administration Programming
<b>300368.2</b>	Intelligent Systems
<b>300093.3</b>	Computer Graphics

### Major - Advanced Programming

#### **M3001.1**

This major is only available to students enrolled in the Bachelor of Computing or Bachelor of Information and Communications Technology courses.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Students must complete 80 credit points as follows

<b>300103.2</b>	Data Structures and Algorithms
<b>300167.3</b>	Systems Programming 1
<b>300404.2</b>	Formal Software Engineering
<b>300168.2</b>	Systems Programming 2
<b>300149.2</b>	Operating Systems
<b>300096.5</b>	Computer Organisation

And choose two of

<b>300130.2</b>	Internet Programming
<b>300115.2</b>	Distributed Systems and Programming
<b>300165.3</b>	Systems Administration Programming

**Major - Information Technology**

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**M3002.1**

This major is available to all students except those enrolled in the Networks or Information Systems Key Programs within the Bachelor of Computing course, and the Bachelor of Information and Communications Technology course.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Students must complete 80 credit points as follows

<b>300580.2</b>	Programming Fundamentals
<b>300585.2</b>	Systems Analysis and Design
<b>300582.2</b>	Technologies for Web Applications
<b>300583.2</b>	Web Systems Development
<b>300565.2</b>	Computer Networking
<b>300095.4</b>	Computer Networks and Internets

And choose one of

<b>300575.2</b>	Networked Systems Design
<b>300166.2</b>	Systems and Network Management

And choose one of

<b>300104.4</b>	Database Design and Development
<b>300570.3</b>	Human-Computer Interaction
<b>300569.2</b>	Computer Security

**Major - Web Systems Development**

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**M3003.1**

This major is available to all students except those enrolled in the Bachelor of Computing, Bachelor of Computer

Science or the Bachelor of Information and Communications Technology courses.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Students must complete the following eight units

<b>300580.2</b>	Programming Fundamentals
<b>300585.2</b>	Systems Analysis and Design
<b>300582.2</b>	Technologies for Web Applications
<b>300104.4</b>	Database Design and Development
<b>300570.3</b>	Human-Computer Interaction
<b>300583.2</b>	Web Systems Development
<b>300111.2</b>	Developing Web Applications with XML
<b>300572.2</b>	Information Systems Deployment and Management

**Major - Health Informatics**

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**M3004.1**

This major is available to all students except those enrolled in the Health Informatics key program within the Bachelor of Computing course.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Students must complete 80 credit points as follows

<b>300566.2</b>	Introduction to Health Informatics
<b>300580.2</b>	Programming Fundamentals
<b>300104.4</b>	Database Design and Development
<b>300582.2</b>	Technologies for Web Applications
<b>300567.3</b>	e-Health
<b>300568.2</b>	Services Computing in Healthcare

And choose one of

<b>300700.5</b>	Statistical Decision Making
<b>300585.2</b>	Systems Analysis and Design

And choose one of

<b>200036.3</b>	Data Mining and Visualisation
<b>300570.3</b>	Human-Computer Interaction

Note: Students in the Bachelor of Computing (Information Systems) are required to select 300585 Systems Analysis and Design in order to comply with course major guidelines.

## Major - Entertainment Computing

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### M3005.1

This major is available to all students

#### Location

Campus	Mode
Penrith Campus	Internal

#### Unit Set Structure

Students must complete 80 credit points as follows

<b>300580.2</b>	Programming Fundamentals
<b>300585.2</b>	Systems Analysis and Design
<b>300491.2</b>	Games Technology
<b>300578.3</b>	Professional Development
<b>300565.2</b>	Computer Networking
<b>300104.4</b>	Database Design and Development
<b>300093.3</b>	Computer Graphics

Choose one of

<b>300492.2</b>	Games Theory and Design
<b>300862.1</b>	Video Games Development

Please note 300492 Games Theory and Design will be replaced by 300862 Video Games Development from 2012.

## Major - Mathematics

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### M3021.1

This major is available to all students. This major may meet the NSW Institute of Teachers accreditation requirements for teaching Mathematics as a first subject in NSW state high schools.

#### Location

Campus	Mode
Penrith Campus	Internal

#### Unit Set Structure

Students must complete 80 credit points as follows

<b>300672.2</b>	Mathematics 1A
<b>300673.2</b>	Mathematics 1B
<b>200025.2</b>	Discrete Mathematics
<b>200028.3</b>	Advanced Calculus

Choose two of

<b>200027.2</b>	Linear Algebra
<b>200030.3</b>	Differential Equations
<b>200029.2</b>	Numerical Analysis

Choose two of

<b>200193.2</b>	Abstract Algebra
<b>200023.3</b>	Analysis

### 200022.3 Mathematical Modelling

Students enrolled in the Bachelor of Information and Communications Technology may replace 200025 Discrete Mathematics with Discrete Structures and Complexity.

Note: For students who want to complete the Mathematics Major but may not necessarily want to qualify for NSW Institute of Teachers accreditation, 200024 Mathematical Finance would be added to the list of Level 3 units.

## Major - Statistics

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### M3022.1

This major is available to all UWS students.

#### Location

Campus	Mode
Penrith Campus	Internal

#### Unit Set Structure

Students must complete 80 credit points as follows

<b>200033.4</b>	Applied Statistics
<b>300606.2</b>	Foundations of Statistical Modelling and Decision Making
<b>300104.4</b>	Database Design and Development
<b>200037.4</b>	Regression Analysis & Experimental Design
<b>200038.3</b>	Time Series and Forecasting
<b>200036.3</b>	Data Mining and Visualisation
<b>200039.2</b>	Surveys and Multivariate Analysis

Choose one of

<b>300700.5</b>	Statistical Decision Making
<b>200263.4</b>	Biometry
<b>200032.5</b>	Statistics for Business
<b>300700.5</b>	Statistical Decision Making

## Major - Computational Decision Making

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### M3023.1

This major is available to all students.

#### Location

Campus	Mode
Penrith Campus	Internal

#### Unit Set Structure

Students must complete 80 credit points as follows

<b>300606.2</b>	Foundations of Statistical Modelling and Decision Making
<b>200042.3</b>	Introduction to Operations Research
<b>200027.2</b>	Linear Algebra
<b>300670.2</b>	Optimisation Techniques
<b>300671.2</b>	Principles and Practice of Decision Making
<b>200044.1</b>	Simulation Techniques

Choose one of

<b>300700.5</b>	Statistical Decision Making
<b>200263.3</b>	Biometry
<b>200032.5</b>	Statistics for Business
<b>300700.5</b>	Statistical Decision Making

And choose one of

<b>200025.2</b>	Discrete Mathematics
<b>300672.2</b>	Mathematics 1A

## Major - Knowledge Discovery and Data Mining

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### *M3024.1*

This major is available to all students.

### Location

Campus	Mode
Penrith Campus	Internal

### Unit Set Structure

Students must complete 80 credit points as follows

<b>300585.2</b>	Systems Analysis and Design
<b>200033.4</b>	Applied Statistics
<b>300606.2</b>	Foundations of Statistical Modelling and Decision Making
<b>300104.4</b>	Database Design and Development
<b>200036.3</b>	Data Mining and Visualisation
<b>300117.3</b>	Enterprise Database

Choose one of

<b>300700.5</b>	Statistical Decision Making
<b>200263.4</b>	Biometry
<b>200032.5</b>	Statistics for Business
<b>300700.5</b>	Statistical Decision Making

Choose one of

<b>200037.4</b>	Regression Analysis & Experimental Design
<b>200038.3</b>	Time Series and Forecasting
<b>200039.2</b>	Surveys and Multivariate Analysis
<b>200042.3</b>	Introduction to Operations Research
<b>300670.2</b>	Optimisation Techniques
<b>300671.2</b>	Principles and Practice of Decision Making

## Major - Networking

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### *M3025.1*

This major is only available to students enrolled in 3639 Bachelor of Information and Communications Technology course.

### Location

Campus	Mode
Campbelltown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

### Unit Set Structure

Students must complete 80 credit points as follows

<b>300565.2</b>	Computer Networking
<b>300576.2</b>	Networking Workshop
<b>300582.2</b>	Technologies for Web Applications
<b>300095.4</b>	Computer Networks and Internets
<b>300143.3</b>	Network Security
<b>300575.2</b>	Networked Systems Design
<b>300166.2</b>	Systems and Network Management

Choose one of

<b>300583.2</b>	Web Systems Development
<b>300112.1</b>	Digital Communication Technology
<b>300088.1</b>	Broadband Networking

## Major - Systems Programming

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### *M3043.1*

This major aims to develop graduates with sound skills in the discipline of programming. The focus is on programming at the level of system calls to the underlying operating system and many of the units use the industry standard language for systems programming, namely C/C+++, as the vehicle of instruction. There is a strong emphasis on the development of highly efficient and reliable code that can provide support services for higher level application oriented programs, as well as the development of programs suitable for systems administration and management. Practical work utilises the Unix environment. This major is appropriate where a career in systems programming or systems administration is planned, or where the student wishes to develop advanced systems programming skills.

### Unit Set Structure

Students must complete the following eight units

<b>300128.3</b>	Information Security
<b>300368.2</b>	Intelligent Systems
<b>300149.2</b>	Operating Systems
<b>300115.2</b>	Distributed Systems and Programming
<b>300165.3</b>	Systems Administration Programming
<b>300130.2</b>	Internet Programming
<b>300143.3</b>	Network Security
<b>300569.2</b>	Computer Security

## Major - Networked Systems

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### M3044.1

This major aims to develop graduates with sound skills in the discipline of networked computer systems. Recent advances in computer and telecommunications networked systems, particularly those based on TCP/IP, have increased the importance of network technologies in the discipline of computer science. This major covers a wide range of topics including computer communication network concepts and protocols, multimedia systems, Internet standards and technologies, network security, wireless and mobile computing, and distributed systems. The candidates are also introduced to some of the relevant current key research issues of the field.

### Unit Set Structure

Students must complete the following eight units

300128.3	Information Security
300095.4	Computer Networks and Internets
300166.2	Systems and Network Management
300575.2	Networked Systems Design
300143.3	Network Security
300149.2	Operating Systems
300115.2	Distributed Systems and Programming
300138.3	LAN Workshop

## Major - Biochemistry and Molecular Biology

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### M3045.1

This major will equip students with knowledge and skills in fundamental biology and chemistry, biochemistry and molecular biology to allow students to enter industrial or research-based employment in this area (biotech companies, pathology, quality assurance, university and hospital labs and scientific sales, government policy analysis). As this area has expanding knowledge and technologies, outcomes also include the ability to read, critique and evaluate emerging research with the view to becoming a life-long learner in the field. The outcomes of this major would support honours or masters level research in this area.

### Location

Campus	Mode
Campbelltown Campus	Internal
Hawkesbury Campus	Internal
Parramatta Campus	Internal

### Unit Set Structure

Students must complete eight units as follows

Note: Three units must be at Level 3.

#### Level 1

300816.1	Cell Biology
300803.1	Essential Chemistry 2

#### Level 2

300936.1	Functional Proteins and Genes
300848.1	Metabolism

Choose one of

300817.1	Molecular Biology
300847.1	Immunology
300845.1	Genetics

#### Level 3

300927.1	Molecular Medicine
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Choose two of

300820.1	Genes, Genomics and Human Health
300905.1	Advanced Immunology
300850.1	Advanced Cell Biology

## Major - Aquatic Biology

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### M3046.1

Aquatic and marine environments play vital roles in providing food, water, recreation and other ecosystem services to human society, as well as providing habitat for important species that make up global biodiversity. This major will equip students with the background knowledge and training to work in aquatic and marine environments, to learn skills in inquiry and problem solving, so that they can contribute beneficially to management and/or conservation of waterways and oceans and the biodiversity within them.

### Location

Campus	Mode
Hawkesbury Campus	Internal

### Unit Set Structure

Students must complete the following eight units

#### Level 1

300802.1	Biodiversity
300824.1	Management of Aquatic Environments

#### Level 2

300838.1	Comparative Physiology
300839.1	Ecology
300877.1	Toxicology

#### Level 3

300929.1	Aquatic Ecology
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**300918.1** Invertebrate Biology  
**300870.1** Water in the Landscape

## Major - Chemistry

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### M3047.1

This major will give students a solid grounding in chemistry as a scientific discipline; units can be selected to specialise in inorganic, organic, analytical or physical chemistry. Completion of the major will also qualify students as secondary school chemistry teachers.

#### Location

Campus	Mode
Campbelltown Campus	Internal
Parramatta Campus	Internal

#### Unit Set Structure

Students must complete eight units as follows

##### Level 1

**300800.1** Essential Chemistry 1  
**300803.1** Essential Chemistry 2

##### Level 2

Choose three of

**300876.1** Organic Chemistry  
**300899.1** Inorganic Chemistry  
**300849.1** Physical Chemistry  
**300832.1** Analytical Chemistry

Or

**300843.1** Forensic and Environmental Analysis

##### Level 3

Choose one of the following capstone units

**300924.1** Science Research Project  
**300883.1** Laboratory Quality Management

And two of

**300925.1** Advanced Analytical Chemistry  
**300907.1** Advanced Inorganic Chemistry  
**300906.1** Advanced Organic Chemistry  
**300926.1** Advanced Physical Chemistry  
**300891.1** Advanced Medicinal Chemistry  
**300920.1** Pharmacological Chemistry

## Major - Climate Change

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### M3048.1

A factual understanding of climate, the components that go to make it up, and how climate has varied in the past, is essential for any person working in the climate change

area. This unit will introduce students to the concept of climate, our understanding of how it works, and how it has changed through time. Topics in basic atmospheric science will give students a critical understanding of current environmental concerns and debates about the greenhouse effect and climate change, and the science behind greenhouse gas accounting. Students will be introduced to current atmosphere-related research at UWS and elsewhere.

#### Location

Campus	Mode
Hawkesbury Campus	Internal

#### Unit Set Structure

Students must complete eight units as follows

##### Level 1

**300802.1** Biodiversity

Choose one of

**300800.1** Essential Chemistry 1  
**300808.1** Introductory Chemistry

##### Level 2

**300839.1** Ecology  
**300837.1** Climate Change Science

Choose one of

**300865.1** Plant Physiology  
**300838.1** Comparative Physiology

##### Level 3

**300909.1** Biological Adaptation to Climate Change

Choose two of

**300857.1** Environmental Geochemistry  
**300855.1** Conservation Biology  
**300856.1** Ecosystem Carbon Accounting

## Major - Conservation Biology

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### M3049.1

Conservation biology has emerged as a field of study from a synthesis of the ecological, demographic, genetic and societal risks faced by small natural populations. This major equips students with skills in fundamental biology, in the ecology of populations and communities, in population genetics and in the legal conservation framework to enable them to work in this area.

#### Location

Campus	Mode
Hawkesbury Campus	Internal

## Unit Set Structure

Students must complete eight units as follows. Five units must be from the Level 1 and 2 pools, with no more than three units at Level 1. Students must also complete three units at Level 3.

### Level 1

<b>300802.1</b>	Biodiversity
<b>300816.1</b>	Cell Biology
<b>300813.1</b>	Wildlife Studies
<b>300824.1</b>	Management of Aquatic Environments

### Level 2

<b>300839.1</b>	Ecology
<b>300845.1</b>	Genetics
<b>300836.1</b>	Botany

### Level 3

Students must complete

<b>300855.1</b>	Conservation Biology
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And choose two of

<b>300929.1</b>	Aquatic Ecology
<b>300918.1</b>	Invertebrate Biology
<b>300861.1</b>	Vertebrate Biodiversity

## Major - Environmental Management

### M3050.1

Solution to environmental problems requires both a technical/scientific 'fix', and an agreed social implementation, or management 'fix'. This major covers environmental management as an academic discipline, giving students knowledge and skills in the social, legislative and planning frameworks within which environmental practitioners must work to implement solutions to environmental problems.

### Location

Campus	Mode
Hawkesbury Campus	Internal

### Unit Set Structure

Students must complete eight units as follows

#### Level 1

<b>300824.1</b>	Management of Aquatic Environments
<b>300823.1</b>	Soils
<b>101646.2</b>	Analysis of Spatial Data

#### Level 2

Choose two of

<b>300840.1</b>	Environmental Planning and Climate Change
<b>101878.1</b>	Indigenous Landscapes
<b>300875.1</b>	Landuse and the Environment

### Level 3

Choose three of

<b>300841.1</b>	Environmental Regulation and Policy
<b>300858.1</b>	Environmental Risk Management
<b>300860.1</b>	Urban Environment
<b>300919.1</b>	Occupational Health and Safety

## Major - Forensic Science

### M3051.1

This major gives a systematic introduction to the principles and practice of forensic science, emphasising the importance of maintaining the integrity of physical evidence during its recovery and analysis. The major is designed to complement a science-based degree, but it may also be taken by students who are studying a different discipline or profession. It includes the relevant pre-requisites for the Level 2 and 3 units, and the forensic content and principles are sequenced through the curriculum. This major in may be complemented by units from other disciplines such as the biological sciences, statistics, policing, criminology and law. Students who are interested in the analysis of DNA evidence may take Functional Genes and Proteins and Molecular Biology, or equivalent units. Other relevant science units include Biometry, Botany, Genetics, Introduction to Anatomy and Histology, Invertebrate Biology, Ecology and Physics 1.

### Location

Campus	Mode
Hawkesbury Campus	Internal

### Unit Set Structure

This Major is only available to students enrolled in 3675 Bachelor of Science and to students in 3562 Bachelor of Science (Advanced Science) who are undertaking the Forensic Science program. This unit set is not available to students enrolled in the course 3589 Bachelor of Science (Forensic Science).

Students must complete eight units as follows

#### Level 1

<b>300800.1</b>	Essential Chemistry 1
<b>300803.1</b>	Essential Chemistry 2
<b>300806.1</b>	Forensic Science

#### Level 2

<b>300843.1</b>	Forensic and Environmental Analysis
<b>300935.1</b>	Evidence and Crime Scene Management

#### Level 3

<b>300882.1</b>	Forensic Archaeology
<b>300868.1</b>	Forensic Chemistry
<b>300883.1</b>	Laboratory Quality Management

## Major - General Biology

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### M3052.1

The major in General Biology gives students a broad training in biology, with the opportunity to select a program that ranges across the scale from macro- to micro- to molecular level processes. Completion of the major meets the requirements for secondary school biology teaching (post-graduate study is required to qualify as a teacher).

### Location

Campus	Mode
Campbelltown Campus	Internal
Hawkesbury Campus	Internal
Parramatta Campus	Internal

### Unit Set Structure

Students must complete a maximum of 3 units from Level 1 and at least 3 units from Level 3.

Students must complete eight units as follows

#### Level 1

300802.1	Biodiversity
300816.1	Cell Biology

Choose six of the following units, including at least three at Level 3.

#### Level 1

300800.1	Essential Chemistry 1
300803.1	Essential Chemistry 2

#### Level 2

300936.1	Functional Proteins and Genes
300848.1	Metabolism
300817.1	Molecular Biology
300847.1	Immunology
300845.1	Genetics
300833.1	Microbiology 1
300896.1	Microbiology 2
300838.1	Comparative Physiology
300839.1	Ecology
300865.1	Plant Physiology
300836.1	Botany

#### Level 3

300851.1	Advanced Physiology
300866.1	Analytical Microbiology
300850.1	Advanced Cell Biology
300819.1	Topics in Physiology
300855.1	Conservation Biology
300905.1	Advanced Immunology
300820.1	Genes, Genomics and Human Health
300826.1	Medical Microbiology
300927.1	Molecular Medicine
300929.1	Aquatic Ecology

300861.1	Vertebrate Biodiversity
300918.1	Invertebrate Biology
300924.1	Science Research Project
300883.1	Laboratory Quality Management
300919.1	Occupational Health and Safety

## Major - Geochemistry

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### M3053.1

This major recognises the relevance of geochemistry in our rapidly expanding mining and minerals industries, and its importance in the understanding of related environmental issues. It offers a strong grounding in key areas of geochemistry and chemistry, and emphasises the integration of theory and practical skills and their relevance to real world applications in industry, research and the environment.

### Location

Campus	Mode
Parramatta Campus	Internal

### Unit Set Structure

Students must complete eight units as follows

#### Level 1

300803.1	Essential Chemistry 2
300822.1	Introduction to Earth Science
300809.1	Introductory Geochemistry

#### Level 2

300846.1	Geochemical Systems
300832.1	Analytical Chemistry

#### Level 3

300857.1	Environmental Geochemistry
300925.1	Advanced Analytical Chemistry
300924.1	Science Research Project

## Major - Mathematics

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### M3054.1

This major covers topics in the traditional areas of calculus and algebra. Single and multivariable calculus are covered, as well as topics in linear algebra, analysis and mathematical modelling. This major is available to all UWS students and may meet the NSW Institute of Teachers accreditation requirements for teaching Mathematics as a first subject in NSW state high schools.

### Location

Campus	Mode
Campbelltown Campus	Internal



Campus	Mode
Parramatta Campus	Internal

### Unit Set Structure

Students must complete eight units as follows

#### Level 1

<b>300672.2</b>	Mathematics 1A
<b>300673.2</b>	Mathematics 1B
<b>200025.2</b>	Discrete Mathematics

#### Level 2

Choose two units from the level 2 units below

<b>200030.3</b>	Differential Equations
<b>200028.3</b>	Advanced Calculus
<b>200027.2</b>	Linear Algebra

#### Level 3

<b>200193.2</b>	Abstract Algebra
<b>200022.3</b>	Mathematical Modelling
<b>200023.3</b>	Analysis

### Major - Microbiology

#### M3055.1

Microorganisms impact on all aspects of our lives. A microbiology major will equip students with the skills and knowledge of microbiology and molecular microbiology relevant to employment in research laboratories and industries including biotechnology companies, medical and environmental laboratories, food, wine and pharmaceutical companies, quality assurance and scientific sales. The major, which includes the study of bacteria, fungi, protists and viruses and their roles in medicine, industry and the environment, will also provide a foundation for research at Honours and postgraduate levels. (Students from Parramatta and Campbelltown will have to travel to Hawkesbury to complete some of the units in the major).

#### Location

Campus	Mode
Campbelltown Campus	Internal
Hawkesbury Campus	Internal
Parramatta Campus	Internal

### Unit Set Structure

Students must complete eight units, including three units at Level 3

Note: Students undertaking this major at Parramatta and Campbelltown campus need to travel to Hawkesbury to complete one or two Level 3 units.

#### Level 2

<b>300936.1</b>	Functional Proteins and Genes
<b>300833.1</b>	Microbiology 1

<b>300896.1</b>	Microbiology 2
<b>300817.1</b>	Molecular Biology
<b>300847.1</b>	Immunology

#### Level 3

Choose three of

<b>300866.1</b>	Analytical Microbiology
<b>300826.1</b>	Medical Microbiology
<b>300905.1</b>	Advanced Immunology
<b>300883.1</b>	Laboratory Quality Management

### Major - Zoology

#### M3056.1

This major trains students in how to best care for and protect our animals, by covering scientific knowledge of native wildlife, companion animals, and production animals. This major will allow students to develop scientific understanding of how animals function and interact with their environment; from their ecology and evolution; to physiology and biochemistry of tissues and major organ systems, as well as down to structure and function of biomolecules and cells. On-campus animal facilities include those for reptiles, small marsupials, small rodents, horses, sheep and cattle, as well as over 1000ha of native, rural and aquatic habitat.

#### Location

Campus	Mode
Hawkesbury Campus	Internal

### Unit Set Structure

Students must complete eight units as follows

#### Level 1

Choose two of

<b>300802.1</b>	Biodiversity
<b>300816.1</b>	Cell Biology
<b>300813.1</b>	Wildlife Studies

#### Level 2

<b>300838.1</b>	Comparative Physiology
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Choose two of

<b>300839.1</b>	Ecology
<b>300845.1</b>	Genetics
<b>300853.1</b>	Animal Nutrition and Feeding
<b>300835.1</b>	Animal Reproduction

#### Level 3

<b>300909.1</b>	Biological Adaptation to Climate Change
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Choose two of

<b>300929.1</b>	Aquatic Ecology
<b>300918.1</b>	Invertebrate Biology
<b>300861.1</b>	Vertebrate Biodiversity

300878.1 Animal Behaviour

**Major - Food Science & Technology****M3057.1**

A major in Food Science and Technology explores the science behind food, its preparation and manufacture. The program covers specialised topics in food processing, quality assurance, new product development, postharvest, packaging, microbiological and chemical analysis of foods. The program aims to develop in depth scientific understanding of processes involved in food manufacture and requirements to produce safe, nutritious and palatable food. The major prepares students for a wide range of careers in the food and beverage related industries, including food product development, quality assurance, food regulations, research and development, plus management of fresh food supply. Students seeking to be secondary Food Technology teachers are advised to also select a Sub-major in Education Studies in preparation for Master of Teaching in their fourth year of study. This program will satisfy the requirements of the NSW Institute of Teachers for first teaching areas of 'Food Technology' and 'Biology', with further teaching areas possible in 'chemistry', 'physics', or 'design and technology' depending on the electives selected.

**Location**

Campus	Mode
Hawkesbury Campus	Internal

**Unit Set Structure****Standard Food Science and Technology Major**

Students must complete eight units as follows

300859.1	Food Safety
300869.1	Postharvest
300922.1	Quality Assurance and Food Analysis
300871.1	Culinary Science
300915.1	Food Product Development
300904.1	Advanced Food Science and Technology
300883.1	Laboratory Quality Management

And choose one of

300866.1	Analytical Microbiology
300843.1	Forensic and Environmental Analysis

**Food Science and Technology Major for Students undertaking the Education Studies Sub Major**

Students must complete eight units as follows, plus be enrolled in the Education Studies Sub Major

300805.1	Food Science 1
300842.1	Food Science 2
300859.1	Food Safety
300869.1	Postharvest
300922.1	Quality Assurance and Food Analysis
300871.1	Culinary Science
300915.1	Food Product Development
300904.1	Advanced Food Science and Technology

**Major - Nutrition and Physiology****M3058.1**

The study of nutrition and human physiology incorporates knowledge of human biology and biochemistry to understand how the body utilizes nutrients and related substances for optimal health throughout the lifecycle. This major also addresses the physiological and nutritional foundations for understanding the nature of food and the physiological and epidemiological relationships between food, nutrients and components of food and common diet-related diseases prevalent in Australia. This major is recommended for students seeking an in-depth understanding of diet-related health issues and intending to work in allied or community health, education, or seeking further graduate studies in nutrition, dietetics or public health.

**Location**

Campus	Mode
Hawkesbury Campus	Internal

**Unit Set Structure**

Students must complete eight units from the following, with at least three units from Level 3

**Level 1**

300818.1	Introduction to Physiology
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**Level 2**

300936.1	Functional Proteins and Genes
300848.1	Metabolism

Choose two of

300933.1	Nutrition and Health 1
300934.1	Nutrition and Health 2
300928.1	Consumer Issues in Nutrition

**Level 3**

300851.1	Advanced Physiology
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Choose two of

300908.1	Applied Nutrition
300917.1	Global Nutrition, Food and Community
300871.1	Culinary Science

**Major - Human Nutrition****M3059.1**

A major in Human Nutrition investigates healthy eating as a vital part of good health. This major offers a human nutrition specialisation for students enrolled in the Nutrition and Food Science degree. The major covers nutrition and

health, with specialised studies in community nutrition, public health nutrition, human physiology, health promotion and food studies. The program aims to develop understanding of human nutrition as it applies to the various stages of life, as well as examining the development of Australian dietary practices and diet related disorders. Students will explore the role of community food systems; developing strategies for social research methods and applications in public health nutrition and health promotion. The major prepares students for careers in community nutrition, health promotion and education, or work in a range of food and nutrition related businesses, including new product development of healthy foods. Those students seeking postgraduate studies in dietetics with the objective of becoming an accredited practising dietician should select a double major of 'Nutrition and Physiology' with the 'Human Nutrition' major and complete further studies in metabolism and advanced physiology.

### Location

Campus	Mode
Hawkesbury Campus	Internal

### Unit Set Structure

Students must complete eight units as follows

#### Year 2

##### Autumn session

<b>300933.1</b>	Nutrition and Health 1
<b>300936.1</b>	Functional Proteins and Genes

##### Spring session

<b>300934.1</b>	Nutrition and Health 2
<b>300818.1</b>	Introduction to Physiology

#### Year 3

##### Autumn session

<b>300928.1</b>	Consumer Issues in Nutrition
<b>300871.1</b>	Culinary Science

##### Spring session

<b>300908.1</b>	Applied Nutrition
<b>300917.1</b>	Global Nutrition, Food and Community

### Major - Medicinal Chemistry

#### **M3060.1**

### Unit Set Structure

Note - At least 60 credit points must be at Level 3 or above (two electives/Schedule C units must be at least a Level 3 unit)

#### Year 2

##### Autumn session

#### **300936.1** Functional Proteins and Genes

Two Schedule C Units  
And one elective

##### Spring session

<b>300848.1</b>	Metabolism
<b>300889.1</b>	Pathological Basis of Disease
<b>300876.1</b>	Organic Chemistry

And one elective

#### Year 3

##### Autumn session

#### **300891.1** Advanced Medicinal Chemistry

Two Schedule C Units  
And one elective

##### Spring session

<b>300893.1</b>	Topics in Medical Science
<b>300920.1</b>	Pharmacological Chemistry
<b>300906.1</b>	Advanced Organic Chemistry

And one elective

##### Schedule C Units

Choose four of

<b>300907.1</b>	Advanced Inorganic Chemistry
<b>300899.1</b>	Inorganic Chemistry
<b>300925.1</b>	Advanced Analytical Chemistry
<b>300832.1</b>	Analytical Chemistry
<b>300912.1</b>	Molecular Pharmacokinetics
<b>300849.1</b>	Physical Chemistry

### Mid Year Intake

Note - At least 60 credit points must be at Level 3 or above (two electives/Schedule C units must be at least a Level 3 unit)

#### Year 1

##### Spring session

<b>300816.1</b>	Cell Biology
<b>300803.1</b>	Essential Chemistry 2
<b>300818.1</b>	Introduction to Physiology
<b>300811.1</b>	Scientific Literacy

##### Autumn session

<b>300802.1</b>	Biodiversity
<b>300800.1</b>	Essential Chemistry 1
<b>300825.1</b>	Introduction to Anatomy

Choose one of

<b>300830.1</b>	Analysis of Change
<b>300831.1</b>	Quantitative Thinking
<b>300672.2</b>	Mathematics 1A
<b>200263.3</b>	Biometry

**Year 2****Spring session**

**300889.1** Pathological Basis of Disease  
**300876.1** Organic Chemistry

One Schedule C Unit  
 And one elective

**Autumn session**

**300936.1** Functional Proteins and Genes

One Schedule C Unit  
 And two electives

**Year 3****Spring session**

**300848.1** Metabolism  
**300893.1** Topics in Medical Science  
**300920.1** Pharmacological Chemistry  
**300906.1** Advanced Organic Chemistry

**Autumn session**

**300891.1** Advanced Medicinal Chemistry

Two Schedule C Units  
 And one elective

**Schedule C Units**

**300832.1** Analytical Chemistry  
**300925.1** Advanced Analytical Chemistry  
**300899.1** Inorganic Chemistry  
**300849.1** Physical Chemistry  
**300907.1** Advanced Inorganic Chemistry  
**300912.1** Molecular Pharmacokinetics

Note: Students wishing to take Analytical Chemistry will need to adjust their pattern of electives.

**Sub-major elective spaces**

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

**Major - Anatomy and Physiology****M3061.1****Unit Set Structure**

Note - At least 60 credit points must be at Level 3 or above (two electives/Schedule B units must be at least a Level 3 unit)

**Year 2****Autumn session**

**300936.1** Functional Proteins and Genes  
**300894.1** Anatomy of the Thorax and Abdomen

One Schedule B Unit  
 And one elective

**Spring session**

**300848.1** Metabolism  
**300889.1** Pathological Basis of Disease  
**300884.1** Pharmacology

And one elective

**Year 3****Autumn session**

**300819.1** Topics in Physiology  
**300851.1** Advanced Physiology

One Schedule B Unit  
 And one elective

**Spring session**

**300754.1** Neuroanatomy  
**300893.1** Topics in Medical Science

One Schedule B Unit  
 And one elective

**Schedule B Units**

Choose three of

**300905.1** Advanced Immunology  
**300898.1** The Appendicular Skeleton  
**300817.1** Molecular Biology  
**300897.1** Anatomy of the Head and Neck  
**300838.1** Comparative Physiology  
**300927.1** Molecular Medicine  
**300845.1** Genetics  
**300820.1** Genes, Genomics and Human Health

**Mid Year Intake****Year 1****Spring session**

**300816.1** Cell Biology  
**300803.1** Essential Chemistry 2  
**300818.1** Introduction to Physiology  
**300811.1** Scientific Literacy

**Autumn session**

**300936.1** Functional Proteins and Genes  
**300800.1** Essential Chemistry 1  
**300825.1** Introduction to Anatomy

Choose one of

**300830.1** Analysis of Change  
**300831.1** Quantitative Thinking

**300672.2** Mathematics 1A  
**200263.3** Biometry

### Year 2

#### Spring session

**300848.1** Metabolism  
**300889.1** Pathological Basis of Disease  
**300884.1** Pharmacology

One Schedule B Unit

#### Autumn session

**300802.1** Biodiversity  
**300894.1** Anatomy of the Thorax and Abdomen

One Schedule B Unit

And one elective

### Year 3

#### Spring session

**300893.1** Topics in Medical Science  
**300754.1** Neuroanatomy

One Schedule B Unit

And one elective

#### Autumn session

**300819.1** Topics in Physiology  
**300851.1** Advanced Physiology

One Schedule B Unit

And one elective

#### Schedule B Units

Choose three of

**300905.1** Advanced Immunology  
**300898.1** The Appendicular Skeleton  
**300817.1** Molecular Biology  
**300897.1** Anatomy of the Head and Neck  
**300838.1** Comparative Physiology  
**300927.1** Molecular Medicine  
**300845.1** Genetics  
**300820.1** Genes, Genomics and Human Health

### Sub-major elective spaces

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

## Major - Biomedical Science

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### M3062.1

#### Unit Set Structure

Note - At least 60 credit points must be at Level 3 or above (five electives/ Schedule A units must be at least a Level 3 unit)

### Year 2

#### Autumn session

**300936.1** Functional Proteins and Genes

Two Schedule A Units

And one elective

#### Spring session

**300848.1** Metabolism  
**300889.1** Pathological Basis of Disease

One Schedule A Unit

And one elective

### Year 3

#### Autumn session

Three Schedule A Units

And one elective

#### Spring session

**300893.1** Topics in Medical Science

Two Schedule A Units

And one elective

#### Schedule A Units

Choose eight of

**300833.1** Microbiology 1  
**300896.1** Microbiology 2  
**300845.1** Genetics  
**300820.1** Genes, Genomics and Human Health  
**300826.1** Medical Microbiology  
**300905.1** Advanced Immunology  
**300817.1** Molecular Biology  
**300850.1** Advanced Cell Biology  
**300866.1** Analytical Microbiology  
**300927.1** Molecular Medicine  
**300847.1** Immunology

### Mid Year Intake

Note - At least 60 credit points must be at Level 3 or above (five electives/ Schedule A units must be at least a Level 3 unit)

### Year 1

#### Spring session

**300816.1** Cell Biology  
**300803.1** Essential Chemistry 2

**300818.1** Introduction to Physiology  
**300811.1** Scientific Literacy

**Autumn session**

**300802.1** Biodiversity  
**300800.1** Essential Chemistry 1  
**300825.1** Introduction to Anatomy

Choose one of

**300830.1** Analysis of Change  
**300831.1** Quantitative Thinking  
**300672.2** Mathematics 1A  
**200263.3** Biometry

**Year 2****Spring session**

**300889.1** Pathological Basis of Disease

Two Schedule A Units  
 And one elective

**Autumn session**

**300936.1** Functional Proteins and Genes

Two Schedule A Units  
 And one elective

**Year 3****Spring session**

**300848.1** Metabolism  
**300893.1** Topics in Medical Science

One Schedule A Unit  
 And one elective

**Autumn session**

Three Schedule A Units  
 And one elective

**Schedule A Units**

Choose eight of

**300833.1** Microbiology 1  
**300896.1** Microbiology 2  
**300845.1** Genetics  
**300820.1** Genes, Genomics and Human Health  
**300905.1** Advanced Immunology  
**300817.1** Molecular Biology  
**300850.1** Advanced Cell Biology  
**300866.1** Analytical Microbiology  
**300847.1** Immunology

**Mid Year Intake - Alternate pattern**

Note - At least 60 credit points must be at Level 3 or above (five electives/ Schedule A units must be at least a Level 3 unit)

**Year 1****Spring session**

**300816.1** Cell Biology  
**300803.1** Essential Chemistry 2  
**300818.1** Introduction to Physiology  
**300811.1** Scientific Literacy

**Autumn session**

**300936.1** Functional Proteins and Genes  
**300800.1** Essential Chemistry 1  
**300825.1** Introduction to Anatomy

Choose one of

**300830.1** Analysis of Change  
**300831.1** Quantitative Thinking  
**300672.2** Mathematics 1A  
**200263.3** Biometry

**Year 2****Spring session**

**300848.1** Metabolism  
**300889.1** Pathological Basis of Disease

One Schedule A Unit  
 And one elective

**Autumn session**

**300802.1** Biodiversity

Two Schedule A Units  
 And one elective

**Year 3****Spring session**

**300893.1** Topics in Medical Science

Two Schedule A Units  
 And one elective

**Autumn session**

Three Schedule A Units  
 And one elective

**Schedule A Units**

Choose eight of

**300833.1** Microbiology 1  
**300896.1** Microbiology 2  
**300845.1** Genetics  
**300820.1** Genes, Genomics and Human Health  
**300905.1** Advanced Immunology  
**300817.1** Molecular Biology  
**300850.1** Advanced Cell Biology  
**300866.1** Analytical Microbiology  
**300847.1** Immunology

**Sub-major elective spaces**

Elective units may be used toward obtaining an additional approved sub-major (40 credit points). UWS offers sub-majors in a range of areas including Sustainability and Indigenous Studies. Refer to the Unit Set Index.

Students can apply for these unit sets using the Course Variation Form, which is listed under Enrolment Forms on the Student forms web page.

## Major - Medicinal Chemistry

### M3063.1

#### Location

Campus	Mode
Campbelltown Campus	Internal

#### Unit Set Structure

Students completing the Bachelor of Medical Science (Advanced) with a major in Medicinal Chemistry will complete the following course structure.

**Note: At least 60 credit points must be at Level 3 or above (one Schedule C unit must be at least a Level 3 unit)**

#### Year 1

##### Autumn session

300802.1	Biodiversity
300811.1	Scientific Literacy
300800.1	Essential Chemistry 1
300825.1	Introduction to Anatomy

##### Spring session

300816.1	Cell Biology
300803.1	Essential Chemistry 2
300818.1	Introduction to Physiology
300672.2	Mathematics 1A

#### Year 2

##### Autumn session

300937.1	Advanced Science Project A
300936.1	Functional Proteins and Genes

And two Schedule C Units

##### Spring session

300938.1	Advanced Science Project B
300848.1	Metabolism
300889.1	Pathological Basis of Disease
300876.1	Organic Chemistry

#### Year 3

##### Autumn session

300910.1	Advanced Science Project C
300891.1	Advanced Medicinal Chemistry

And two Schedule C Units

##### Spring session

300893.1	Topics in Medical Science
300920.1	Pharmacological Chemistry

300906.1	Advanced Organic Chemistry
300892.1	Medical Science Project

#### Schedule C Units

Choose four of

300907.1	Advanced Inorganic Chemistry
300899.1	Inorganic Chemistry
300925.1	Advanced Analytical Chemistry
300832.1	Analytical Chemistry
300912.1	Molecular Pharmacokinetics
300849.1	Physical Chemistry

Note: Students wishing to take Analytical Chemistry will need to adjust their pattern of electives.

## Major - Anatomy and Physiology

### M3064.1

#### Location

Campus	Mode
Campbelltown Campus	Internal

#### Unit Set Structure

Students completing the Bachelor of Medical Science (Advanced) with a major in Anatomy and Physiology will complete the following course structure.

**Note: At least 60 credit points must be at Level 3 or above (one Schedule B unit must be at least a Level 3 unit)**

#### Year 1

##### Autumn session

300802.1	Biodiversity
300811.1	Scientific Literacy
300800.1	Essential Chemistry 1
300825.1	Introduction to Anatomy

##### Spring session

300816.1	Cell Biology
300803.1	Essential Chemistry 2
300818.1	Introduction to Physiology
300672.2	Mathematics 1A

#### Year 2

##### Autumn session

300937.1	Advanced Science Project A
300936.1	Functional Proteins and Genes
300894.1	Anatomy of the Thorax and Abdomen

And one Schedule B Unit

##### Spring session

300938.1	Advanced Science Project B
300848.1	Metabolism
300889.1	Pathological Basis of Disease
300884.1	Pharmacology

**Year 3****Autumn session**

- 300910.1** Advanced Science Project C  
**300819.1** Topics in Physiology  
**300851.1** Advanced Physiology

And one Schedule B Unit

**Spring session**

- 300892.1** Medical Science Project  
**300754.1** Neuroanatomy  
**300893.1** Topics in Medical Science

And one Schedule B Unit

**Schedule B Units**

Choose three of

- 300905.1** Advanced Immunology  
**300898.1** The Appendicular Skeleton  
**300817.1** Molecular Biology  
**300897.1** Anatomy of the Head and Neck  
**300838.1** Comparative Physiology  
**300927.1** Molecular Medicine  
**300845.1** Genetics  
**300820.1** Genes, Genomics and Human Health

**Major - Biomedical Science****M3065.1****Location**

Campus	Mode
Campbelltown Campus	Internal
Hawkesbury Campus	Internal

**Unit Set Structure**

Students completing the Bachelor of Medical Science (Advanced) with a major in Medicinal Chemistry will complete the following course structure.

Note: At least 60 credit points must be at Level 3 or above (four Schedule A units must be at least a Level 3 unit)

**Year 1****Autumn session**

- 300802.1** Biodiversity  
**300811.1** Scientific Literacy  
**300800.1** Essential Chemistry 1  
**300825.1** Introduction to Anatomy

**Spring session**

- 300816.1** Cell Biology  
**300803.1** Essential Chemistry 2  
**300818.1** Introduction to Physiology  
**300672.2** Mathematics 1A

**Year 2****Autumn session**

- 300937.1** Advanced Science Project A  
**300936.1** Functional Proteins and Genes

And two Schedule A Units

**Spring session**

- 300938.1** Advanced Science Project B  
**300848.1** Metabolism  
**300889.1** Pathological Basis of Disease

And one Schedule A Unit

**Year 3****Autumn session**

- 300910.1** Advanced Science Project C

And three Schedule A Units

**Spring session**

- 300892.1** Medical Science Project  
**300893.1** Topics in Medical Science

And two Schedule A Units

**Schedule A Units**

Choose eight of

- 300833.1** Microbiology 1  
**300896.1** Microbiology 2  
**300845.1** Genetics  
**300820.1** Genes, Genomics and Human Health  
**300826.1** Medical Microbiology  
**300905.1** Advanced Immunology  
**300817.1** Molecular Biology  
**300850.1** Advanced Cell Biology  
**300866.1** Analytical Microbiology  
**300927.1** Molecular Medicine  
**300847.1** Immunology

**Major - Computer Forensics****M31015V2.1**

Computer forensics focuses on the gathering of evidence (often as part of an investigation) from computers and computer networks. Such evidence may consist of actual files (e.g. an image) or the traces of a user's activities that are left in the activity logs of operating systems, browsers, databases, web proxies, or network firewalls, etc. Identifying such evidence requires in-depth technical knowledge of the interactions between hardware, the operating system, programs, and the network. Similarly, knowledge of cryptographic techniques is required where data has been encrypted and/or obfuscated. This major develops this requisite knowledge; it also develops the skills necessary to ensure that evidence is not corrupted, and can be documented and presented in an intelligible manner.



**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Students must complete 80 credit points as follows

<b>300447.2</b>	Computer Forensics Workshop
<b>CP308A.2</b>	Information Systems Ethics and Law

**Please note that unit CP308A Information Systems Ethics and Law is only offered every second year in odd years, eg. 2013, 2015, 2017**

<b>300149.2</b>	Operating Systems
<b>300165.3</b>	Systems Administration Programming
<b>300128.3</b>	Information Security
<b>300143.3</b>	Network Security
<b>300095.4</b>	Computer Networks and Internets
<b>300569.2</b>	Computer Security

**Major - Innovation Design Management*****M3503IDM.1*****Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Students must complete 80 credit points as follows  
The following are core units.

<b>200083.2</b>	Marketing Principles
<b>300014.3</b>	Design Management 3: Organisational Skills for Designers

The following are drawn from alternate Industrial Design units.

<b>300012.3</b>	Design Management 1: Product Design Audit
<b>300013.3</b>	Design Management 2: Corporate Image and Identity
<b>300015.3</b>	Design Management 4: Design Process
<b>200163.1</b>	Innovation and Product Development
<b>100800.2</b>	Consumer Psychology
<b>200154.3</b>	Entrepreneurial Management and Innovation

**Major - Interactive Industrial Graphics*****M3503IIG2.1*****Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Students must complete the following eight units  
The following are core units.

<b>300302.2</b>	Industrial Graphics 1: Presentation
<b>300282.2</b>	Industrial Graphics 2: Transition
<b>300310.3</b>	Industrial Graphics 3: 3D Solids

The following are drawn from alternative/elective units

<b>300312.3</b>	Industrial Graphics 4: Surface
<b>300315.3</b>	Industrial Graphics 5: Integrated
<b>101180.2</b>	Web and Time Based Design
<b>100789.3</b>	Interactive Design I
<b>100949.3</b>	Interactive Design II

**Major - International Design Management*****M3503INTDM.1*****Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Students must complete the following eight units.  
The following are core units.

<b>200083.2</b>	Marketing Principles
<b>300014.3</b>	Design Management 3: Organisational Skills for Designers

The following are drawn from alternate Industrial Design units.

<b>300012.3</b>	Design Management 1: Product Design Audit
<b>300013.3</b>	Design Management 2: Corporate Image and Identity
<b>300015.3</b>	Design Management 4: Design Process
<b>200088.2</b>	Brand and Product Management
<b>61671.1</b>	International Management
<b>200154.3</b>	Entrepreneurial Management and Innovation

**Major - Therapeutic Recreation*****M4000.1*****Unit Set Structure**

Students must complete the following eight units

<b>400244.2</b>	Introduction to Leisure and Recreation Theory
<b>400968.2</b>	Professional Practice in Aged Care and Disability
<b>400246.3</b>	Workplace Learning 1 (Therapeutic Recreation)
<b>400789.3</b>	Leisure Education Programming and Mental Health
<b>400252.2</b>	Workplace Learning 2 (Community Placement)

<b>400254.2</b>	Therapeutic Recreation Professional Project
<b>400249.2</b>	Ethical and Legal Issues in Health Care
<b>400786.2</b>	Professional Transition Project

## Major - Health Promotion

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### M4001.1

#### Unit Set Structure

Students must complete the following eight units

<b>400285.2</b>	Public Health
<b>400966.2</b>	Health Politics, Policy and Planning
<b>400286.3</b>	Injury Prevention
<b>400275.2</b>	Health Planning Project
<b>400784.2</b>	Health Promotion Practice 1
<b>400785.2</b>	Health Promotion Practice 2
<b>400249.2</b>	Ethical and Legal Issues in Health Care
<b>400786.2</b>	Professional Transition Project

## Major - Health Services Management

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### M4002.1

#### Unit Set Structure

Students must complete the following eight units

<b>400277.3</b>	Health Services Management
<b>400966.2</b>	Health Politics, Policy and Planning
<b>400788.2</b>	Health Services Workforce Management
<b>400275.2</b>	Health Planning Project
<b>400787.2</b>	Health Services Management Practice
<b>400279.3</b>	Health Services Financial Management
<b>400249.2</b>	Ethical and Legal Issues in Health Care
<b>400786.2</b>	Professional Transition Project

## Sub-major - Design Management

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### S3502DM.1

#### Location

Campus	Mode
Penrith Campus	Internal

#### Unit Set Structure

Students must complete the following four units.

The following is a core unit.

<b>300014.3</b>	Design Management 3: Organisational Skills for Designers
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The following are drawn from alternate Industrial Design units.

<b>300012.3</b>	Design Management 1: Product Design Audit
<b>300013.3</b>	Design Management 2: Corporate Image and Identity
<b>300015.3</b>	Design Management 4: Design Process

## Sub-major - Industrial Graphics

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### S3502IG.1

#### Location

Campus	Mode
Penrith Campus	Internal

#### Unit Set Structure

Students must complete the following five units

The following are core units.

<b>300302.2</b>	Industrial Graphics 1: Presentation
<b>300282.2</b>	Industrial Graphics 2: Transition
<b>300310.3</b>	Industrial Graphics 3: 3D Solids

The following are drawn from alternate Industrial Design units.

<b>300312.3</b>	Industrial Graphics 4: Surface
<b>300315.3</b>	Industrial Graphics 5: Integrated

## Sub-major - Sustainable Design

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### S3502SD.1

#### Location

Campus	Mode
Penrith Campus	Internal

#### Unit Set Structure

Students must complete the following four units.

The following are core units.

<b>300304.3</b>	Sustainable Design: Materials Technology
<b>300309.3</b>	Sustainable Design: Life Cycle Analysis
<b>300306.3</b>	Sustainable Design: Sustainable Futures

The following unit is drawn from alternate Industrial Design units.

<b>300735.2</b>	Automated Manufacturing
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## Sub-major - Religion, Anthropology and Philosophy

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### SM1032.1

This multidisciplinary sub-major pursues critical and rational analysis of questions about individuals and societies; about human knowledge, culture and existence. It inquires into issues about human nature; the scope and limits of knowledge and belief; God and ethics; conflict and violence; ritual and myth; and religion, politics and culture. The sub-major provides students with rigorous training in

analytic and creative thinking, intellectual independence and cultural and ethical awareness.

### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal

### Unit Set Structure

Students must complete 40 credit points from the following pool with no more than one unit at Level 1

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

#### Level 1 Unit Pool

**101462.2** Understanding Islam and Muslim Societies

#### Level 2 Unit Pool

**101882.1** A History of Modern Global Buddhism  
**100850.2** Buddhism in the Contemporary World  
**100852.2** Classics of Modern Philosophy  
**101856.1** Film and Philosophy  
**101464.3** Great Texts of Islam: Qur'an and Hadith  
**101843.2** Philosophy and Environment  
**101881.1** Philosophy and the Good Life  
**101867.1** The Ethical Life  
**101294.3** The Western Philosophical Tradition

#### Level 3 Unit Pool

**101295.2** Aesthetics  
**101688.2** Anthropology of Religion  
**400087.5** Applied Critical Methods  
**100863.3** Ethical Cultures  
**100998.4** Evolutionary Thinking  
**100961.4** Humanities Internship  
**101463.4** Islam in the Modern World  
**101467.2** Islam in Southeast Asia  
**101465.2** Islamic Law in a Changing World  
**101724.2** Literary Animals  
**100875.4** Literature and Philosophy  
**100275.4** Philosophies of Love and Death  
**101761.2** Philosophy and the Visual  
**100879.2** Philosophy Today  
**101665.3** Politics and Religion  
**101003.2** Religion and Culture  
**101359.5** Sociology of Religion  
**100969.2** Theories of Conflict and Violence  
**101880.1** The Space of Literature  
**101798.2** Understanding Freedom  
**101010.3** What is the Human?  
**101471.2** Women in Arabic and Islamic Literature

### Sub-major - Media and Visual Cultures

#### **SM1033.1**

The rapid flow of visual images with which we communicate today – on the internet, by web and moblogs – is a contemporary manifestation of the importance of

visual cultures in everyday life. The Media and Visual Cultures sub-major area equips students with multidisciplinary knowledge and skills in critical art history and theory, digital media, film and television studies, philosophy, and cultural studies. It aims to create career ready graduates with the skills necessary to interpret the production and dissemination of visual images and their meanings in a variety of media as well as cultural and institutional contexts.

### Location

Campus	Mode
Bankstown Campus	Internal
Penrith Campus	Internal

### Unit Set Structure

Students must complete 40 credit points from the following pools

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

#### Level 2 Unit Pool

**100245.2** Asian Cinema  
**101248.3** Australian Art 1  
**101626.3** Children's Literature: Image and Text  
**101250.3** Digital Futures  
**101856.1** Film and Philosophy  
**10157.2** History and Theory of the Avant-Garde  
**100964.2** Introduction to Film Studies  
**101254.3** The Animated Image: Histories and Theories  
**10371.3** The Art Museum - from the Prince to the Public  
**100890.2** The Art of Landscape  
**101795.2** The Musical  
**10158.2** Writings on Art

#### Level 3 Unit Pool

**400087.5** Applied Critical Methods  
**100959.2** Australian Art II  
**100989.2** Cinema and Realism  
**100990.2** Cinema, Culture, Memory  
**100256.4** Film and Affect  
**100866.3** Film and Drama  
**100961.4** Humanities Internship  
**101468.2** Islam, Media and Conflict  
**101732.2** Media, The Everyday and Uneven Modernities  
**101800.2** Media, Violence, Protest, Terror  
**101001.3** Modernity and Cinema  
**101761.2** Philosophy and the Visual  
**101253.3** Public Memory and Commemoration  
**101006.2** Social Semiotics  
**101738.2** The Art Game: Fraud, Forgery, Theft and Perfidy  
**101266.2** The Art of Modern Life  
**101717.2** The Italian Renaissance Unpacked  
**101668.2** World Cinema

**Sub-major - Chinese****SM1035.1**

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

**Location**

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal

**Unit Set Structure**

A sub-major in Chinese is any sequence of 40 credit points with no more than 20 credit points at Level 1.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or
- take a Level 2 unit after passing a Level 3 unit in the same language.

**Level 1 unit pool**

<b>100056.2</b>	Chinese 101
<b>100057.2</b>	Chinese 102

**Level 2 unit pool**

<b>101700.2</b>	Language and Communication Skills 2A: Chinese
<b>101705.2</b>	Language and Communication Skills 2B: Chinese

**Level 3 unit pool**

<b>100063.2</b>	Chinese 302
<b>100064.2</b>	Chinese 303: Twentieth-Century Chinese Literature
<b>100065.2</b>	Chinese 304: Chinese Classical Literature
<b>100066.2</b>	Chinese 305: Chinese Cinema
<b>100067.2</b>	Chinese 307: The Cultural Context of China
<b>101710.2</b>	Languages and Grammatical Concepts 3A: Chinese
<b>101454.2</b>	Intercultural Pragmatics
<b>101668.2</b>	World Cinema

**Sub-major - Italian****SM1036.1**

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

**Location**

Campus	Mode
Bankstown Campus	Internal

**Unit Set Structure**

A sub-major in Italian is any sequence of 40 credit points with no more than 20 credit points at Level 1.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or
- take a Level 2 unit after passing a Level 3 unit in the same language.

**Level 1 unit pool**

<b>100130.2</b>	Italian 101
<b>100131.2</b>	Italian 102

**Level 2 unit pool**

<b>101701.2</b>	Language and Communication Skills 2A: Italian
<b>101706.2</b>	Language and Communication Skills 2B: Italian

**Level 3 unit pool**

<b>100138.2</b>	Italian 303: Contemporary Italy in European and International Contexts
<b>100140.1</b>	Italian 305: Modern Literature
<b>100141.2</b>	Italian 306: Classical Literature
<b>100143.2</b>	Italian 308: Italian Cinema
<b>101711.2</b>	Languages and Grammatical Concepts 3A: Italian
<b>101454.2</b>	Intercultural Pragmatics
<b>101668.2</b>	World Cinema
<b>101669.2</b>	World Literature in Translation

**Sub-major - Japanese****SM1037.1**

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

**Location**

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal

**Unit Set Structure**

A sub-major in Japanese is any sequence of 40 credit points with no more than 20 credit points at Level 1.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or
- take a Level 2 unit after passing a Level 3 unit in the same language.

**Level 1 unit pool**

<b>100085.2</b>	Japanese 101
<b>100086.2</b>	Japanese 102

**Level 2 unit pool**

<b>101702.2</b>	Language and Communication Skills 2A: Japanese
<b>101707.2</b>	Language and Communication Skills 2B: Japanese

**Level 3 unit pool**

<b>100093.2</b>	Japanese 303: Contemporary Culture and Society
<b>100094.1</b>	Japanese 304: Discourse in Japanese
<b>100096.2</b>	Japanese 306: Japanese for Business
<b>100098.1</b>	Japanese 308: Japanese Textual Studies
<b>101712.2</b>	Languages and Grammatical Concepts 3A: Japanese
<b>101454.2</b>	Intercultural Pragmatics
<b>101668.2</b>	World Cinema
<b>101669.2</b>	World Literature in Translation

**Sub-major - Spanish****SM1038.1**

Second language skills are a key competency for employment in an increasingly globalised society. Students undertake study of a language other than English (Arabic, Chinese, Italian, Japanese, Spanish) suited to their level of language proficiency and career aspirations. The major area includes units about specialized topics, including literature, cinema and culture. Competence in a modern language other than English opens doors to many careers in education, government and community-based industries and businesses.

**Location**

Campus	Mode
Bankstown Campus	Internal

**Unit Set Structure**

A sub-major in Spanish is any sequence of 40 credit points with no more than 20 credit points at Level 1.

Students should take units that reflect their level of competence in the language and they should not backtrack, i.e. they must not:

- take a Level 1 unit after passing a Level 2 unit in the same language; or
- take a Level 2 unit after passing a Level 3 unit in the same language.

**Level 1 unit pool**

<b>100145.2</b>	Spanish 101
<b>100146.2</b>	Spanish 102

**Level 2 unit pool**

<b>101703.2</b>	Language and Communication Skills 2A: Spanish
<b>101708.2</b>	Language and Communication Skills 2B: Spanish

**Level 3 unit pool**

<b>100153.2</b>	Spanish 303: Advanced Writing Skills
<b>100154.2</b>	Spanish 304: Advanced Speaking Skills
<b>100155.2</b>	Spanish 305: Contemporary Literature
<b>100156.2</b>	Spanish 306: Contemporary History
<b>100157.2</b>	Spanish 307: Classical Literature
<b>100158.2</b>	Spanish 308: Spanish Sociolinguistics
<b>101713.2</b>	Languages and Grammatical Concepts 3A: Spanish
<b>101454.2</b>	Intercultural Pragmatics
<b>101668.2</b>	World Cinema
<b>101669.2</b>	World Literature in Translation
<b>400087.5</b>	Applied Critical Methods
<b>100961.4</b>	Humanities Internship
<b>101791.2</b>	Short Fiction in the Americas

**Sub-major - Global Studies****SM1040.1**

What does it mean to live in an increasingly globalised world? Global Studies offers students the opportunity to acquire key competencies in cross-cultural communication and global issues to act as socially aware global citizens in international settings. Global Studies addresses issues such as consumer and popular culture, global histories of food and technology, the interconnection of race, identity and transnational migration and intercultural pragmatics. Students have the opportunity to complete a semester of study abroad.

**Location**

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal

**Unit Set Structure**

Students must complete 40 credit points from the following pools with no more than one unit at Level 1.

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

**Level 1 unit pool**

**101737.2** World Politics: An Introduction

**Level 2 unit pool**

**101857.1** Doing Business in China  
**101543.2** India: Global Contexts  
**100871.3** International Texts and Contexts  
**101797.2** Political Terror

**Level 3 unit pool**

**400087.5** Applied Critical Methods  
**100992.3** Communication: Power and Practice  
**101870.1** Climate Change and Culture  
**100994.2** Consumer Culture  
**100858.3** Culture and Globalisation  
**101674.2** Global Histories of Food  
**101735.2** Global Politics  
**101736.2** Governing the Globe  
**100961.4** Humanities Internship  
**101454.2** Intercultural Pragmatics  
**101468.2** Islam, Media and Conflict  
**101733.2** Looking at Global Politics Through Film  
**101732.2** Media, The Everyday and Uneven Modernities  
**101666.2** Race, Identity and Globalisation  
**101717.2** The Italian Renaissance Unpacked  
**101848.1** Transnationalism and Migration  
**101831.2** Transport and the Making of the Modern World  
**101668.2** World Cinema  
**101669.2** World Literature in Translation  
**101830.2** WWII in Asia and the Pacific

**Sub-major - History and Political Thought****SM1041.1**

Since the revival of humanist studies in Renaissance Europe in the 15th century, universities have placed history and political thought at the heart of studies in the humanities. Through study of the political thought and social, political and cultural history of Australian, Asian and European societies, students gain knowledge and critical skills relevant to a variety of careers in education, government and non-governmental organizations. Study of the writings of political thinkers from ancient Greece and Rome, such as Plato and Cicero, and the early modern period, such as Hobbes and Machiavelli, to noted 19th century figures, such as Hegel and Marx, prepare students to engage with contemporary issues of governance, such as sovereignty, power, opportunity, property, civic freedom and social justice.

**Location**

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

**Unit Set Structure**

Students must complete 40 credit points from the following pools:

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

**Level 1 unit pool**

**100848.2** Australian Politics  
**100868.2** Foundations of Modern Australia  
**100873.3** Inventing Modernity  
**101737.2** World Politics: An Introduction

**Level 2 unit pool**

**101882.1** A History of Modern Global Buddhism  
**100244.2** Ancient Western Culture: Periclean Athens  
**100861.3** Empire: European Colonial Rule and its Subjects, 1750-1920  
**100254.3** Exploring Local History  
**100869.2** Foundations of Modern Europe 1500-1800  
**101543.2** India: Global Contexts  
**100001.3** Keeping the Past  
**101843.2** Philosophy and Environment  
**101797.2** Political Terror  
**100904.2** Politics and Business in Asia  
**100277.3** Politics of Australia and Asia Relations  
**100882.2** Politics of Sex and Gender  
**63111.3** Special Topics in Asian and International Studies  
**101867.1** The Ethical Life  
**101404.3** The History of Modern Indonesia  
**101294.3** The Western Philosophical Tradition  
**101871.1** War  
**100293.3** War and Society: 20th Century Australia

**Level 3 unit pool**

400087.5	Applied Critical Methods
100966.3	American History, 1898-1945
100986.2	Australian History 1860-1920
100987.3	Australian History Since 1920
101685.3	Australian Indigenous History
101872.1	Australian Indigenous History from Federation to Reconciliation
100991.2	Citizenship Ancient and Modern
100852.2	Classics of Modern Philosophy
101799.2	Convicts and Settlers - Australian History 1788 - 1840
101249.2	Culture and Thought in Twentieth-Century China
100903.2	Democracy in Asia
100863.3	Ethical Cultures
100864.2	Europe in the Twentieth Century
101844.2	Feminist Theories
101674.2	Global Histories of Food
101735.2	Global Politics
100507.4	History of Modern China to 1949
100961.4	Humanities Internship
100963.3	Interpreting Australia: Australian Historians and Historiography
101801.2	Interpreting Fascism
101823.2	Lay Participation in Justice Processes
100875.4	Literature and Philosophy
101733.2	Looking at Global Politics Through Film
100271.3	Modern Japanese History
101665.3	Politics and Religion
100278.2	Politics of Post-War Japan
100908.2	Race Politics
63178.2	Social and Political Developments in Contemporary China
101667.3	The External Relations of the European Union
101782.2	The History and Politics of Contemporary Central Asia
101783.2	The International Relations of the Middle East Since 1945
101405.2	The Politics of Contemporary Indonesia
100969.2	Theories of Conflict and Violence
101831.2	Transport and the Making of the Modern World
101798.2	Understanding Freedom
101731.2	Understanding Power
101866.1	United States Government and Politics
101375.3	War and Peace
100294.3	Warlords, Artists and Emperors: Power and Authority in Premodern Japan
100971.2	Which New World Order?
101830.2	WWII in Asia and the Pacific

**Sub-major - Asian Studies and International Relations****SM1042.1**

This sub-major has been designed to meet the needs of Australian government, business and society to engage the states and peoples of Asia at all levels in pursuit of national interests and as part of the globalisation process. It

provides students with the opportunity to study modern and contemporary Asia, the rich and diverse histories, politics, cultures and languages of Asian countries and the international issues affecting Australia's interests and role in the region and in the world at large. The sub-major area includes a range of units concerned with the United States, Europe and Australia as well as with Asia itself, and units in international relations. It seeks to produce graduates with a broad, liberal education with the skills to mediate between Australia and the world in general and Asia in particular through political, economic, commercial, cultural, diplomatic and strategic links. Students are encouraged to undertake a sub-major in an Asian language in conjunction with the major. Employment opportunities may be found in the State and Commonwealth public service, overseas organisations, trade and tourist organisations, business and industry, education and research

**Location**

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal

**Unit Set Structure**

Students must complete 40 credit points from the following pools:

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

**Level 1 Unit Pool**

101737.2	World Politics: An Introduction
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**Level 2 Unit Pool**

101882.1	A History of Modern Global Buddhism
100245.2	Asian Cinema
100847.2	Asia and the West: The Imperial Encounter
100850.2	Buddhism in the Contemporary World
100855.2	Contemporary Japan: Culture and Society
101857.1	Doing Business in China
100861.3	Empire: European Colonial Rule and its Subjects, 1750-1920
101543.2	India: Global Contexts
100872.2	International Politics of North Asia
100904.2	Politics and Business in Asia
100277.3	Politics of Australia and Asia Relations
63111.3	Special Topics in Asian and International Studies
101404.3	The History of Modern Indonesia
101871.1	War

**Level 3 Unit Pool**

100985.2	American Foreign Policy Since 1945
400087.5	Applied Critical Methods
101249.2	Culture and Thought in Twentieth-Century China
100903.2	Democracy in Asia
100507.4	History of Modern China to 1949
100961.4	Humanities Internship
100962.2	International Politics of the Southeast Asian Region
101467.2	Islam in Southeast Asia

<b>101733.2</b>	Looking at Global Politics Through Film
<b>100271.3</b>	Modern Japanese History
<b>100278.2</b>	Politics of Post-War Japan
<b>63178.2</b>	Social and Political Developments in Contemporary China
<b>101667.3</b>	The External Relations of the European Union
<b>101782.2</b>	The History and Politics of Contemporary Central Asia
<b>101783.2</b>	The International Relations of the Middle East Since 1945
<b>101405.2</b>	The Politics of Contemporary Indonesia
<b>101866.1</b>	United States Government and Politics
<b>101375.3</b>	War and Peace
<b>100294.3</b>	Warlords, Artists and Emperors: Power and Authority in Premodern Japan
<b>100971.2</b>	Which New World Order?
<b>101830.2</b>	WWII in Asia and the Pacific

### Sub-major - Cultural and Social Analysis

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#### **SM1043.1**

Cultural and Social Analysis is an interdisciplinary sub-major developing knowledge, research skills and analytic capacities relevant to understanding and interpreting landscapes of cultural diversity and social difference in our contemporary world, both in terms of the broad contours, as well as specific micro-social environments. This sub-major provides grounding in contemporary debates and methodologies in cultural studies and social theory, and draws on various disciplines including history, sociology, communications, and linguistics. Topics include popular culture, everyday urban life, cultural and social impacts of scientific theories and new technologies, multiculturalism, and contemporary spirituality. Study in this area is relevant for work involving commentary and analysis of contemporary social issues and cultural practices (e.g. journalism, teaching, activism) and fields concerned with designing, delivering and evaluating cultural and artistic productions, and education, communication, welfare or health services, in culturally diverse communities.

#### Location

Campus	Mode
Bankstown Campus	Internal
Penrith Campus	Internal

#### Unit Set Structure

Students must complete 40 credit points from the Level 2/3 units from the following pools

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

#### Level 2 Unit Pool

<b>101409.2</b>	Aboriginal Cultural Texts
<b>100854.3</b>	Contemporary Popular Cultures
<b>100871.3</b>	International Texts and Contexts
<b>101251.2</b>	Introduction to Psychoanalysis
<b>100273.3</b>	New Ethnicities, Old Racisms
<b>100882.2</b>	Politics of Sex and Gender

<b>100281.3</b>	Sexual Culture/s
<b>100884.2</b>	Social Inequalities
<b>100886.2</b>	Special Topics in Cultural and Social Analysis
<b>100889.2</b>	Technocultures
<b>101867.1</b>	The Ethical Life
<b>100291.4</b>	Urban Life/Urban Culture
<b>101879.1</b>	Women with Muslim Identity
<b>100298.2</b>	Youth Cultures and Moral Panics

#### Level 3 Unit Pool

<b>400087.5</b>	Applied Critical Methods
<b>101265.2</b>	Children's Culture
<b>100990.2</b>	Cinema, Culture, Memory
<b>101870.1</b>	Climate Change and Culture
<b>100992.3</b>	Communication: Power and Practice
<b>100858.3</b>	Culture and Globalisation
<b>100996.3</b>	Death and Culture
<b>100860.3</b>	Emotions, Culture and Community
<b>100998.4</b>	Evolutionary Thinking
<b>101844.2</b>	Feminist Theories
<b>101716.3</b>	Healing and Culture
<b>100961.4</b>	Humanities Internship
<b>101468.2</b>	Islam, Media and Conflict
<b>101739.3</b>	Literature and Trauma
<b>101732.2</b>	Media, The Everyday and Uneven Modernities
<b>101800.2</b>	Media, Violence, Protest, Terror
<b>100877.3</b>	Multicultural Studies
<b>101252.2</b>	Psychoanalytic Criticism
<b>101253.3</b>	Public Memory and Commemoration
<b>101003.2</b>	Religion and Culture
<b>101005.4</b>	Representing Crime
<b>101006.2</b>	Social Semiotics
<b>101832.2</b>	Talking Normal: Sociolinguistics and Modern Literature
<b>101008.2</b>	Technologies of Racism
<b>101009.3</b>	The Body in Culture
<b>101848.1</b>	Transnationalism and Migration
<b>101798.2</b>	Understanding Freedom
<b>101731.2</b>	Understanding Power
<b>101010.3</b>	What is the Human?

### Sub-major - English, Text and Writing

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#### **SM1044.1**

The English, Text and Writing sub-major invites students to explore contemporary approaches to language, literary study and writing, including literary criticism and theory, linguistic analysis, genre and textual study, and creative writing. English, Text and Writing focuses on the imaginative workings of language, and students can study a wide selection of modern and classic literature, as well as the relationships between written texts and other media such as film and information technology. Students also have the opportunity to produce their own creative writing and to edit and publish their work. Career prospects include publishing, editing, teaching, writing and advertising.



**Location**

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

**Unit Set Structure**

Students would be eligible for this sub-major having successfully completed 40 credit points.

Students must complete 40 credit points from the following pools with no more than one unit at Level 1.

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

**Level 1 unit pool**

**100641.3** Approaches to Text

**Level 2 unit pool**

**101626.3** Children's Literature: Image and Text  
**100900.3** Comedy and Tragedy  
**101408.2** Critical Discourse Analysis  
**101452.2** History of the English Language  
**100870.2** Hypertext Fictions  
**100871.3** International Texts and Contexts  
**100964.2** Introduction to Film Studies  
**100505.2** Special Topics in English, Text and Writing  
**101795.2** The Musical  
**100893.3** The Novel  
**101455.3** The Structure of English  
**100896.3** Writing Fiction  
**101869.1** Studies in Postcolonial Literature  
**101873.1** The Sound of Language

**Level 3 unit pool**

**400087.5** Applied Critical Methods  
**100845.3** American Literature  
**100849.4** Australian Textual Studies  
**101242.3** Children's Literature  
**100856.4** Creative Non-Fiction  
**100859.3** Creative Writing Project  
**100256.4** Film and Affect  
**100866.3** Film and Drama  
**100961.4** Humanities Internship  
**101724.2** Literary Animals  
**100875.4** Literature and Philosophy  
**101739.3** Literature and Trauma  
**100874.4** Literature, History and Culture  
**101033.4** Modernism  
**101001.3** Modernity and Cinema  
**101406.2** Queering Text  
**101650.3** Race in Literature  
**101005.4** Representing Crime  
**101791.2** Short Fiction in the Americas  
**101832.2** Talking Normal: Sociolinguistics and Modern Literature  
**101453.2** Text and Discourse in English  
**101471.2** Women in Arabic and Islamic Literature  
**101668.2** World Cinema  
**101669.2** World Literature in Translation  
**101670.3** Writing and Society

**100895.4** Writing For Performance  
**101011.3** Writing Poetry  
**100582.2** Writing Portfolio  
**101796.1** 19th Century American Literature  
**101880.1** The Space of Literature

**Sub-major - Islamic Studies****SM1045.1**

Students engage in interdisciplinary study essential to an understanding of Islam, past and present. The area of study balances historical and modern Islamic studies and research methods. One of the keys to Islamic Studies is 'relevance' to contemporary Australian society but relevance can only come from a sound comprehension of past traditions in Islamic scholarship and their socio-historical contexts. Preparation for graduate study is also a key objective of this program, with its focus on developing critical and interdisciplinary research skills through a combination of approaches.

**Location**

Campus	Mode
Bankstown Campus	Internal

**Unit Set Structure**

Students must complete 40 credit points from the following pools with no more than one unit at level 1

**Level 2 unit pool**

**101464.3** Great Texts of Islam: Qur'an and Hadith  
**100273.3** New Ethnicities, Old Racisms

**Level 3 unit pool**

**101688.2** Anthropology of Religion  
**400087.5** Applied Critical Methods  
**101466.2** Ethical Traditions in Islam  
**100961.4** Humanities Internship  
**101822.2** Islam in the West  
**101463.4** Islam in the Modern World  
**101467.2** Islam in Southeast Asia  
**101468.2** Islam, Media and Conflict  
**101465.2** Islamic Law in a Changing World  
**100877.3** Multicultural Studies  
**101359.5** Sociology of Religion  
**101792.2** Texts in Contemporary Arab Society and Culture  
**101783.2** The International Relations of the Middle East Since 1945  
**101471.2** Women in Arabic and Islamic Literature

**Sub-major - Linguistics****SM1046.1**

Through study of what language is and how it works, students gain conceptual tools and knowledge relevant to

the relationship of language and society as well linguistics-related disciplines, such as Sociolinguistics, Psycholinguistics, Developmental Linguistics, Bilingualism, and other applied linguistics areas. Understanding of the relationship between language learning, communicative competence and cultural practices, both in the Australian context and in a global context, provides a foundation for many careers including primary and secondary teaching, policy analysis, communication, social and welfare services in culturally diverse communities.

### Location

Campus	Mode
Bankstown Campus	External

### Unit Set Structure

Students must complete 40 credit points from the following pools with no more than one unit at level 1.

Note: Not all units will be offered each year. Units will be offered on a rotational basis.

#### Level 1 unit pool

<b>100194.2</b>	Introduction to Interpreting
<b>100195.2</b>	Introduction to Translation

#### Level 2 unit pool

<b>101452.2</b>	History of the English Language
<b>100928.3</b>	Linguistics
<b>101873.1</b>	The Sound of Language
<b>101302.2</b>	Translation Technologies

#### Level 3 unit pool

<b>400087.5</b>	Applied Critical Methods
<b>101449.2</b>	Bilingualism and Biculturalism
<b>101441.2</b>	English Semantics and Pragmatics
<b>101454.2</b>	Intercultural Pragmatics
<b>101709.2</b>	Languages and Grammatical Concepts 3A: Arabic
<b>101710.2</b>	Languages and Grammatical Concepts 3A: Chinese
<b>101711.2</b>	Languages and Grammatical Concepts 3A: Italian
<b>101712.2</b>	Languages and Grammatical Concepts 3A: Japanese
<b>101713.2</b>	Languages and Grammatical Concepts 3A: Spanish
<b>101451.2</b>	Second Language Acquisition
<b>101721.2</b>	Second Language Learning and Teaching
<b>101450.2</b>	Sociolinguistics
<b>100201.2</b>	Special Study in Languages and Linguistics
<b>101832.2</b>	Talking Normal: Sociolinguistics and Modern Literature
<b>101453.2</b>	Text and Discourse in English

## Sub-major - Indigenous Australian Studies

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### SM1049.1

What does it mean to live in Indigenous Australia? The Indigenous Australian Studies Major and sub-majors offers students the exciting opportunity to acquire key cultural competencies that will enable them to understand and work more effectively with Indigenous Australians in professions such as the arts, communications, media industries; education; government and non-government; policy; health; sciences; and community services. The Indigenous Australian Studies Major and sub-majors addresses the cultural, historical, social and economic issues affecting Indigenous and Non-Indigenous Australians and relationships.

### Location

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

### Unit Set Structure

Students must complete 40 credit points as follows

<b>101751.2</b>	Contextualising Indigenous Australia (Day Mode)
<b>101752.1</b>	Pigments of the Imagination
<b>101756.1</b>	Bridging the Gap: Re-engaging Indigenous Learners

Choose one of

<b>101757.1</b>	The Making of the 'Aborigines'
<b>101758.1</b>	Learning through Indigenous Australian Community Service (Day Mode)
<b>101759.1</b>	Rethinking Research with Indigenous Australians: Independent Study Project (Day Mode)

## Sub-major - Indigenous Economics

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### SM1050.1

What does it mean to live in Indigenous Australia? The Indigenous Australian Studies Major and sub-majors offers students the exciting opportunity to acquire key cultural competencies that will enable them to understand and work more effectively with Indigenous Australians in professions such as the arts, communications, media industries; education; government and non-government; policy; health; sciences; and community services. The Indigenous Australian Studies Major and sub-majors addresses the cultural, historical, social and economic issues affecting Indigenous and Non-Indigenous Australians and relationships.

**Location**

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

**Unit Set Structure**

Students must complete 40 credit points as follows

<b>101751.2</b>	Contextualising Indigenous Australia (Day Mode)
<b>101753.2</b>	Revaluating Indigenous Economics (Day Mode)
<b>101757.1</b>	The Making of the 'Aborigines'

Choose one of

<b>101758.1</b>	Learning through Indigenous Australian Community Service (Day Mode)
<b>101759.1</b>	Rethinking Research with Indigenous Australians: Independent Study Project (Day Mode)

**Sub-major - Indigenous Australian Creative Expressions****SM1051.1**

What does it mean to live in Indigenous Australia? The Indigenous Australian Studies Major and sub-majors offers students the exciting opportunity to acquire key cultural competencies that will enable them to understand and work more effectively with Indigenous Australians in professions such as the arts, communications, media industries; education; government and non-government; policy; health; sciences; and community services. The Indigenous Australian Studies Major and sub-majors addresses the cultural, historical, social and economic issues affecting Indigenous and Non-Indigenous Australians and relationships.

**Location**

Campus	Mode
Bankstown Campus	Internal
Parramatta Campus	Internal
Penrith Campus	Internal

**Unit Set Structure**

Students must complete 40 credit points as follows

<b>101751.2</b>	Contextualising Indigenous Australia (Day Mode)
<b>101754.2</b>	From Corroborees to Curtain Raisers (Day Mode)
<b>101755.1</b>	From Ochre to Acrylics to New Technologies

Choose one of

<b>101758.1</b>	Learning through Indigenous Australian Community Service (Day Mode)
<b>101759.1</b>	Rethinking Research with Indigenous Australians: Independent Study Project (Day Mode)

**Sub-major - Education Studies****SM1067.1**

The Education Studies sub-major comprises a foundation pool of units which addresses key issues in contemporary educational thinking and practice. Education has a key role to play in bridging the gap between social advantage and disadvantage, in transforming the lives of individuals and their families and building capacity within communities.

**Location**

Campus	Mode
Bankstown Campus	Internal
Penrith Campus	Internal

**Unit Set Structure**

Students must complete 40 credit points from the following units

<b>101259.2</b>	Learning and Creativity
<b>101263.1</b>	Education and Transformation
<b>101874.1</b>	Experiential Learning in Communities (ELC)
<b>101661.1</b>	Education in a Cosmopolitan Society
<b>101662.1</b>	Young People, Their Futures and Education
<b>101663.1</b>	Education for Sustainability

**Sub-major - Psychological Studies****SM1069.1**

The Psychological Studies sub-major comprises units in the discipline of psychology that focus on the field of inquiry that uses scientific techniques and methods to understand and explain behaviour and experience. Units in the program are drawn from the following core areas of psychology: brain and behaviour, learning, motivation and emotion, social psychology, lifespan development, perception, and cognitive processes. A Psychological Studies sub-major does not meet APAC requirements for an accredited sequence in Psychology. Students wishing to enrol in an accredited Psychology sequence need to complete the Psychology key program of 200 credit points.

**Location**

Campus	Mode
Bankstown Campus	Internal
Penrith Campus	Internal

## Unit Set Structure

This sub-major is restricted to students enrolled in 1604 - Bachelor of Arts, 1652 - Bachelor of Arts (Pathway to Teaching Secondary) or 1655 - Bachelor of Arts (Dean's Scholars).

Students must complete 40 credit points as follows

<b>101184.2</b>	Psychology: Human Behaviour
<b>101183.2</b>	Psychology: Behavioural Science
<b>100013.3</b>	Experimental Design and Analysis

Choose one of

<b>101680.3</b>	Perception
<b>101684.3</b>	Brain and Behaviour
<b>101676.2</b>	Human Learning
<b>101677.3</b>	Cognitive Processes
<b>101682.4</b>	Developmental Psychology

## Sub-major - Computer Systems

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### SM3000.1

This sub-major is only available to students enrolled in the Bachelor of Computing or Bachelor of Information and Communications Technology courses.

### Location

Campus	Mode
Penrith Campus	Internal

### Unit Set Structure

Students must complete the following four units

<b>300096.5</b>	Computer Organisation
<b>300167.3</b>	Systems Programming 1
<b>300092.1</b>	Computer Architecture
<b>300149.2</b>	Operating Systems

## Sub-major - Systems Administration

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### SM3001.1

This sub-major is only available to students enrolled in the Bachelor of Computing or Bachelor of Information and Communications Technology courses.

### Location

Campus	Mode
Penrith Campus	Internal

### Unit Set Structure

Students must complete the following four units

<b>300167.3</b>	Systems Programming 1
<b>300103.2</b>	Data Structures and Algorithms
<b>300149.2</b>	Operating Systems
<b>300165.3</b>	Systems Administration Programming

## Sub-major - Systems Security

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### SM3002.1

This sub-major is only available to students enrolled in the Bachelor of Computing or Bachelor of Information and Communications Technology courses.

### Location

Campus	Mode
Penrith Campus	Internal

### Unit Set Structure

Students must complete the following four units

<b>300167.3</b>	Systems Programming 1
<b>300128.3</b>	Information Security
<b>300143.3</b>	Network Security
<b>300149.2</b>	Operating Systems

## Sub-major - Systems Programming

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### SM3003.1

This sub-major is only available to students enrolled in the Bachelor of Computing or Bachelor of Information and Communications Technology courses.

### Location

Campus	Mode
Penrith Campus	Internal

### Unit Set Structure

Student must complete 40 credit points as follows

<b>300167.3</b>	Systems Programming 1
<b>300103.2</b>	Data Structures and Algorithms
<b>300149.2</b>	Operating Systems

And choose one of

<b>300115.2</b>	Distributed Systems and Programming
<b>300168.2</b>	Systems Programming 2

## Sub-major - Formal Systems

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### SM3004.1

This sub-major is only available to students enrolled in the Bachelor of Computing or Bachelor of Information and Communications Technology courses.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Student must complete 40 credit points as follows

<b>300103.2</b>	Data Structures and Algorithms
<b>300121.2</b>	Formal Languages and Automata
<b>300404.2</b>	Formal Software Engineering

And choose one of

<b>300368.2</b>	Intelligent Systems
<b>300093.3</b>	Computer Graphics
<b>200237.3</b>	Mathematics for Engineers 1
<b>200193.2</b>	Abstract Algebra
<b>200033.4</b>	Applied Statistics
<b>200042.3</b>	Introduction to Operations Research

**Sub-major - Applied Mathematics****SM3005.1**

This sub-major is only available to students enrolled in the Bachelor of Computing or Bachelor of Information and Communications Technology courses.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Student must complete 40 credit points as follows

<b>200237.3</b>	Mathematics for Engineers 1
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And choose three of

<b>200238.2</b>	Mathematics for Engineers 2
<b>200242.3</b>	Mathematics for Engineers 3
<b>200023.3</b>	Analysis
<b>200193.2</b>	Abstract Algebra
<b>200033.4</b>	Applied Statistics
<b>200042.3</b>	Introduction to Operations Research
<b>200027.2</b>	Linear Algebra

**Sub-major - Web Application Development (for Computing Students)****SM3006.1**

This sub-major is only available to students enrolled in the Bachelor of Computing or Bachelor of Information and Communications Technology courses.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Students must complete the following four units

<b>300582.2</b>	Technologies for Web Applications
<b>300583.2</b>	Web Systems Development
<b>300111.2</b>	Developing Web Applications with XML
<b>300574.2</b>	Internet Structures and Web Servers

**Sub-major - Web Application Development (for Non-Computing Students)****SM3007.1**

This sub-major is available to all UWS students except those enrolled in the Bachelor of Computing or Bachelor of Information and Communications Technology courses.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Student must complete 40 credit points as follows

<b>300580.2</b>	Programming Fundamentals
<b>300582.2</b>	Technologies for Web Applications
<b>300583.2</b>	Web Systems Development

And choose one of

<b>300104.4</b>	Database Design and Development
<b>300570.3</b>	Human-Computer Interaction
<b>300569.2</b>	Computer Security
<b>300111.2</b>	Developing Web Applications with XML
<b>300574.2</b>	Internet Structures and Web Servers

**Sub-major - Networking****SM3008.1**

This sub-major is available to all students except those enrolled in the Bachelor of Computing (Networks).

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Student must complete 40 credit points as follows

<b>300565.2</b>	Computer Networking
<b>300095.4</b>	Computer Networks and Internets
<b>300575.2</b>	Networked Systems Design

And choose one of

<b>300143.3</b>	Network Security
<b>300166.2</b>	Systems and Network Management
<b>300088.1</b>	Broadband Networking

### Sub-major - Health Information Management

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#### SM3009.1

This sub-major deals with the management of Health Information and the management and analysis of that data via databases. This sub-major is available to all students except those enrolled in the Health Informatics key program within the Bachelor of Computing course.

#### Location

Campus	Mode
Penrith Campus	Internal

#### Unit Set Structure

Students must complete the following four units

<b>300566.2</b>	Introduction to Health Informatics
<b>300104.4</b>	Database Design and Development
<b>300567.3</b>	e-Health
<b>200036.3</b>	Data Mining and Visualisation

### Sub-major - Health Information Applications

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#### SM3010.1

This sub-major will deal with the application of approaches, tools and techniques and the development of programs appropriate for Health Information systems. This sub-major is available to all students except those enrolled in the Health Informatics key program within the Bachelor of Computing course.

#### Location

Campus	Mode
Penrith Campus	Internal

#### Unit Set Structure

Students must complete the following four units

<b>300566.2</b>	Introduction to Health Informatics
<b>300582.2</b>	Technologies for Web Applications
<b>300567.3</b>	e-Health
<b>300568.2</b>	Services Computing in Healthcare

Note: 300582 Technologies for Web Applications requires 300580 Programming Fundamentals as a pre-requisite.

### Sub-major - Entertainment Computing

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#### SM3011.1

This sub-major is available to all students.

#### Location

Campus	Mode
Penrith Campus	Internal

#### Unit Set Structure

Student must complete 40 credit points as follows

<b>300580.2</b>	Programming Fundamentals
<b>300491.2</b>	Games Technology
<b>300093.3</b>	Computer Graphics

Choose one of

<b>300492.2</b>	Games Theory and Design
<b>300862.1</b>	Video Games Development

Please note 300492 Games Theory and Design will be replaced by 300862 Video Games Development from 2012.

### Sub-major - Mathematics

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#### SM3025.1

This sub-major is available to all students. This sub-major may meet the NSW Institute of Teachers accreditation requirements for teaching Mathematics as a second subject in NSW state high schools.

#### Location

Campus	Mode
Penrith Campus	Internal

#### Unit Set Structure

Student must complete 40 credit points as follows

<b>300672.2</b>	Mathematics 1A
<b>300673.2</b>	Mathematics 1B

And choose two of

<b>200028.3</b>	Advanced Calculus
<b>200027.2</b>	Linear Algebra
<b>200030.3</b>	Differential Equations

### Sub-major - Statistics

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#### SM3026.1

This sub-major is available to all students.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Student must complete 40 credit points as follows  
Choose one of

<b>200263.4</b>	Biometry
<b>200032.5</b>	Statistics for Business
<b>300700.5</b>	Statistical Decision Making

And choose at least one of

<b>200033.4</b>	Applied Statistics
<b>300606.2</b>	Foundations of Statistical Modelling and Decision Making
<b>300104.4</b>	Database Design and Development

And choose at least one of

<b>200037.4</b>	Regression Analysis & Experimental Design
<b>200038.3</b>	Time Series and Forecasting
<b>200036.3</b>	Data Mining and Visualisation
<b>200039.2</b>	Surveys and Multivariate Analysis

**Sub-major - Computational Decision Making****SM3027.1**

This sub-major is available to all students.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Student must complete 40 credit points as follows

<b>200025.2</b>	Discrete Mathematics
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And choose one of

<b>200263.4</b>	Biometry
<b>200032.5</b>	Statistics for Business
<b>300700.5</b>	Statistical Decision Making

And choose two of

<b>300606.2</b>	Foundations of Statistical Modelling and Decision Making
<b>200042.3</b>	Introduction to Operations Research
<b>200027.2</b>	Linear Algebra
<b>300670.2</b>	Optimisation Techniques
<b>300671.2</b>	Principles and Practice of Decision Making
<b>200044.1</b>	Simulation Techniques

Students enrolled in Bachelor of Information and Communications Technology course may replace 200025 Discrete Mathematics with 300699 Discrete Structures and Complexity.

Note: For students who want to complete a Mathematics sub-major, but may not necessarily want to qualify for NSW Institute of Teachers accreditation, 200029 Numerical Analysis would be added to the list of Level 2 units and 200024 Mathematical Finance would be added to the list of Level 3 units.

**Sub-major - Knowledge Discovery and Data Mining****SM3028.1**

This sub-major is available to all students.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Students must complete 40 credit points as follows

<b>300606.2</b>	Foundations of Statistical Modelling and Decision Making
<b>300104.4</b>	Database Design and Development
<b>200036.3</b>	Data Mining and Visualisation

And choose one of

<b>200263.4</b>	Biometry
<b>200032.5</b>	Statistics for Business
<b>300700.5</b>	Statistical Decision Making

**Sub-major - Construction Economics****SM3029.1**

This sub-major is a requirement for membership of the Australian Institute of Quantity Surveyors and is a useful course of study for those interested in the area of cost control and project planning.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Students must complete the following four units

<b>200503.2</b>	Construction Information Systems
<b>200487.3</b>	Quantity Surveying 2
<b>300748.2</b>	Quality and Value Management
<b>300726.2</b>	Estimating 2

## Sub-major - IT Support

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### SM3031.1

This sub-major is only available to students enrolled in the Bachelor of Information and Communications Technology course.

#### Location

Campus	Mode
Penrith Campus	Internal

#### Unit Set Structure

Student must complete 40 credit points as follows

<b>300150.3</b>	PC Workshop
<b>300576.2</b>	Networking Workshop
<b>300136.4</b>	I.T. Support Practicum

And choose one of

<b>200083.2</b>	Marketing Principles
<b>300167.3</b>	Systems Programming 1
<b>200120.1</b>	E-Business Fundamentals and Systems

## Sub-major - Computer Engineering

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### SM3032.1

This sub-major is available to students other than those enrolled in B Engineering (Computer) Key Program. This sub-major includes core subjects of computer engineering. It provides a comprehensive introduction to essential aspects of the discipline.

#### Location

Campus	Mode
Penrith Campus	Internal

#### Unit Set Structure

Student must complete 40 credit points as follows

<b>300029.3</b>	Engineering Visualization
<b>300167.3</b>	Systems Programming 1
<b>300096.5</b>	Computer Organisation

And choose one of

<b>300092.1</b>	Computer Architecture
<b>300149.2</b>	Operating Systems
<b>300044.2</b>	Microcontrollers and PLCs

## Sub-major - Construction

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### SM3033.1

This sub-major is available to any student in UWS other than those enrolled in Bachelor of Construction Management or Bachelor of Housing. This sub-major includes core subjects of construction. It provides a comprehensive introduction to essential aspects of the discipline.

#### Location

Campus	Mode
Penrith Campus	Internal

#### Unit Set Structure

Students must complete the following four units

<b>300707.2</b>	Building 2
<b>BG302A.1</b>	Building Regulation Studies
<b>200471.3</b>	Construction Technology 5 (Envelope)
<b>MG313A.1</b>	Project Management

## Sub-major - Electrical Engineering

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### SM3034.1

This sub-major is available to students other than those enrolled in B Engineering (Electrical) Key Program. This sub-major includes core subjects of electrical engineering. It provides a comprehensive introduction to essential aspects of the discipline.

#### Location

Campus	Mode
Penrith Campus	Internal

#### Unit Set Structure

Student must complete 40 credit points as follows

<b>300071.2</b>	Electrical Machines 1
<b>300481.2</b>	Engineering Electromagnetics

And choose two of

<b>300026.3</b>	Energy Systems
<b>300070.4</b>	Electrical Drives
<b>300024.2</b>	Electronic Systems Design

## Sub-major - Environmental Engineering

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### SM3035.1

This sub-major is available to students other than those enrolled in B Engineering (Environmental) Key Program. This sub-major includes core subjects of environmental



engineering. It provides a comprehensive introduction to essential aspects of the discipline.

### Location

Campus	Mode
Penrith Campus	Internal

### Unit Set Structure

Students must complete the following four units

<b>300469.2</b>	Introductory Chemistry
<b>EY101A.1</b>	Terrestrial Environment Management
<b>MG309A.2</b>	Water and Waste Management
<b>EH321A.1</b>	Air Quality Assessment & Management (UG)

### Sub-major - Wireless Engineering

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#### **SM3036.1**

This sub-major is available to students other than those enrolled in B Engineering (Telecommunications) Key Program. This sub-major covers specialised topics on wireless communications, in addition to general concepts on telecommunications.

### Location

Campus	Mode
Penrith Campus	Internal

### Unit Set Structure

Student must complete 40 credit points as follows

<b>300007.2</b>	Communication Systems
<b>300065.4</b>	Wireless Communications
<b>300024.2</b>	Electronic Systems Design

And choose one of

<b>300068.3</b>	Communication Electronics
<b>300489.2</b>	Radio and Satellite Communication

### Sub-major - Food Technology - Secondary Teaching

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#### **SM3038.1**

The food technology sub-major brings together food science and nutrition with education studies to meet the graduate requirements for teaching in food technology as a second teaching area. This sub-major includes specialised studies in food processing, new food product development, nutrition, contemporary food issues, and the food marketplace relevant to the Australian food industry. The program has strong industry links, well-equipped facilities including food processing pilot plant and modern kitchen facilities.

### Location

Campus	Mode
Hawkesbury Campus	Internal

### Unit Set Structure

Students must complete four units as follows

#### Year 1

##### Spring session

<b>300805.1</b>	Food Science 1
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#### Year 2

##### Autumn session

<b>300842.1</b>	Food Science 2
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Choose two of

#### Year 2

##### Autumn session

<b>300933.1</b>	Nutrition and Health 1
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#### Year 2

##### Spring session

<b>300879.1</b>	Experimental Foods
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#### Year 3

##### Autumn session

<b>300871.1</b>	Culinary Science
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#### Year 3

##### Spring session

<b>300915.1</b>	Food Product Development
<b>300904.1</b>	Advanced Food Science and Technology

### Sub-major - Statistics

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#### **SM3039.1**

This sub-major covers topics in statistics from an introductory level to exploring complex statistical techniques that are used to analyse and interpret data generated in many disciplines. Thus students contemplating honours in any discipline should seriously consider taking this sub-major as part of their undergraduate degree. It is open to all UWS students.

### Location

Campus	Mode
Campbelltown Campus	Internal

Campus	Mode
Parramatta Campus	Internal

### Unit Set Structure

The Statistics sub major is available to all UWS undergraduate students except those enrolled in the 3679 Bachelor of Science (Mathematical Science) course.

Students must complete four units as follows

<b>200033.4</b>	Applied Statistics
<b>200037.4</b>	Regression Analysis & Experimental Design
<b>200038.3</b>	Time Series and Forecasting

Choose one of

<b>200263.4</b>	Biometry
<b>200032.5</b>	Statistics for Business
<b>300700.5</b>	Statistical Decision Making

### Sub-major - Aquatic Environments

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#### SM3040.1

Aquatic and marine environments play vital roles in providing food, water, recreation and other ecosystem services to human society, as well as providing habitat for important species that make up global biodiversity. This submajor will equip students with the background knowledge and training to work in aquatic and marine environments, assess water quality to learn skills in inquiry and problem solving and understand legislation on water, so that they can contribute beneficially to management and/or conservation of waterways and oceans and the biodiversity within them.

#### Location

Campus	Mode
Hawkesbury Campus	Internal

### Unit Set Structure

**The Aquatic Environments sub major is available to all UWS undergraduate students except those enrolled in the M3046 Aquatic Biology Major**

Students must complete the following four units

#### Level 1

<b>300824.1</b>	Management of Aquatic Environments
<b>300814.1</b>	Water Quality Assessment and Management

#### Level 3

<b>300929.1</b>	Aquatic Ecology
<b>300870.1</b>	Water in the Landscape

### Sub-major - Biochemistry and Molecular Biology

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#### SM3041.1

This sub-major will develop knowledge and skills in biochemistry and molecular biology important in industrial or research-based employment (biotech companies, pathology, quality assurance, university and hospital labs and scientific sales, government policy analysis). Students will read, critique and evaluate research so that they develop independent learning skills and the confidence needed to deal with the rapid expansion of content in this area of Biology.

#### Location

Campus	Mode
Campbelltown Campus	Internal
Hawkesbury Campus	Internal
Parramatta Campus	Internal

### Unit Set Structure

**The Biochemistry and Molecular Biology sub major is available to all UWS undergraduate students except those enrolled in the M3045 Biochemistry and Molecular Biology Major.**

Students must complete four units as follows

#### Level 2

<b>300936.1</b>	Functional Proteins and Genes
<b>300848.1</b>	Metabolism
<b>300817.1</b>	Molecular Biology

#### Level 3

Choose one of

<b>300927.1</b>	Molecular Medicine
<b>300820.1</b>	Genes, Genomics and Human Health

### Sub-major - Conservation Biology

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#### SM3042.1

Conservation biology has emerged as a field of study from a synthesis of the ecological, demographic, genetic and societal risks faced by small natural populations. This submajor equips students with skills in fundamental biology, in the ecology of populations and communities, in population genetics and in the legal conservation framework to enable them to work in this area.

#### Location

Campus	Mode
Hawkesbury Campus	Internal

## Unit Set Structure

The Conservation Biology sub major is available to all UWS undergraduate students except those enrolled in the M3049 Conservation Biology Major

Students must complete four units as follows

### Level 1

Choose one of

- 300802.1** Biodiversity  
**300813.1** Wildlife Studies

### Level 2

- 300839.1** Ecology  
**300845.1** Genetics

### Level 3

- 300855.1** Conservation Biology

## Sub-major - Geochemistry

### SM3043.1

This submajor recognises the relevance of geochemistry in our rapidly expanding mining and minerals industries, and its importance in the understanding of related environmental issues. It offers a strong grounding in key areas of geochemistry and chemistry, and emphasises the integration of theory and practical skills and their relevance to real world applications in industry, research and the environment.

### Location

Campus	Mode
Parramatta Campus	Internal

## Unit Set Structure

The Geochemistry sub major is available to all UWS undergraduate students except those enrolled in the M3053 Geochemistry Major

Students must complete four units as follows

### Level 1

- 300822.1** Introduction to Earth Science  
**300809.1** Introductory Geochemistry

### Level 2

- 300846.1** Geochemical Systems

### Level 3

- 300857.1** Environmental Geochemistry

## Sub-major - Microbiology

### SM3044.1

Microorganisms impact on all aspects of our lives. A microbiology submajor will equip students with the skills and knowledge of microbiology and molecular microbiology relevant to employment in research laboratories and industries including biotechnology companies, medical and environmental laboratories, food, wine and pharmaceutical companies, quality assurance and scientific sales.

### Location

Campus	Mode
Hawkesbury Campus	Internal

## Unit Set Structure

The Microbiology sub major is available to all UWS undergraduate students except those enrolled in the M3055 Microbiology Major.

Students must complete four units as follows

### Level 2

- 300833.1** Microbiology 1  
**300896.1** Microbiology 2

### Level 3

- 300866.1** Analytical Microbiology  
**300826.1** Medical Microbiology

## Sub-major - Zoology

### SM3045.1

This submajor will allow students to develop scientific understanding of how animals function and interact with their environment; from their ecology and evolution; to physiology and biochemistry of tissues and major organ systems, as well as down to structure and function of biomolecules and cells.

### Location

Campus	Mode
Hawkesbury Campus	Internal

## Unit Set Structure

The Zoology sub major is available to all UWS undergraduate students except those enrolled in the M3056 Zoology Major.

Students must complete four units as follows

### Level 1

- 300813.1** Wildlife Studies

**Level 2**

**300834.1** Animal Health and Welfare

**Level 3**

Choose two of

**300918.1** Invertebrate Biology  
**300861.1** Vertebrate Biodiversity  
**300878.1** Animal Behaviour  
**300855.1** Conservation Biology

### Sub-major - Sustainable Environmental Management

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**SM3046.1**

Solution to environmental problems requires both a technical/scientific 'fix', and an agreed social implementation, or management 'fix'. This submajor covers the essentials of environmental management as an academic discipline, giving students knowledge and skills in the social, legislative and planning frameworks within which environmental practitioners must work to implement solutions to environmental problems.

**Location**

<b>Campus</b>	<b>Mode</b>
Hawkesbury Campus	Internal

**Unit Set Structure**

**The Sustainable Environmental Management sub major is available to all UWS undergraduate students except those enrolled in the M3050 Environmental Management Major.**

Students must complete four units as follows

**Level 2**

**300840.1** Environmental Planning and Climate Change

**Level 3**

**300841.1** Environmental Regulation and Policy  
**300858.1** Environmental Risk Management  
**300860.1** Urban Environment

### Sub-major - Climate Change

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**SM3048.1**

One of the major problems society faces is how to move to an economy and way of life that is sustainable for our planet. This submajor equips students with the skills to address the scientific issues behind global climate change; what makes it happen, and how we can reduce or mitigate its impacts on the earth and its biota.

**Location**

<b>Campus</b>	<b>Mode</b>
Hawkesbury Campus	Internal

**Unit Set Structure**

**The Climate Change sub major is available to all UWS undergraduate students except those enrolled in the M3048 Climate Change Major.**

Students must complete four units as follows

**Level 2**

**300837.1** Climate Change Science  
**300840.1** Environmental Planning and Climate Change

**Level 3**

**300909.1** Biological Adaptation to Climate Change  
**300856.1** Ecosystem Carbon Accounting

### Sub-major - Immunology and Cell Biology

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**SM3049.1**

This sub-major will equip students with knowledge and skills in immunology, cell and molecular biology to allow students to enter industrial or research-based employment in this area (biotech companies, pathology, quality assurance, university and hospital labs and scientific sales, government policy analysis). As this area has expanding knowledge and technologies, outcomes also include the ability to read, critique and evaluate emerging research with the view to becoming a life-long learner in the field.

**Location**

<b>Campus</b>	<b>Mode</b>
Campbelltown Campus	Internal
Hawkesbury Campus	Internal
Parramatta Campus	Internal

**Unit Set Structure**

Students must complete four units as follows

**Level 2**

**300817.1** Molecular Biology  
**300847.1** Immunology

**Level 3**

**300850.1** Advanced Cell Biology  
**300905.1** Advanced Immunology

**Sub-major - Physics****SM3050.1**

The physics sub-major is designed to provide the basic curriculum for students who have an interest in physics while intending to pursue a degree in some other field. The sub-major offers units that practicing physicists would normally be expected to have studied. Consequently, those who already have in mind a career in teaching, research, industry or education will graduate with a basic, solid preparation in Physics.

**Location**

Campus	Mode
Campbelltown Campus	Internal

**Unit Set Structure**

**The Physics sub major is available to all UWS undergraduate students. These are core units from 3674 Bachelor of Medical Science (Nanotechnology).**

Students must complete four units as follows

**Level 1**

<b>300828.1</b>	Physics 1
<b>300829.1</b>	Physics 2

**Level 2**

<b>300930.1</b>	Classical Physics and Advanced Technologies
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**Level 3**

<b>300923.1</b>	Quantum Physics
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**Sub-major - Civil Engineering****SM3621CIVE.1**

This sub-major is available to students other than those enrolled in the B Engineering (Civil) Key Program. This sub-major includes core subjects of civil engineering. It provides a comprehensive introduction to essential aspects of the discipline.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Students must complete the following four units

<b>300732.2</b>	Structural Analysis
<b>300730.2</b>	Steel Structures
<b>300739.2</b>	Timber Structures (UG)

**300736.2** Concrete Structures (UG)

**Sub-major - Ecological Engineering****SM3621ECOE.1**

This sub-major is available to students other than those enrolled in the B Engineering (Civil) or (Environmental) Key Program. This sub-major includes core subjects of ecological engineering. It provides a comprehensive introduction to essential aspects of the discipline.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Students must complete the following four units

<b>300482.2</b>	Engineering Geology and Concrete Materials
<b>300738.3</b>	Surveying for Engineers
<b>300486.2</b>	Infrastructure Engineering
<b>300737.3</b>	Environmental Engineering

**Sub-major - Robotics and Mechatronics****SM3621R&M.1**

This sub-major is available to students other than those enrolled in B Engineering (Robotics and Mechatronics) Key Program. The units forming this sub-major provide a comprehensive introduction to essential aspects of mechatronics and robotics. It is intended as a coherent set of units in mechanics of machines, automation and robotics that can add to engineering knowledge gained in other fields of engineering. The sub-major may be taken by students in non-engineering areas provided they satisfy the unit prerequisites and assumed knowledge.

**Location**

Campus	Mode
Penrith Campus	Internal

**Unit Set Structure**

Student must complete 40 credit points as follows

<b>300035.3</b>	Kinematics and Kinetics of Machines
<b>300735.2</b>	Automated Manufacturing
<b>300044.2</b>	Microcontrollers and PLCs

And choose one of

<b>300056.3</b>	Robotics
<b>300043.3</b>	Mobile Robotics

## Sub-major - Soil Engineering

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### **SM3621SOE.1**

This sub-major is available to students other than those enrolled in B Engineering (Civil) or (Environmental) Key Programs. This sub-major includes core subjects of soil engineering. It provides a comprehensive introduction to essential aspects of the discipline.

#### Location

Campus	Mode
Penrith Campus	Internal

#### Unit Set Structure

Students must complete the following four units

<b>200237.3</b>	Mathematics for Engineers 1
<b>300482.2</b>	Engineering Geology and Concrete Materials
<b>300731.2</b>	Soil Engineering
<b>300485.3</b>	Foundation Engineering

## Sub-major - Structural Engineering

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### **SM3621STRE.1**

This sub-major is available to students other than those enrolled in the B Engineering (Civil) or (Environmental) Key Programs. This sub-major includes core subjects of structural engineering. It provides a comprehensive introduction to essential aspects of the discipline.

#### Location

Campus	Mode
Penrith Campus	Internal

#### Unit Set Structure

Students must complete the following four units

<b>300463.2</b>	Fundamentals of Mechanics
<b>300040.2</b>	Mechanics of Materials
<b>300733.2</b>	Introduction to Structural Engineering
<b>300732.2</b>	Structural Analysis

## Sub-major - Water Engineering

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### **SM3621WATE.1**

This sub-major is available to students other than those enrolled in B Engineering (Civil) or (Environmental) Key Programs. This sub-major includes core subjects of water engineering. It provides a comprehensive introduction to essential aspects of the discipline.

#### Location

Campus	Mode
Penrith Campus	Internal

#### Unit Set Structure

Students must complete the following four units

<b>200237.3</b>	Mathematics for Engineers 1
<b>300740.1</b>	Water Engineering
<b>300479.1</b>	Drainage Engineering
<b>300734.1</b>	Water Resources Engineering (UG)

## Units

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### 101796.1 19th Century American Literature

**Credit Points** 10 **Level** 3

#### Special Requirements

Successful completion of 60 credit points of study

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This unit focuses on literature from the American Renaissance through to the end of the Civil War. Issues to be examined will include some of the following: the construction of a national literature, the ideology of American Exceptionalism, the tension between the religious and the secular, and the clash between freedom and slavery. Texts may include fiction, poetry, and drama.

### 400958.1 A Field Study: Comparative Studies of Health Care Delivery

**Credit Points** 10 **Level** 2

#### Special Requirements

Students enrolled in this unit will be visiting health care facilities, and may require a criminal record check, and working with children check. Students will need a valid passport and visa that qualify them to travel to the country of study. Students will be required to travel as a member in the study group to the country of study. Course charges are available only as a package deal, including accommodation and airfare, travel and health insurance. A deposit is to be paid at the time of registration. In the event of late withdrawal, this deposit is non-refundable.

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This unit is designed to enable students studying health courses to gain insight into, and develop an understanding of health care delivery and contemporary issues confronting health care in Australia and in the study country in this study-abroad unit.

### 101882.1 A History of Modern Global Buddhism

**Credit Points** 10 **Level** 2

#### Equivalent Units

63120 - Communication and Culture in Asia 2: Performing Asian Cultures and Identities

#### Incompatible Units

100850 - Buddhism in the Contemporary World

#### Special Requirements

Successful completion of 40 credit points at Level 1.

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A history of Buddhism and its spread through Asian and more recently to the West, introducing its principal beliefs and practices, the diversity of its manifestations, its political, cultural, and social impact. This unit is a history of this current global religion in its social, cultural and political context.

### 101409.2 Aboriginal Cultural Texts

**Credit Points** 10 **Level** 2

#### Equivalent Units

G2004 - Aboriginal Cultural Texts

#### Special Requirements

Successful completion of 60 credit points at Level 1.

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Representations of Indigenous Australians are to be found within a broad range of texts produced by both Indigenous and non-Indigenous people. The texts give us access to the shifting conceptualisations about both the nature of Aboriginality, and the relations between Indigenous and non-Indigenous Australians. Examination and comparison of dominant as well as self-representations of Indigenous Australians in a variety of texts and films will enable students to deconstruct the cultural processes through which their own identities are produced. Texts and their readings; textual deconstruction; Saussure's basic semiotic analysis; signification and the production of cultural meaning; Barthes' myth and second level significations; function of the metaphor; genre and intertextuality; narrative form the 'realism' effect; grand narratives and ideology; narrator function and audience positioning.

### 200193.2 Abstract Algebra

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

200025 - Discrete Mathematics

#### Prerequisite

**200025.2** Discrete Mathematics

#### Equivalent Units

14702 - Advanced Algebra, 14383 - Algebra 3

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This unit develops algebraic thought to a high level. The abstract concepts involved in the main topics (group theory and number theory) have many applications in science and technology, and the unit includes an application to cryptography.

### 700056.1 Academic English (UWSCFS)

**Credit Points** 10 **Level** Z

#### Special Requirements

Students must be enrolled at UWS College.

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This unit is designed to improve English proficiency across the four macro skills, of overseas and local students who wish to progress to university studies. In particular, the course aims to help students access the conventions of academic English by focusing on attitudes to knowledge, the ways in which ideas are structured and presented and surface language correctness. In addition, the course encourages students to develop strategies to maximize their learning and to reflect on their own learning styles.

### 200101.3 Accounting Information for Managers

**Credit Points** 10 **Level** 1

#### Corequisite

**200336.3** Business Academic Skills

#### Equivalent Units

61111 - Intro Financial Accounting, 84458 - Engineering Management 3, 89109 - Management for Engineers 2, AC105A - Finance and Accounting, H1746 - Financial and Management Accounting 1, MG324A - Management 3.2, 200103 - Accounting Reports and Decisions

#### Special Requirements

External offerings for this unit are only available to students who are enrolled in a Property course, Key Program or Major. Co-requisite 200336 - Business Academic Skills only applies to students in courses 2739 Bachelor of Business and Commerce, 2741 Bachelor of Business and Commerce (Advanced Business Leadership) and 2740 Bachelor of Business and Commerce/Bachelor of Laws.

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This unit provides exposure to financial and management accounting information from a user of accounting information viewpoint. The unit aims to provide breadth of awareness and knowledge in relevant fields of accounting essential to decision making for managers.

### 700005.1 Accounting Information for Managers (UWSC)

**Credit Points** 10 **Level** 1

#### Equivalent Units

200101 - Accounting Information for Managers

#### Special Requirements

Students must be enrolled at UWS College.

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This unit provides exposure to financial and management accounting information from a user of accounting information viewpoint. The unit aims to provide breadth of awareness and knowledge in relevant fields of accounting essential to decision making for managers.

### 200534.3 Accounting Information Systems

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Basic financial and management accounting fundamentals, including use of spreadsheets in accounting and the use of a computerised accounting package.

#### Prerequisite

**200116.4** Management Accounting Fundamentals

#### Equivalent Units

AC202A - Accounting Information Systems, H3331 - Accounting Information Systems, 61141 - Accounting Information Systems, 200114 - Issues in Accounting Information Systems

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This unit considers the design and implementation of accounting information systems as a data model for resource allocation and management of an organisation. It includes consideration of current trends in information management and the changing regulatory requirements.

### 400873.1 Acupuncture Techniques

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Assumed knowledge equivalent to Channels and Points 1 and 2.

#### Equivalent Units

400350 - Acupuncture 2

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This unit consolidates and extends students' knowledge of acupuncture theory and practice, and provides further opportunity to develop practical skills. Students are introduced to the theory of point combinations and the development of acupuncture prescriptions and treatment plans. Practical sessions include moxibustion, cupping. This unit also expands upon the student's understanding of the theory and practice principles of traditional Chinese medicine.

### 200267.2 Advanced Accounting

**Credit Points** 10 **Level** 3

#### Prerequisite

**200109.4** Corporate Accounting Systems

#### Equivalent Units

200102 - Accounting Philosophies and Theories

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This unit addresses the advanced aspects of accounting with particular emphasis on accounting theories and how they assist us in understanding current accounting practice and accounting standards. This unit focuses on the relationship between the theoretical concepts and current news and events.

### 300925.1 Advanced Analytical Chemistry

**Credit Points** 10 **Level** 3

#### Equivalent Units

300298 - Analytical Chemistry 3, 300537 - Advanced Chemical Analysis

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This unit builds on Analytical Chemistry 2 and focuses more on instrumental analysis, isolation and cleanup techniques and aspects of quality control and quality assurance in an analytical laboratory and in manufacturing are discussed. The instrumental methods covered include atomic spectroscopy (for example, atomic absorption and emission, x-ray fluorescence), molecular spectroscopy (for example, UV-Vis, IR, fluorometry, mass spectrometry), chromatography, electrochemistry, thermal methods and automated methods. The theory of the instrumental methods, their construction, operation and applications are covered. The theory and application of isolation and



cleanup techniques in inorganic and organic residue analysis are given.

### 200028.3 Advanced Calculus

**Credit Points** 10 **Level** 2

**Prerequisite**

**300673.1** Mathematics 1B

**Equivalent Units**

14504 - Mathematics 4, 14379 - Advanced Calculus, 14385 - Calculus 3, J2764 - Mathematics 2.1, J2765 Mathematics 2.2

**Incompatible Units**

200238 - Mathematics for Engineers 2

**Special Requirements**

Students enrolled in 3621 Bachelor of Engineering or 3664 Bachelor of Engineering Science may not enrol in this unit.

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This unit is designed for students undertaking studies in mathematics, statistics, operations research and mathematical finance. It provides further mathematical training in the areas of multivariable and vector calculus, which is essential to the understanding of many areas of both pure and applied mathematics.

### 300850.1 Advanced Cell Biology

**Credit Points** 10 **Level** 3

**Prerequisite**

**300848.1** Metabolism OR **300936.1** Functional Proteins and Genes OR **300817.1** Molecular Biology OR **300847.1** Immunology

**Equivalent Units**

300408 - Mammalian Cell Biology and Biotechnology; 300544 - Cell Signalling

**Incompatible Units**

300223 - Cell Signalling and Molecular Immunology

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Cells of the body are studied in the context of health and disease, including mechanisms by which cells respond to the environment and integrate in and around tissue. Fundamental cellular processes are discussed that are important in embryonic development, stem cells, haematology and cancer. This unit investigates the action of hormones, growth factors and morphogens; their receptors and signalling pathways and the cellular responses they trigger. This unit covers modern techniques in cell culture, tissue engineering, advanced microscopy and other modern experimental approaches that enable dynamic understanding of live cell function.

### 300586.2 Advanced Computer Science Activities 1

**Credit Points** 0 **Level** 1

**Special Requirements**

Students must be enrolled in course 3634 Bachelor of Computer Science (Advanced).

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This unit is only for Bachelor of Computer Science (Advanced) students in year one of their studies. Students will participate in industry and research based extension activities (non-assessable). These activities will be identified with the goal of exposing students early in their degree and integrating them into a culture of academic enquiry, problem solving, knowledge generation and scholarship and an awareness of the challenges and current issues confronting the computing/IT industry. The unit will be used to record student activities and a satisfactory/ unsatisfactory grade will be applied at the end of each semester.

### 300587.2 Advanced Computer Science Activities 2

**Credit Points** 0 **Level** 2

**Special Requirements**

Students must be enrolled in course 3634 Bachelor of Computer Science (Advanced).

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This unit is only for Bachelor of Computer Science (Advanced) students in year two of their studies. Students will participate in industry and research based extension activities (non-assessable). These activities will be identified with the goal of exposing students early in their degree and integrating them into a culture of academic enquiry, problem solving, knowledge generation and scholarship and an awareness of the challenges and current issues confronting the computing/IT industry. The unit will be used to record student activities and a satisfactory/ unsatisfactory grade will be applied at the end of each semester.

### 300588.2 Advanced Computer Science Activities 3

**Credit Points** 0 **Level** 3

**Special Requirements**

Students must be enrolled in course 3634 Bachelor of Computer Science (Advanced).

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This unit is only for Bachelor of Computer Science (Advanced) students in year three of their studies. Students will participate in industry and research based extension activities (non-assessable). These activities will be identified with the goal of exposing students early in their degree and integrating them into a culture of academic enquiry, problem solving, knowledge generation and scholarship and an awareness of the challenges and current issues confronting the computing/IT industry. The unit will be used to record student activities and a satisfactory/ unsatisfactory grade will be applied at the end of each semester.

### 300763.1 Advanced Dynamics

**Credit Points** 10 **Level** 3

**Prerequisite**

**300480.1** Dynamics of Mechanical Systems

### Incompatible Units

300009 - Control Systems

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This unit covers the analysis and control of dynamical behaviour of mechanical systems. It discusses the fundamental principles in controlling mechanical dynamic systems. In particular, the unit will cover contents in: multi-degree of freedom vibration analysis and modelling; open and closed loop systems; transfer function and state variable methods in mechanical system modelling; concepts of stability; design and analyse control systems using root-locus, bode diagram and state-space methods for mechanical systems.

### 300668.2 Advanced Engineering Thesis

**Credit Points** 60 **Level** 5

#### Assumed Knowledge

Students should have achieved at least 240 Credit Points because this is an honours level unit. Students must have a course GPA equal to or greater than 5.5, which is required to maintained their candidature in course 3636 Bachelor of Engineering (Advanced).

#### Prerequisite

**300053.3** Professional Practice

#### Corequisite

**81999.1** Industrial Experience (Engineering) OR  
**300741.2** Industrial Experience (Engineering)

#### Incompatible Units

300484 - Engineering Thesis, 300483 - Engineering Project

#### Special Requirements

This unit is only available to students in course 3636 Bachelor of Engineering (Advanced). An eligible student must enrol in this unit in two consecutive halves (e.g., 1H and 2H in 2009, or 2H in 2009 and 1H in 2010).

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This unit provides students with the opportunity to conduct original research on their chosen topics under the supervision of academics. Students are encouraged to disseminate their research results as refereed publications.

### 300666.2 Advanced Engineering Topic 1

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Students should have achieved at least 160 Credit Points to be able to study the advanced engineering topics in the unit. Students must have a course GPA equal to or greater than 5.5, which is required to maintained their candidature in course 3636 Bachelor of Engineering (Advanced).

#### Special Requirements

Students must be enrolled in course 3636 Bachelor of Engineering (Advanced).

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This unit provides students with the opportunity to tackle challenging engineering problems. They will study advanced topics in selected areas under the supervision of

academics. The advanced topics will prepare students for further study and research.

### 300667.2 Advanced Engineering Topic 2

**Credit Points** 10 **Level** 4

#### Assumed Knowledge

Students must have a course GPA equal to or greater than 5.5, which is required to maintained their candidature in course 3636 Bachelor of Engineering (Advanced).

#### Prerequisite

**300666.2** Advanced Engineering Topic 1

#### Special Requirements

Students must be enrolled in course 3636 Bachelor of Engineering (Advanced).

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This unit provides students with the opportunity to tackle engineering problems that are more challenging than those in Advanced Engineering Topic 1. They will study advanced topics in selected areas under the supervision of academics. The advanced topics will prepare students for further study and research.

### 300904.1 Advanced Food Science and Technology

**Credit Points** 10 **Level** 3

#### Prerequisite

**300842.1** Food Science 2

#### Equivalent Units

300780 - Advanced Food Science and Technology

#### Incompatible Units

300636 - Food Processing and Analysis, 300641 - Packaging Science and Technology

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This unit gives students an appreciation of the physicochemical and molecular processes involved in food manufacture and their integration to produce safe, nutritious and palatable food. The structure-function relationships of ingredients (water, carbohydrates, proteins and lipids) will be explored, addressing the effect of concentration, ionic environment (pH, salt, sequestrant, etc.), glass transition properties, factors influencing non-enzymic browning, starch retrogradation, lipid oxidation and rancidity. Students will learn about methods for monitoring and controlling food quality and spoilage, including shelf-life testing and the safety evaluation of additives in foods. Various operations used in food processing (emerging technologies, thermal and cold processes, drying and dehydration, and extrusion) and packaging technologies, including active packaging will be studied. A practical program will complement the theory to demonstrate the use of some of the operations, and the effects of varying processing parameters and ingredients on quality of final products. Students will also be taken on conducted tours of food production sites with a view to not only observe activities, but also to document and catalogue ingredients, operations and food products.

### 300905.1 Advanced Immunology

**Credit Points** 10 **Level** 3

**Prerequisite**

**300936.1** Functional Proteins and Genes

**Equivalent Units**

300757 - Molecular Biological of the Immune System

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The human immune system is a milieu of cells, cytokines, chemokines, growth factors and cell adhesion molecules which form an elaborate molecular communication network through a number of signalling networks and molecules. The relevance of this knowledge for understanding the pathology and specific diseases of the human immune system are emphasised through the unit. This unit also provides an in depth analysis of the molecular mechanisms of cell to cell communication, cell activation, the immunological synapse, transplant rejection (including adoptive transfer experimentation), antigen presentation, B and T cell recruitment and MHC restriction. Medical and diagnostic applications of hybridoma technology, antibody engineering and advances in vaccine development are discussed. The laboratory course will develop technical and interpretative skills in relevant techniques, in particular the ImmunoCAP technology for asthma and allergy diagnosis.

### 300907.1 Advanced Inorganic Chemistry

**Credit Points** 10 **Level** 3

**Prerequisite**

**300545.2** Coordination Chemistry OR **300230.2** Inorganic Chemistry 2 OR **300899.1** Inorganic Chemistry

**Equivalent Units**

J3668 - Inorganic Chemistry 3, 300231 - Inorganic Chemistry 3, 300538 - Advanced Inorganic Chemistry

**Special Requirements**

Students are required to have laboratory coat, appropriate shoes and eye protection.

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Building on the foundations laid in Inorganic Chemistry, this unit focuses on structure and bonding in inorganic chemistry, and the stereochemistry of coordination complexes. Spectroscopic and magnetic properties of inorganic compounds are evaluated as a consequence of structure and bonding, and an introduction to X-ray methods for structure determination is given. Kinetics and mechanism of inorganic reactions are examined, and the area of bioinorganic chemistry is developed. Unique structures and reactions of organotransition metal chemistry are explored. Advanced Modules cover aqueous chemistry of cations and oxyanions, inorganic materials, molecular orbital theory in coordination complexes, group theory; lanthanides and actinides.

### 300761.1 Advanced Mechanics of Materials

**Credit Points** 10 **Level** 3

**Assumed Knowledge**

This subject assumes that the student has undertaken the first and second year studies in UWS engineering courses or equivalent.

**Prerequisite**

**300040.1** Mechanics of Materials

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Extending upon the unit 300040 Mechanics of Materials, this unit will look at what happens when components undergo non-elastic deformation. It will look at how stresses depend on the orientation of the reference axes, and at how materials fail – including creep, fatigue and stress concentrations. It will then look at properties of metals, including alloys and phase diagrams.

### 300891.1 Advanced Medicinal Chemistry

**Credit Points** 10 **Level** 3

**Prerequisite**

**300803.1** Essential Chemistry 2

**Special Requirements**

Successful completion of 40 credit points at Level 2 or 3 in order to enrol this unit.

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Medicinal Chemistry is an interdisciplinary science that exists at the intersection of chemistry, pharmacology, physiology and human health. Students will explore the multidisciplinary nature and interconnectedness of medicinal chemistry through in-depth study of topics that relate medicinal chemistry to disciplines such as physiology, natural product science, biochemistry and pharmacology. It will also explore the expectations of a professional medicinal chemist.

### 300906.1 Advanced Organic Chemistry

**Credit Points** 10 **Level** 3

**Prerequisite**

**300876.1** Organic Chemistry

**Equivalent Units**

300546 - Drug Design and Synthesis, 300235 - Organic Chemistry 3

**Special Requirements**

Students are required to have laboratory coat, appropriate shoes and eye protection.

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This unit builds on the reactions learnt in the unit Organic Chemistry, extending the range of C-C bond forming reactions to include the most significant in modern synthesis. In the second stage students learn to develop multistep synthetic strategies to produce target molecules using their level 2 organic chemistry and the reactions above. Structural analysis by mass spectroscopy and more advanced NMR techniques is also investigated. The

students use this chemistry in a lab course designed to highlight a number of these concepts (including the synthesis of 2 pharmaceutical compounds and a team experiment) and to extend their range of practical skills.

### 300926.1 Advanced Physical Chemistry

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

An understanding of and competence with the basic principles of physical chemistry including states and properties of matter, thermodynamics, chemical equilibria, kinetics and electrochemistry.

#### Prerequisite

**300849.1** Physical Chemistry

#### Equivalent Units

300303 - Physical Chemistry 3

#### Special Requirements

Students are required to have laboratory coat, appropriate shoes and eye protection.

Advanced Physical Chemistry builds on the fundamental principals of energy changes in systems (thermodynamics), and the rates and mechanisms of reactions (kinetics) learnt in Physical Chemistry and extends this so that students gain an understanding of polymer and surface chemistries. This unit also will strengthen student's problem solving skills in quantitative chemical analysis, develop experimental techniques and advanced data-analysis skills.

### 300851.1 Advanced Physiology

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Demonstrated sound understanding of physiological systems of the human body.

#### Prerequisite

**300818.1** Introduction to Physiology OR **300838.1** Comparative Physiology

#### Equivalent Units

300622 - Human Physiology, 300326 - Topics in Physiology

#### Special Requirements

Students must have lab coat, and enclosed footwear.

Physiology is the study of the way in which a living organism and its bodily parts functions. Fundamental to this are ion channels. With ion channels as a central and unifying core, this unit will examine aspects of neurophysiology, sensory physiology, nutritional physiology, channelopathies, the skeleto-muscular system, the cardiovascular system, environmental adaptation and homeostasis. Students will have the opportunity to independently research, in depth, an area of physiology pertinent to their degree/interest.

### 300937.1 Advanced Science Project A

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Dependent on the nature of the project.

#### Equivalent Units

300591 - Advanced Science Research Project A

#### Special Requirements

Students must be enrolled in 3562 Bachelor of Science (Advanced Science) or 3682 Bachelor of Medical Science (Advanced) or 3683 Bachelor of Natural Science (Advanced). Students must also have completed 80 credit points at Level 1.

This unit introduces the student to thinking as a research scientist whilst developing skills in a particular area of interest. The student undertakes a minor research project, either individually or as part of a small group, under directed supervision, during which they learn to outline the problem and undertake a full appropriate literature review, investigate the most appropriate research techniques to study the problem, undertake a small amount of introductory research, and analyse and discuss the results in poster and lecture format.

### 300938.1 Advanced Science Project B

**Credit Points** 10 **Level** 2

#### Equivalent Units

300592 - Advanced Science Project B

#### Special Requirements

Students must be enrolled in course 3562 Bachelor of Science (Advanced Science), 3682 - Bachelor of Medical Science (Advanced) or 3683 - Bachelor of Natural Science (Advanced) and must have successfully completed at least 80 credit points at Level 1.

This unit continues the students training in thinking as a research scientist whilst developing skills in a particular area of interest. The student undertakes a minor research project under directed supervision, during which they outline the problem and undertake a full literature review, undertake appropriate research, and analyze and discuss the results in research paper and lecture format. The student is expected to show a greater degree of independence than was expected in Advanced Project unit A.

### 300910.1 Advanced Science Project C

**Credit Points** 10 **Level** 2

#### Prerequisite

**300937.1** Advanced Science Project A OR **300938.1** Advanced Science Project B

#### Equivalent Units

300593 - Advanced Science Research Project C

### Special Requirements

Students must be enrolled in course 3562 - Bachelor of Science (Advanced Science), 3682 - Bachelor of Medical Science (Advanced) or 3683 - Bachelor of Natural Science (Advanced).

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This unit further advances the students training in thinking as a research scientist whilst developing skills in a particular area of interest. The student undertakes a minor research project under moderate supervision, during which they outline the problem and undertake a full literature review, undertake appropriate research, and analyse and discuss the results in research paper and lecture format. The student is expected to show a greater degree of independence than was expected in Advanced Project unit B.

### 400888.1 Advanced Sports Physiology

**Credit Points** 10 **Level** 3

#### Prerequisite

**400326.1** Exercise Prescription for General Populations AND **400883.1** Exercise Bioenergetics AND **400885.1** Sport and Exercise Physiology

#### Equivalent Units

400329 - Sports Physiology

#### Special Requirements

Students must be enrolled in course 4658 - Bachelor of Health Science (Sport and Exercise Science). To undertake this unit, students must comply with the following special requirements: Prior to enrolling in this unit students must have: 1) submitted a Criminal Record Check form prior to 1 June 2010 or a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate 2) submitted a Prohibited Employment Declaration prior to 1 June 2010 or a Working with Children Check Student Declaration after 1 June 2010, possess a current WorkCover Authority approved First Aid Certificate.

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This unit presents the knowledge and laboratory skills essential to understanding the physiological demands on the sports participant, as well as to develop, implement and evaluate sports-specific training programs. Students will develop the knowledge and skills necessary to perform and interpret results for a number of standard laboratory and field-based physiological tests used in talent identification and the assessment of high performance athletes. Prescription focuses on the development and implementation of sport specific fitness programs. Also covered are the physiology of ergogenic aids, overtraining, muscle fatigue and soreness; physiological factors limiting performance; and physiological responses to exercise in challenging environments.

### 300747.2 Advanced Topics and Research Skills

**Credit Points** 20 **Level** 5

#### Assumed Knowledge

Successful completion of a Bachelors degree in a science discipline or tourism. Normally the student will have

achieved a grade-point average of greater than 5.0 in Level 2 and 3 units.

#### Equivalent Units

300410 - Advanced Topics and Research Skills

#### Special Requirements

Students must be enrolled in an honours or postgraduate degree.

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This unit will allow students to explore more advanced topics, including wider areas of research and their applications in science, technology, tourism or the environment. It will encompass and build upon subject areas and techniques already encountered in the undergraduate program, and provide students with an appreciation of more sophisticated applications of scientific principles, emphasising the practical, social, environmental and/or economic value of the sciences. In addition, students will further develop competency in the communication of research results and conclusions through participation in seminar series within the College of Science, Technology and Environment.

### 200411.2 Advanced Topics in Mathematics

**Credit Points** 30 **Level** 5

#### Special Requirements

Students must be enrolled in a Bachelors honours course.

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The Advanced Topics in Mathematics is an integral part of the Bachelor of Science (Honours) course work program. It is structured in such a way that there are extensive links with the other components in the program (Honours Thesis). In undertaking and completing tasks associated with this component the student will be working toward the ultimate goal of completion of the Thesis document. Successful completion of the Advanced Topics in Mathematics Program will allow development of skills, knowledge and a way of thinking to assist in the learning of mathematics/statistics, which will help in the production of the thesis. In this program students will be given the opportunity to present work in assignments and examinations.

### 101295.2 Aesthetics

**Credit Points** 10 **Level** 3

#### Equivalent Units

63090 - Aesthetics

#### Special Requirements

Successful completion of 60 credit points.

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The major philosophies of art will be examined. The Western tradition will be surveyed from the Ancient Greeks through medieval and Renaissance theories of art to modern and postmodern aesthetics beginning with Kant. Marxist and feminist aesthetics will be especially emphasised. The artistic material will primarily come from the visual arts.

### **300863.1 Agronomy**

**Credit Points** 10 **Level** 2

#### **Equivalent Units**

300524 - Agronomy

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This unit enables students to develop understanding of basic crop and pasture agronomy including plant identification, crop/pasture establishment, growth, development, adaptation, plant protection, and grazing management. Students manage a crop in the field and a pot trial in the glasshouse and interact with researchers and industry professionals in understanding broad principles involved in the production and management of crops, pasture and animal production issues. The practical sessions enable students to apply the management principles and become familiar with various measuring techniques.

### **300852.1 Air Quality and Climate Change**

**Credit Points** 10 **Level** 3

#### **Equivalent Units**

300777 - Air Quality and Climate Change, 300628 - Air Quality Management

#### **Special Requirements**

Successful completion of 60 credit points at Level 1 and 40 credit points at Level 2. Students must wear enclosed footwear during field visit.

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Deteriorating air quality and climate change are two major challenges facing humanity and threatening environmental sustainability and human health. As such, air quality and climate change are of International, National, State and local community concern. This unit critically analyses the many issues that relate to air pollution, including its nature, extent, impacts and monitoring. Students will examine an air pollution issue of their choice.

### **300777.2 Air Quality and Climate Change**

**Credit Points** 10 **Level** 3

#### **Equivalent Units**

EH321A - Air Quality Assessment and Management (UG), 300628 - Air Quality Management

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This unit is designed for students who wish to gain knowledge of air pollution, its causes and control methods. Topics include: Pollution types and sources, ambient air quality ; meteorology and climate change;; emission testing; odour and hydrocarbon control;. At the completion of this unit the student will have a good understanding in the following: Pollution types and sources; Effects of air pollution; Influence of meteorology; Indoor air quality; Dispersion modelling; Monitoring of stationary and mobile sources; Climate Change , and Global air pollution issues.

### **EH321A.1 Air Quality Assessment & Management (UG)**

**Credit Points** 10 **Level** 3

#### **Equivalent Units**

EH302A - Air Quality Assessment and Management

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From 2009 this unit was replaced by 300628 - Air Quality Management. This unit is designed for students who wish to gain knowledge of air pollution, it's causes and control methods. Topics include: clean air legislation; air pollution; meteorology; ambient air quality; emission testing; odour and hydrocarbon control; control technology; emissions inventory. At the completion of this unit the student will have a good understanding in the following: pollution types and sources; effects of air pollution; influence of meteorology; indoor air quality; dispersion modelling; monitoring and control of pollution from stationary and mobile sources; legislation and standards, and global air pollution issues.

### **400815.2 Alterations in Breathing, Work/Leisure and Mobility**

**Credit Points** 10 **Level** 2

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This unit will elaborate the mechanisms of health breakdown and their application to professional nursing practice in supporting people who are affected by alteration in breathing, work/leisure, sexuality and mobility.

### **400814.2 Alterations in Nutrition, Elimination and Sexuality**

**Credit Points** 10 **Level** 2

#### **Equivalent Units**

400754 - Understanding Alterations in Nutrition and Elimination

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This unit will elaborate the mechanisms of health breakdown and their application to professional nursing practice in supporting people who are affected by alteration in eating, drinking, nutrition, elimination and sexuality.

### **100985.2 American Foreign Policy Since 1945**

**Credit Points** 10 **Level** 3

#### **Equivalent Units**

B3845 - American Foreign Policy, 100907 - American Foreign Policy Since 1945

#### **Special Requirements**

Successful completion of 60 credit points.

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This unit will analyse both the major international issues and crises which America confronted after 1945 and how successive American presidents and their policy makers responded to these problems

### 100966.3 American History, 1898-1945

**Credit Points** 10 **Level** 3

#### Special Requirements

Successful completion of 60 credit points

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This unit offers a history of the United States of America from 1898 until 1945. It examines the key events and issues from the Spanish-American War to the New Deal and Isolationism which shaped the course of modern America.

### 100845.3 American Literature

**Credit Points** 10 **Level** 3

#### Equivalent Units

100642 - Classic American Literature, 100643 - Modern American Literature, B1326 - Far Horizons and Open Space, 100506 - American Literature

#### Special Requirements

Successful completion of 60 credit points at Level 1.

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This unit explores American literature from its colonial beginnings to the present. Issues to be examined will include some of the following: the construction of a national literature, struggles for justice and human rights, intersection of race, gender, and sexuality, the ideology of American Exceptionalism, and the rise and fall of "The American Dream." Texts may include fiction, poetry, and drama.

### 200023.3 Analysis

**Credit Points** 10 **Level** 3

#### Prerequisite

**200028.2** Advanced Calculus

#### Equivalent Units

14388 - Advanced Mathematical Topics

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Analysis provides the theoretical basis of real and complex numbers, including differentiation and integration. Topics include: field axioms and completeness, sequences, series, convergence, compactness, continuity, differentiability, integrability, and related theorems in both the real and complex number systems.

### 300830.1 Analysis of Change

**Credit Points** 10 **Level** 1

#### Assumed Knowledge

General Mathematics background achieved at bands 5 or 6, or Mathematics, achieved at band 4, or equivalent or 300831 Quantitative Thinking.

#### Equivalent Units

200191 - Fundamentals of Mathematics

#### Special Requirements

Students are required to have a Scientific calculator and access to a computer with mathematical software packages installed. Students may complete the 3 units Quantitative Thinking, Analysis of Change and Maths 1A in the following order: 300831 Quantitative Thinking, 300830 Analysis of Change, 300672 Mathematics 1A. This means that students may complete 300831 before attempting 300830, but not after. 300830 and 300831 may be attempted before 300672, but not after. Students may not enrol in 300831 and 300830 or 300831 and 300672 or 300831 and 300672 in the same teaching session. Students enrolled in the 3621 Bachelor of Engineering or 3664 Bachelor of Engineering Science may not enrol in any of the units 300830, 300831 or 300672.

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This Level 1 unit introduces students to the mathematical modelling techniques that are used to formulate and solve problems in the physical and biological sciences. To use these techniques successfully, students must develop the ability to formulate a problem mathematically and then be able to use the appropriate knowledge to test conclusions by analytical and numerical means. These skills will be emphasized as each technique is introduced. Apart from some introductory work on logarithms and exponentials (essential concepts in the sciences), the main techniques developed involve aspects of differential calculus, culminating in the use of differential equations to model real phenomena in the sciences.

### 700108.1 Analysis of Change (UWSC)

**Credit Points** 10 **Level** 1

#### Assumed Knowledge

General Mathematics background achieved at bands 5 or 6, or Mathematics, achieved at band 4, or equivalent to 300831 Quantitative Thinking.

#### Equivalent Units

200191 - Fundamentals of Mathematics, 300830 - Analysis of Change

#### Special Requirements

Students must be enrolled at UWSCollege in either 7003 Diploma in Science or 7009 Diploma in Science Fast Track. Students enrolled in 7003 Diploma in Science need to have achieved a "Satisfactory" grade in 700069 Mathematics B to proceed to 700108 Analysis of Change.

.....

This Level 1 unit introduces students to the mathematical modelling techniques that are used to formulate and solve problems in the physical and biological sciences. To use these techniques successfully, students must develop the ability to formulate a problem mathematically and then be able to use the appropriate knowledge to test conclusions by analytical and numerical means. These skills will be emphasized as each technique is introduced. Apart from some introductory work on logarithms and exponentials (essential concepts in the sciences), the main techniques developed involve aspects of differential calculus, culminating in the use of differential equations to model real phenomena in the sciences.

## 101646.2 Analysis of Spatial Data

**Credit Points** 10 **Level** 2

### Special Requirements

Successful completion of 40 credit points.

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The making and the use of maps. This unit involves the critical examination of the way geographical data is produced, analysed, mapped and used to inform both private and public decisions. Natural environment, health, accessibility and residential amenity are examples of phenomena that have an important geographical dimension. Policy responses to these phenomena need to be specific with regard to locations and places. Geographic information systems software and census will be used to produce maps based on the analysis and interpretation of data relating to the student's field of interest.

## 300832.1 Analytical Chemistry

**Credit Points** 10 **Level** 2

### Prerequisite

**300800.1** Essential Chemistry 1

### Equivalent Units

300297 - Analytical Chemistry 2

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This unit provides insight into both classical methods of analytical analysis and an introduction to modern instrumental methods of analysis. Specifically, the classical methods of analysis include volumetric and gravimetric methods, while the modern instrumental methods include separation techniques and spectroscopy. The role of spreadsheets in data analysis and presentation is discussed and applied in the laboratory program.

## 300866.1 Analytical Microbiology

**Credit Points** 10 **Level** 3

### Assumed Knowledge

A good general knowledge of microbiology and having the technical skills needed to work safely with microorganisms.

### Prerequisite

**300833.1** Microbiology 1

### Equivalent Units

300307 - Analytical Microbiology

### Special Requirements

Students are required to have laboratory coat, appropriate shoes and eye protection.

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The unit provides a theoretical and practical introduction to wide range of microbiological techniques that are commonly used in medical science, industrial and food microbiology, environmental science, and research. Building on a basic understanding of microbiology the unit shows how microorganisms can be isolated, identified, and enumerated using traditional microbiological methods, modern variations on traditional methods, and more recent

immunological and molecular methods. The laboratory component is an integral component of the unit as the students use a variety of techniques, methods and commercial systems that are applied in microbiological laboratories, and incorporates problem solving and inquiry based exercises.

## 300897.1 Anatomy of the Head and Neck

**Credit Points** 10 **Level** 3

### Prerequisite

**300825.1** Introduction to Anatomy

### Equivalent Units

300316 - Anatomy of the Head and Neck, 300750 - Anatomy of the Head and Neck

### Special Requirements

Students must be enrolled in 3577 Bachelor of Medical Science, 3657 Bachelor of Medical Science (Advanced), 3673 - Bachelor of Medical Science or 3682 Bachelor of Medical Science (Advanced) Students must also have a laboratory coat in this unit.

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This unit builds on the systems anatomy taught during the first year, offering a regional study of the human head & neck. Emphasis is placed on the identification and description of the structures, including the correlation of structure and function. Cadaveric specimens are used to aid the learning of these regions and their three-dimensional aspect, including the anatomical variation found in these regions.

## 300894.1 Anatomy of the Thorax and Abdomen

**Credit Points** 10 **Level** 2

### Prerequisite

**300825.1** Introduction to Anatomy

### Equivalent Units

300317 - Anatomy of the Thorax and Abdomen, 300751 - Anatomy of the Thorax and Abdomen

### Special Requirements

Student must be enrolled in course code 3577 - Bachelor of Medical Science, 3673- Bachelor of Medical Science, 3657 - Bachelor of Medical Science/Bachelor of Information and Communications Technology, or 3682 - Bachelor of Medical Science (Advanced). Students must have lab coat in this unit.

.....

This unit builds on the systems anatomy studied during first year, and explores the regional anatomy of the contents and walls of the human thorax and abdominopelvic cavities. Emphasis is placed on the relationship between structures, and the nexus between form and function. Cadaveric specimens are used in this unit to illustrate the array of normal anatomical variation.



### 100244.2 Ancient Western Culture: Periclean Athens

**Credit Points** 10 **Level** 2

#### Special Requirements

Successful completion of 40 credit points at Level 1.

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The Athens of Pericles is studied from three perspectives: philosophy, art and history. The use of reason and rhetoric is examined through the works of some pre-Socratics, sophists and Socrates. Architectural style and the artistic representation of the human will be studied with particular reference to the Parthenon. This philosophy and art will be placed in the context of the history of the body, the city-state and democratic citizenship.

### 300878.1 Animal Behaviour

**Credit Points** 10 **Level** 3

#### Equivalent Units

300564 - Animal Behaviour

#### Special Requirements

Successful completion of 120 credit points in the Bachelor of Science or Bachelor of Natural Sciences.

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Focusing on a variety of wildlife and domestic animal species, the unit addresses how classic ecological and evolutionary principles shape animal behaviour by weighing the experimental and observational evidence for each idea. We illustrate concepts with examples from a wide range of taxonomic groups of animals in diverse ecosystems. Students will conduct experimental field and laboratory procedures, as well as observe and work with groups of animals on the UWS Hawkesbury campus.

### 300834.1 Animal Health and Welfare

**Credit Points** 10 **Level** 2

#### Prerequisite

**300802.1** Biodiversity

#### Equivalent Units

300424 - Animal Health and Welfare

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This unit will introduce students to the major issues related to animal health and welfare that form essential knowledge for those working with animals. In particular, students will gain an understanding of disease and methods for disease control as well as an introduction to disease diagnosis. In addition, students will gain knowledge about the relationships between animal management and the health and welfare expectations for domesticated and wild animals. The causes of common animal diseases will be introduced as well as the legal obligations of those owning, working or observing animals with respect to maintaining and monitoring their health and welfare.

### 300853.1 Animal Nutrition and Feeding

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Metabolism of cells and quantitative skills in proportional reasoning.

#### Equivalent Units

300562 - Animal Nutrition and Feeding

#### Special Requirements

Successful completion of 60 credit points.

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Animal nutrition and feeding is fundamental to many aspects of animal production and wildlife systems. This unit aims to provide students with a knowledge of nutrient requirements for different types of animals and the nutrient composition of common feeds. Students will evaluate and formulate rations to meet a range of animal requirements at different stages of growth, reproduction, lactation and production.

### 300854.1 Animal Production

**Credit Points** 10 **Level** 3

#### Equivalent Units

300427 - Animal Production

#### Special Requirements

Successful completion of 120 credit points of Bachelor of Natural Science or Bachelor of Science units to enrol in this unit.

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Animal production is about producing animals for food, companionship and conservation. This unit aims to develop an understanding of the major animal production systems used for food and fibre and other resources in Australia (intensive and wildlife), and to apply this knowledge to improving problematic issues and understanding topical issues. Topics will focus on the application of animal production principles to these production systems.

### 300835.1 Animal Reproduction

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Some knowledge of biology, including basic animal anatomy, introductory animal physiology and some understanding of reproductive behaviour.

#### Equivalent Units

AG306A - Equine Reproduction and Stud Management;  
300563 - Animal Reproduction

#### Special Requirements

All activities in the unit involving live animals must be approved by the UWS Animal Care and Ethics Committee. All activities in the unit involving the use of animal specimens must be approved by the UWS Institutional Biosafety and Radiation Safety Committee.

.....

Reproduction is the origin of life. The aim of this unit is to provide students with a sound understanding of reproduction of both domestic and non domestic animals so that they can design and manage a breeding program for a species of choice. Topics will include anatomy and physiology of male and female reproductive tracts; hormonal control of reproduction; fertilisation, pregnancy, parturition and lactation and advanced reproductive technologies. These topics will be explored in a range of species across different taxonomic groups.

### **300801.1 Animal Science**

**Credit Points** 10 **Level** 1

#### **Equivalent Units**

300421 - Animal Science

#### **Special Requirements**

Students require lab coat, closed in shoes, safety glasses, work boots, long pants and long sleeve shirts in this unit.

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This unit will provide students with an understanding of comparative physiological and anatomical concepts of a range of mammalian and avian species. Students will develop the skills to apply these concepts in practical situations through the use of field observations and the relationship of these to functional anatomy and physiology of production animals. In addition students will develop many of the principles and concepts employed in animal production. Concepts discussed in lectures are reinforced by practical classes held in the laboratory and in the outdoor laboratories.

### **101686.2 Anthropology and Philosophy Look at Religion**

**Credit Points** 10 **Level** 1

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In the 1960s and 70s it was common for social and cultural theorists to talk about the death of God and the eclipse of religion. In social terms at least, this prediction has proved to be wildly inaccurate. Never has religion been so politically and culturally relevant. This unit is the compulsory Level 100 unit for the major Religion, Anthropology and Philosophy. It provides an introduction to some of the key issues and concepts in philosophical and anthropological approaches to the study of religion. Specifically, it employs cultural anthropology and philosophy to engage in an examination of a number of foundational ideas for this major, including reason, religion, knowledge, ethics, and ritual.

### **101688.2 Anthropology of Religion**

**Credit Points** 10 **Level** 3

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By looking at culture in a cross-cultural perspective, anthropology assists us in relativising our own values and worldview. When we understand the logic of the other, we perform a double movement: we transform the exotic into familiar and vice versa. With religion taking a centre stage in world order, the anthropological perspective can give us an understanding 'from within' and help us overcome

prejudice and fear. In this unit we will discuss topics such as magic, witchcraft, attitudes toward the body, healing, shamanism, and spirit possession. We will also address religion in complex societies by exploring the issue of secularisation and re-enchantment of the world. Finally, we will cover the globalisation of religious practices and beliefs.

### **400889.1 Applied Biomechanics of Sport and Exercise**

**Credit Points** 10 **Level** 3

#### **Prerequisite**

**400882.1** Introduction to Biomechanics

#### **Equivalent Units**

400330 - Applied Biomechanics of Exercise

#### **Special Requirements**

Students must be enrolled in course 4658 - Bachelor of Health Science (Sport and Exercise Science).

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To fully understand the science underlying the optimisation of human movement, students require a comprehensive working knowledge of Biomechanics. This unit represents a theoretical and applied study of selected topics in Biomechanics. It builds on the basic principles of Biomechanics that are presented in the unit Introduction to Biomechanics and applies this knowledge to the analysis of sporting and human exercise performance. To achieve this, advanced methods and concepts in the biomechanical analysis of human performance are identified and explored.

### **400087.5 Applied Critical Methods**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

At least 40 credit points of level two and level three units in a Humanities Major area.

#### **Special Requirements**

Successful completion of 60 credit points

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This unit gives students knowledge of research methods relevant to humanities disciplines. Modules provide advanced instruction in developing a research topic, evidence-based research and Human Research Ethics processes and policy.

### **300776.2 Applied Ergonomics**

**Credit Points** 10 **Level** 1

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Ergonomics is the study of the interaction between people, their environments, and their objects. A sound understanding of the principles of ergonomics allows a designer to develop products, systems and environments with optimum usability, comfort, pleasure and productivity for the end user. In this unit, students undertake their own ergonomic study. They are firstly introduced to modelling workshop procedures. They then build and test a model hand-held product, and integrate user feedback into its redesign. Other interchangeable terms for ergonomics are

Biomechanics, Ergonomics, Human Engineering, and Human Factors.

### 300908.1 Applied Nutrition

**Credit Points** 10 **Level** 3

#### Equivalent Units

300653 - Applied Nutrition

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This unit builds on basic concepts in human nutrition and facilitates the study of nutrition needs during the life-cycle and for specific lifestyle and nutrition related diseases. This study will incorporate how to assess individuals and diets and to manipulate diets to ensure nutritional sufficiency and to manage nutritional therapy of lifestyle related diseases. This assessment is also applied to the dietary requirements of specific community groups and covers topics in sports nutrition, food supply and food product development.

### 200033.4 Applied Statistics

**Credit Points** 10 **Level** 2

#### Prerequisite

**200032.5** Statistics for Business OR **200052.4** Introduction to Economic Methods OR **200192.1** Statistics for Science OR **200263.4** Biometry OR **300700.5** Statistical Decision Making

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The unit builds on the basic statistical concepts introduced in first year, and also prepares students for broader application of statistics for those majoring in science or business. Topics include some common probability distributions; revision of hypothesis testing; analysis of categorical data; analysis of variance; simple and multiple linear regression analysis and correlation; some nonparametric methods; and fundamentals of time-series analysis.

### 400867.2 Approaches to Health Promotion

**Credit Points** 10 **Level** 2

#### Equivalent Units

400782 - Essentials of Health Promotion

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Health promotion is a process that seeks to enable individuals, carers, communities and populations to increase control over their health by addressing the determinants of health and equity issues, resulting in improved health outcomes. Theoretical underpinnings of the various approaches to health promotion are explored, enhancing and limiting factors analysed and the levels of health promoting actions demonstrated, including the bigger picture approaches of working with policy, environmental and engineering solutions. Health promotion competencies are developed including conducting a needs and stakeholder analysis, also planning and evaluating an intervention. The best practice, evidence base for health promotion is outlined and the need to move beyond education.

### 700065.2 Approaches to Health Promotion (UWSC)

**Credit Points** 10 **Level** 2

#### Equivalent Units

400867 - Approaches to Health Promotion

#### Special Requirements

Students must be enrolled at UWS College. This is a Level 2 unit and is not to be studied in the first semester of the Diploma.

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Health promotion is a process that seeks to enable individuals, carers, communities and populations to increase control over their health by addressing the determinants of health and equity issues, resulting in improved health outcomes. Theoretical underpinnings of the various approaches to health promotion are explored, enhancing and limiting factors analysed and the levels of health promoting actions demonstrated, including the bigger picture approaches of working with policy, environmental and engineering solutions. Health promotion competencies are developed including conducting a needs and stakeholder analysis, also planning and evaluating an intervention. The best practice, evidence base for health promotion is outlined and the need to move beyond education.

### 100641.3 Approaches to Text

**Credit Points** 10 **Level** 1

#### Equivalent Units

63165 - Approaches to Text

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The production and reception of texts are central to the ways in which we understand the world and who we are. Texts mediate our relationship to the institutions in which we participate, including the media (print and electronic), education, government, families and our private lives. Approaches to Text provides an introduction to understanding the production and analysis of texts. By an exploration of topics such as rhetoric, semiotics, critical discourse analysis, genre, narrative theory and creative writing, the unit develops a set of skills that are vital for interpreting and critiquing texts and textual practice.

### 300655.1 Approved Industrial Experience

**Credit Points** 0 **Level** 2

#### Equivalent Units

SC204A - Approved Industrial Experience, EH218A - Approved Industrial Experience

.....

This is a "Work Experience" unit, for which no student contribution fee is charged, nor will it consume Student Learning Entitlement (SLE). Students are required to obtain at least ten weeks, vocationally relevant, industrial experience during their course of study. The aim of this is to provide students with opportunities to apply theoretical concepts to real world situations, assisting their personal and professional development. Approved industrial

experience aims to provide flexibility for students to pursue areas of interest and to assist in their selection of appropriate elective units in their course and to meet the professional accreditation requirements as maybe required in your key program. Students are required to organise, formalise and validate at least ten weeks of university approved industry experience within an industrial, commercial or government situation during the course of their study.

### **300655.2 Approved Industrial Experience**

**Credit Points** 0 **Level** 2

#### **Equivalent Units**

SC204A - Approved Industrial Experience, EH218A - Approved Industrial Experience

.....

This is a "Work Experience" unit, for which no student contribution fee is charged, nor will it consume Student Learning Entitlement (SLE). Students are required to obtain at least ten weeks, vocationally relevant, industrial experience during their course of study. The aim of this is to provide students with opportunities to apply theoretical concepts to real world situations, assisting their personal and professional development. Approved industrial experience aims to provide flexibility for students to pursue areas of interest and to assist in their selection of appropriate elective units in their course and to meet the professional accreditation requirements as maybe required in your key program. Students are required to organise, formalise and validate at least ten weeks of university approved industry experience within an industrial, commercial or government situation during the course of their study.

### **300929.1 Aquatic Ecology**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

Concepts of classification, evolution, taxonomy, cellular processes plant and animal structure and function, normal distribution, representative sampling, probability and uncertainty.

#### **Equivalent Units**

300465 - Aquatic Ecology

#### **Special Requirements**

Successful completion of 80 Credit Points at Level 1 and 40 credit points at Level 2. Students must also have covered footwear for field excursions.

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Temperate freshwater, estuarine and marine aquatic ecosystems play vital roles in providing food, water, recreation and other ecosystem services to human society and habitats for important species that make up global biodiversity. Yet aquatic habitats are the most threatened ecosystems on earth, under threat from global climate change and urbanisation. Through inquiry and problem solving this unit will equip students with the necessary techniques in experimental design and analysis needed to investigate aquatic ecosystems and knowledge of the main animal and plants in aquatic and marine ecosystems. The logic and philosophy of science, scientific studies and

experimental analyses will be used to understand temperate aquatic ecosystems throughout this unit. On completion students will have the background knowledge and skills communicate to a range of audiences, so that they can contribute beneficially to management and/or conservation of waterways and oceans and the biodiversity within.

### **400895.1 Aquatic Sports**

**Credit Points** 10 **Level** 3

#### **Special Requirements**

Students must be enrolled in course 4659 - Bachelor of Health Science (PDHPE). To undertake this unit, students must comply with the following special requirements: possess a current WorkCover Authority approved First Aid Certificate.

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Students will be instructed on how to teach swimming, diving, water aerobics, canoeing, kayaking, rowing, snorkelling and SCUBA diving to individuals of different ages. Students will also train in swimming to improve stroke mechanics and fitness in order to pass the Bronze Medallion Lifesaving certification. Students will also be exposed to each of the aforementioned aquatic activities in order to develop moderate to high competencies to aid their abilities to teach each activity in a school or community recreation setting.

### **100041.2 Arabic 101**

**Credit Points** 10 **Level** 1

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This unit is designed as an introduction to the Arabic language as well as the contemporary and popular culture of the Arabic-speaking people. It is intended for students who are at beginner level in Modern Standard Arabic in all four skills -listening, speaking, reading and writing. Components of this unit may be presented in English.

### **100042.2 Arabic 102**

**Credit Points** 10 **Level** 1

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This is a post-beginners' level unit in Arabic, intended for students with some background in the language (equivalent to at least 2 Unit HSC Arabic). As part of a major in Arabic this unit will help students to continue in the process of acquisition of Modern Standard Arabic through the study of the language and intensive practice in listening, speaking, reading and writing. This unit also aims to familiarise students with elements of modern Arab culture including issues of Arabic language in Australia.

### **100048.2 Arabic 302 - Arabic Advanced Language and Grammar**

**Credit Points** 10 **Level** 3

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This is the second of two units that aim to provide a thorough review of comprehension, speaking, reading and writing skills, as well as grammar and vocabulary of Modern

Standard Arabic, its range of registers and its linguistic characteristics. This series is intended for students who have knowledge and skills in Arabic equivalent to two years of tertiary study of the language, and who wish to consolidate, develop and improve these skills and knowledge. This unit is mandatory for students who wish to pursue a major in Arabic.

### **100049.2 Arabic 303: Advanced Writing Skills**

**Credit Points 10 Level 3**

This unit is aimed at those who have successfully finished 100044 - Arabic 202, or have an advanced speaking and writing proficiency in Modern Standard Arabic. It is one of the obligatory units for students intending to graduate with Arabic as a major or sub-major. It seeks to develop the writing skills to prepare students to make professional use of the language, and it is particularly recommended for those who wish to involve themselves in areas such as language teaching and translation. Students will be introduced to a full range of text types and language purposes. They will be guided to analyse, interpret and evaluate passages provided, and will be encouraged to extend their ability by experimenting with a variety of writing styles.

### **100050.2 Arabic 304: Arabic Advanced Speaking**

**Credit Points 10 Level 3**

This is a compulsory unit for students in the BA (I and T) (Arabic) and for students intending to do Arabic as a major or sub-major. As a companion unit of 100049 - Arabic 303: Advanced Writing Skills, it aims to prepare students to make professional use of the language, in this case by placing particular emphasis on oral skills, and it is also specially recommended for those wishing to pursue careers in areas such as language teaching and translation. Students will be introduced to a full range of oral text types and language purposes. They will be guided to analyse, interpret and evaluate examples of oral discourse, and be encouraged to develop effective public speaking skills.

### **100052.2 Arabic 306: Arabic Novel and Short Story**

**Credit Points 10 Level 3**

This is an optional unit in the Arabic major program, which aims to introduce students to the study of the Arabic novel and short story, and which examines the historical, political, social and cultural context that this literature reflects. This will be done by studying selected novels and short stories. Students will be able to do a research component on a novel of their choice. This unit will also examine children's literature, including traditional children stories and contemporary Arabic literature, as well as translated western traditional stories.

### **100054.2 Arabic 308: Language Past and Present**

**Credit Points 10 Level 3**

This unit aims to give students an understanding of the phonological, morpho-syntactic, semantic and pragmatic changes that have occurred to the Arabic language both spoken and written in the last century. Particular attention will be paid to the different dialects spoken in some of the Arab countries and their relation to Modern Standard Arabic. A special study will be made of the Australian Arabic used by migrant communities.

### **100847.2 Asia and the West: The Imperial Encounter**

**Credit Points 10 Level 2**

#### **Equivalent Units**

100251 - East West Encounters

#### **Special Requirements**

Successful completion of 60 credit points at Level 1.

The encounter between Europe in Asia, propelled by European imperialism, is one of the great events of modern history. The unit ranges widely over Asia and considers issues of contact, perception, and interaction between Asian and European cultures and economies over a period of 500 years. It begins with the origins of Portuguese expansion overseas but there is particular emphasis on the so-called new imperialism of the period after about 1880 and the nationalist and other resistance movements that developed in Asia in response. Case studies will be made of two Asian countries.

### **101442.2 Asia in the World**

**Credit Points 10 Level 1**

#### **Equivalent Units**

100867 - Foundations of Asia

This unit introduces Asian Studies and International Relations. Considering both traditional and contemporary times, it seeks to place Asia's diverse cultures in a global context. It examines issues such as how to define Asia, how Asian states related to each other, and how Western ideas of international relations have transformed these relations. The unit has two strands, each considering a set of ideas. First it examines the great religions/philosophies of Asian societies – Buddhism, Hinduism, Islam, Christianity and Confucianism – have influenced them. It then considers international relations theory and how theories can help us understand the complexities of Asian states' relations with each other and the wider world.

### **100245.2 Asian Cinema**

**Credit Points 10 Level 2**

#### **Equivalent Units**

63026 - Japanese Cinema

### Special Requirements

Successful completion of 60 credit points at Level 1.

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This unit studies several key Asian cinemas and also examines the work of diasporic film-makers and audiences, with a discussion of the film and video work of Asian-Australian film-makers. Aesthetic trends - questions of form, style, narrative and genre, are explored as part of a study of the historical evolution of these cinemas and the ways in which they address issues of cultural importance. The unit encompasses questions of cultural difference, nationalism, and the hybridisation and globalisation processes at work in contemporary cultures. It will also present a critical evaluation of the assumptions that inform much of western scholarship on Asian cinemas.

### 200535.2 Auditing and Assurance Services

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

A basic knowledge of computing.

#### Prerequisite

**200109.4** Corporate Accounting Systems

#### Equivalent Units

AC301A - Auditing, H3822 - Auditing, 61151 - Principles of Auditing, 200107 - Auditing Principles

#### Incompatible Units

61152 - Auditing & Professional Practice

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This unit studies the roles and responsibilities of the auditor, auditing principles and standards and the application of those standards, particularly in an electronic environment.

### 101248.3 Australian Art 1

**Credit Points** 10 **Level** 2

#### Equivalent Units

10339.1 - Australian Art

#### Special Requirements

Successful completion of 40 credit points at Level 1.

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This unit investigates themes in Australian art in the late eighteenth, nineteenth and early twentieth centuries. Topics covered are: images of the colonial world; the contexts involved in reading this new world, maps, illustrations as well as topographical images. The cultural relationships with Great Britain are explored through the contests over the Australian 'eye' with particular focus on the Heidelberg school, Federation and the First World War. The subject finishes with the debates over a newly arrived Modernism.

### 100959.2 Australian Art II

**Credit Points** 10 **Level** 3

#### Special Requirements

Successful completion of 60 credit points at Level 1.

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This unit investigates the major aesthetic and theoretical events of Australian art in the Twentieth century. Beginning with post First World War art, significant themes surrounding modernism, parochialism, internationalism, conceptualism and contemporary artistic concerns are explored together with aspects of the international art market, museology and indigenous art making.

### 100986.2 Australian History 1860-1920

**Credit Points** 10 **Level** 3

#### Equivalent Units

100247 - Australian History 1860-1920

#### Special Requirements

Successful completion of 60 credit points.

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The unit examines the history of Australia's transformation from a collection of small settler colonies to a modern, industrialising nation. The unit focuses on the creation of a national identity through examination of themes such as race, class, urbanisation, politics, sport gender and culture.

### 100987.3 Australian History Since 1920

**Credit Points** 10 **Level** 3

#### Equivalent Units

100906 - Australian History Since 1920, B3680 - Australian History Since 1920

#### Special Requirements

Successful completion of 60 credit points

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This unit includes a general overview of major developments in Australian political and social history since 1920, and also focuses on particular issues such as the Great Depression, 1949 coal strike, the Petrov Affair and the Whitlam dismissal.

### 101685.3 Australian Indigenous History

**Credit Points** 10 **Level** 3

#### Special Requirements

Successful completion of 60 credit points

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Until 1788, Australia was peopled by those who we now call 'Aborigines'. Then Europeans arrived and began to spread across the continent, displacing and marginalising the Aborigines. This unit will tell the stories of that transformation, beginning with an account of the ideas and motivations of British authority in the late eighteenth century and concluding at the moment when six British colonies formed a federated nation. Topics to be covered will include: violence, humanitarianism, Christian missions, institutional authority. The course will emphasise and explain regional and temporal differences in the ways that Indigenous and non-Indigenous interacted. Students will study primary sources and learn to understand them in context.

### 101872.1 Australian Indigenous History from Federation to Reconciliation

**Credit Points** 10 **Level** 3

#### Special Requirements

Successful completion of 60 credit points.

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This unit aims to explore the history of the relationship between Indigenous and non-Indigenous Australians from Federation (1901) to the present. At the beginning of the twentieth century, Australia became a nation without paying much attention to the first Australians. It was widely assumed that they would die out or at least remain an insignificant welfare problem. Instead, these first Australians survived and grew as a minority population; they also increasingly made themselves heard as a people - so successfully that in 2008 the Parliament of Australia felt obliged formally to apologise for their years of mistreatment. This unit highlights two stories: the non-Indigenous transition from complacency to engagement, and the survival and increasing political effectiveness of the descendants of Australia's first peoples.

### 100848.2 Australian Politics

**Credit Points** 10 **Level** 1

#### Equivalent Units

63284 - Australian Politics, 100266 - Introduction to Australian Politics

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This unit provides an introduction to Australian Politics. It outlines the central features of the federal political system with attention to both historical background and current debates. In addition to study of the institutional frameworks (the Constitution, parliament, political parties and so on), the unit examines the dynamics of inclusion and exclusion that have shaped Australian politics. It explores what it has meant in the past, what it means in the future, for Australians to live together as members of a political community.

### 100849.4 Australian Textual Studies

**Credit Points** 10 **Level** 3

#### Equivalent Units

63233 - Australian Textual Studies, B3858 - Australian Authors: Special Study, B3856 - Australian Literature: the city and the bush

#### Special Requirements

Successful completion of 60 credit points

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This unit aims to increase students' knowledge of the scope and variety of Australian writing. It examines a range of Australian texts from a number of contexts, usually organised along historical and/or thematic lines, and considers the role of writing - both "high" literature and more popular forms - in constructions of Australian culture. Issues of place, gender and race may be foregrounded, and consideration given to how these influence images of

Australia. Film and television texts may also be included or emphasised.

### 300735.2 Automated Manufacturing

**Credit Points** 10 **Level** 2

#### Prerequisite

200237.3 Mathematics for Engineers 1 OR 300463.2 Fundamentals of Mechanics AND 200191.4 Fundamentals of Mathematics AND 300304.3 Sustainable Design: Materials Technology

#### Equivalent Units

86301 - Automated Manufacturing

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The aim of this unit is to provide an introduction into the fundamentals of manufacturing operations, automation and control technologies including numerical control and industrial robotics. In addition, material handling and identification technologies will be discussed as well as manufacturing systems. The latter will examine single-station manufacturing cells, manual assembly lines, automated production and assembly lines as well as flexible manufacturing systems. Mechanical behaviour of common materials used in manufacturing will be studied, and their suitability for various manufacturing processes including metal cutting, sheet-metal forming, bulk deformation and abrasion. Other processes such as rapid prototyping and rapid tooling will also be included.

### 400748.2 Becoming a Nurse

**Credit Points** 10 **Level** 1

#### Equivalent Units

400045 - Nursing Context 1

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This unit introduces the student to the basic constructs that form professional nursing and nursing practice.

### 200518.2 Behavioural Finance

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Students should have at least an introductory finance background before entering into this unit.

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Traditional theories of finance are based the assumption that investors are both rational and utility maximizing. The Efficient Markets Hypothesis in particular has assumptions about investor behaviour which underpin its key predictions. The tenants of behavioural finance disputes the validity of these assumptions. This unit challenges traditional theory by examining how decision making and investor behaviour may be driven by personal and market psychology.

### 400747.2 Behavioural Foundations of Nursing Practice

**Credit Points** 10 **Level** 1

#### Equivalent Units

400046 - Nursing Science 1

### Special Requirements

As a result of space restrictions students must be enrolled in course 4642,4643 or 4648 Bachelor of Nursing.

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This unit introduces the student to psycho-social concepts and principles that underpin human behaviour and inform professional nursing practice.

## 101449.2 Bilingualism and Biculturalism

**Credit Points** 10 **Level** 3

### Equivalent Units

A2014 - Bilingualism and Biculturalism

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Note: The unit offerings for the 1H Teaching Period at Bankstown and Penrith campuses listed above are available only for students enrolled in course 1670 - Bachelor of Education (Birth - 5 years). This unit is a core unit in the BA degree. It is part of the linguistics major and sub-major and can also be taken as an elective.

Bilingualism and biculturalism are an important aspect of life in Australia: many Australian residents are, were, or could be, bilingual and/or bicultural. This unit aims to give students an understanding and appreciation of the most important facets and manifestations of bilingualism and biculturalism, in the linguistic, cognitive, personal, societal and educational spheres, particularly with regard to the Australian context. It also aims to show students how this unit relates to broader studies in education, humanities, linguistics, and social sciences.

## 300890.1 Biodevices

**Credit Points** 10 **Level** 3

### Equivalent Units

300414 - Biodevices

### Special Requirements

Successful completion of 60 credit points at Level 1 or 2.

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This unit replaces 300414 - Biodevices from Autumn 2014. The unit will investigate nature's nanomachines; lipids, DNA and proteins. The students will learn how only a few basic building blocks can self-assemble into more complex structures, which in turn self-assemble into more complex hierarchical structures from which one can build biodevices. These fascinating self-organising supramolecular structures generally involve some kind of non-covalent binding. Particular emphasis is placed on the underlying principles that govern the functioning of such machines and some coverage of the modelling of such processes using techniques such as statistical thermodynamics is given. Biological computing is also covered.

## 300802.1 Biodiversity

**Credit Points** 10 **Level** 1

### Assumed Knowledge

Basic knowledge of biology and chemistry

### Incompatible Units

300539 - Biodiversity, 300792 - Biology A - The Diversity of Life, 300222 - Biology 2, 14436 - Biodiversity, BI102A - Biological Sciences 1.2 (V1), J1761 - General Biology

### Special Requirements

Students are required to have - safety glasses, lab coat, enclosed shoes.

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How many species walk, fly, swim or slither, crawl, hop, wriggle or just float, hitchhike or move so slowly that they appear not to move at all? No one knows and new species appear almost every day. This unit focuses on this spectacular diversity of living things and the process of evolution. Students explore and classify biodiversity and how organisms function, acquire and assimilate resources and co-ordinate growth and reproduction. Organisms interact with one another and their environment forming a complex set of interactions in ecosystems. It is these interactions that have driven evolution. Ultimately human survival depends on the sustainable use of this biodiversity and ecosystems.

## 700095.1 Biodiversity (UWSC)

**Credit Points** 10 **Level** 1

### Assumed Knowledge

Basic knowledge of biology and chemistry

### Equivalent Units

300539 Biodiversity, 700032 Biodiversity (UWSC), 300802 Biodiversity

### Special Requirements

Students must be enrolled at UWSCollege.

.....

How many species walk, fly, swim or slither, crawl, hop, wriggle or just float, hitchhike or move so slowly that they appear not to move at all? No one knows and new species appear almost every day. This unit focuses on this spectacular diversity of living things and the process of evolution. Students explore and classify biodiversity and how organisms function, acquire and assimilate resources and co-ordinate growth and reproduction. Organisms interact with one another and their environment forming a complex set of interactions in ecosystems. It is these interactions that have driven evolution. Ultimately human survival depends on the sustainable use of this biodiversity and ecosystems.

## 300909.1 Biological Adaptation to Climate Change

**Credit Points** 10 **Level** 3

### Special Requirements

Successful completion of 40 credit points at Level 2.

.....

This unit investigates how individuals, populations and ecosystems respond to climate change. Climate change will provide the umbrella by which anthropogenic impacts are examined in the context of adaptation and evolution of animals and plants. This unit explores how ecological



resilience provides a theoretical foundation for understanding how complex systems adapt to and recover from localised disturbances like fires, pest outbreaks, and floods, as well as large-scale perturbations such as climate change. Resilience theory is especially important to environmental scientists for its role in underpinning adaptive management approaches to ecosystem and resource management.

### 200263.1 Biometry

**Credit Points** 10 **Level** 1

#### Assumed Knowledge

HSC Mathematics

#### Equivalent Units

200032 - Statistics for Business, 200192 - Statistics for Science

#### Incompatible Units

200190 - Finite Mathematics, 200194 - Engineering Mathematics 3

.....

This unit introduces students to various statistical techniques necessary in scientific endeavours. Presentation of the content will emphasize the correct principles and procedures for collecting and analysing scientific data, using a hands-on approach. Topics include effective methods of gathering data, statistical principles of designing experiments, error analysis, describing different sets of data, probability distributions, statistical inference, non-parametric methods, and simple linear regression and correlation.

### 200263.3 Biometry

**Credit Points** 10 **Level** 1

#### Assumed Knowledge

HSC Mathematics or equivalent

#### Equivalent Units

200192 - Statistics for Science, 300700 - Statistical Decision Making, 200032 - Statistics for Business, 200052 - Introduction to Economic Methods

#### Incompatible Units

200182 - Quantitative Techniques

.....

Biometry introduces students to various statistical techniques necessary in scientific endeavours. Presentation of the content will emphasize the correct principles and procedures for collecting and analysing scientific data, using a 'hands-on' approach. Topics include effective methods of gathering data, statistical principles of designing experiments, error analysis, describing different sets of data, probability distributions, statistical inference, non-parametric methods, simple linear regression and analysis of categorical data.

### 200263.4 Biometry

**Credit Points** 10 **Level** 1

#### Assumed Knowledge

HSC Mathematics or equivalent

#### Equivalent Units

200192 - Statistics for Science, 300700 - Statistical Decision Making, 200032 - Statistics for Business, 200052 - Introduction to Economic Methods

#### Incompatible Units

200182 - Quantitative Techniques

.....

Biometry introduces students to various statistical techniques necessary in scientific endeavours. Presentation of the content will emphasize the correct principles and procedures for collecting and analysing scientific data, using a hands-on approach. Topics include effective methods of gathering data, statistical principles of designing experiments, error analysis, describing different sets of data, probability distributions, statistical inference, non-parametric methods, simple linear regression and analysis of categorical data.

### 400927.1 Block Clinical Practicum (PG)

**Credit Points** 10 **Level** 7

#### Assumed Knowledge

Traditional Chinese Medicine Practice 4 (PG)

#### Incompatible Units

400363 - Block Clinical Practicum

.....

This unit provides the student with intensive, supervised clinical practice experience. Arrangements will be made for students to complete this stage in China. This will involve students paying their own travel fares, as well as, training and accommodation fees to the Chinese institution. This unit represents the final clinical practicum stage and development of clinical skills. Students will be expected to demonstrate competence in handling patients in a clinical context, and manage their integrated care using TCM.

### 300836.1 Botany

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Basic knowledge of biology, chemistry and ecology.

#### Prerequisite

**300802.1** Biodiversity

#### Equivalent Units

BI103A - Botany; 300328 - Botany

.....

From microscopic algae to giant flowering angiosperms, this unit develops students knowledge and understanding of plants on earth. The unit covers the topics of plant anatomy and morphology, classification and systematics, and evolution. Students will examine the major groups of

plants: green algae, bryophytes, lycophytes, monilophytes, gymnosperms and angiosperms. Laboratory and field work involves the study of common Australian plants and economically significant plants.

### 101684.3 Brain and Behaviour

**Credit Points** 10 **Level** 2

#### Equivalent Units

100931 - Neuroscience

.....

This unit provides an introduction to the biological and neuroscientific bases of human behaviour. Topics covered include the chemistry of life, the molecular basis of life, the cell and some of the major organ systems of the human body with particular reference to the nervous, endocrine and sensory systems. The course has a significant laboratory component which reinforces lecture and text material. Students will be introduced to the biological and neuroscientific concepts necessary for a thorough understanding of areas of psychology such as abnormal psychology, cognitive processes, developmental psychology, human learning, and physiological psychology.

### 200088.2 Brand and Product Management

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

A sound knowledge of marketing principles and of the key elements of consumer behaviour, marketing research and marketing communications.

#### Prerequisite

200083.2 Marketing Principles

#### Equivalent Units

MK205A - Brand Management

.....

This unit focuses on the role of brand and product management in the context of planning and implementing marketing strategies and is intended to develop a critical appreciation of the inherent challenges contemporary firms encounter in creating and maintaining brand equity.

### 101756.1 Bridging the Gap: Re-engaging Indigenous Learners

**Credit Points** 10 **Level** 3

#### Prerequisite

101751.2 Contextualising Indigenous Australia (Day Mode)

#### Equivalent Units

101116 - Issues in Aboriginal Education

.....

This unit is available to all Undergraduate students who have open electives. Bridging the Gap: Re-engaging Indigenous Australian Learners will provide students with knowledge and skills to develop teaching strategies that will bridge the education gaps existing for many Indigenous Australian (Indigenous) learners. Students will gain knowledge of quality teaching frameworks to engage all learners and in particular Indigenous learners. The unit will

also increase students' awareness of the complexities of the cultural inter-relationships between many Indigenous and non-Indigenous learners. The unit focuses on empowering students to effectively teach: Indigenous Australians; Indigenous studies in consultation with Indigenous communities; and assess as well as evaluate resources for use in teaching Indigenous studies.

### 300088.1 Broadband Networking

**Credit Points** 10 **Level** 3

#### Prerequisite

300112.1 Digital Communication Technology

.....

This unit covers networking technologies, and standards of broadband networks that dominate both the WAN and LAN markets. These include frame relay, ATM, broadband ISDN and high-speed LANs. Quality of Service (QoS) issues, and the need to support multimedia and real-time traffic, the need to control congestion and the need to provide different levels of QoS to different applications are the focus.

### 100850.2 Buddhism in the Contemporary World

**Credit Points** 10 **Level** 2

#### Equivalent Units

63120 - Communication and Culture in Asia 2: Performing Asian Cultures and Identities.

#### Special Requirements

Successful completion of 60 credit points at Level 1.

.....

In 2012 this unit replaced by 101882 - A History of Modern Global Buddhism. A history of Buddhism and its spread through Asian and more recently to the West, introducing its principal beliefs and practices, the diversity of its manifestations, its political, cultural, and social impact. Focus is on contemporary Buddhism.

### 400621.2 Bugs and Drugs

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Basic understanding of structure and function of systems within the human body.

.....

Throughout history humans have sought to control their well-being whether it be in response to disease-producing microbes or situations inherent in modern day life. This unit examines an eclectic range of treatments and technologies. Some have been triggered by ancient and enduring infectious foes such as smallpox and the plague or emerging menaces including Ebola and SARS. Others are nested within contemporary living and may be constructed as communicable in the social sense. Selected issues will be explored including agents utilised in the alteration of sensory perception including hallucinogens as well as reaction to and manipulation of body image.

### 300706.2 Building 1

**Credit Points** 10 **Level** 1

#### Equivalent Units

BG101A - Building 1, 700070 - Building 1 (UWSC)

#### Special Requirements

External offerings for this unit are only available to students who are enrolled in a Property course, Key Program or Major.

.....

This unit provides students with an overview of regulations and construction techniques with an emphasis on low-rise residential buildings in the Australian context. It covers general process; building regulations; environmental issues; surveying techniques; structural elements (footings, framing and bracing); envelope; services; fit-out and finishes.

### 700070.1 Building 1 (UWSC)

**Credit Points** 10 **Level** 1

#### Equivalent Units

300706 - Building 1

#### Special Requirements

Students must be enrolled at UWSCollege.

.....

This unit provides students with an overview of regulations and construction techniques with an emphasis on low-rise residential buildings in the Australian context. It covers general process; building regulations; environmental issues; surveying techniques; structural elements (footings, framing and bracing); envelope; services; fit-out and finishes.

### 300707.2 Building 2

**Credit Points** 10 **Level** 1

#### Equivalent Units

BG103A - Building 2; 700071 - Building 2 (UWSC)

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The aim of this unit is to provide students with an overview of the design, classification, applicable Australian Standards, structural systems, construction techniques, materials handling systems, building services, fit-out and finishes for larger scale buildings.

### 700071.1 Building 2 (UWSC)

**Credit Points** 10 **Level** 1

#### Equivalent Units

300707 - Building 2

#### Special Requirements

Students must be enrolled at UWSCollege.

.....

The aim of this unit is to provide students with an overview of the design, classification, applicable Australian

Standards, structural systems, construction techniques, materials handling systems, building services, fit-out and finishes for larger scale buildings.

### 200292.2 Building Law

**Credit Points** 10 **Level** 3

#### Equivalent Units

LW305A - Building Law 2

.....

In 2013 this unit replaced by 200808 - Building Law. This unit is designed to provide students with a good understanding of the law and dispute resolution mechanisms that regulate the conduct of the building industry and building practices e.g. Occupational health and safety, contract law, workers compensation, awareness of industrial relations and dispute resolution.

### BG302A.1 Building Regulation Studies

**Credit Points** 10 **Level** 3

#### Equivalent Units

300722 - Building Regulation Studies

.....

In 2010 this unit replaced by 300722 - Building Regulation Studies. To develop an awareness of the regulatory construction and equipment techniques in the detection, prevention, behaviour and control of fire; an understanding of and an appreciation for buildings; to extend knowledge of the modern built environment for appraisal at Council level in planning and development procedures related to the inspection role, and the legal responsibilities in fire engineering and hazard assessment. Building regulations and fire safety; performance and prescription; fire literature and development; materials in fire, fire resisting construction; detection/alarm systems; egress and human behaviour; spread of fire; work cover; smoke movement and control; fire fighting equipment; essential services and heritage buildings.

### 300722.2 Building Regulations Studies

**Credit Points** 10 **Level** 3

#### Equivalent Units

BG302A - Building Regulation Studies

.....

This unit develops an awareness of the regulations used to control risk in buildings. Major sources of risk, such as fire and public health, are identified and controlled. Building regulations of high risk regions, such as cyclonic, seismic and bushfire-prone areas, are also discussed. The unit emphasises the safety of vulnerable occupants, such as young children, disabled people and the elderly. The unit also explores recent developments in the BCA concerning energy efficiency.

### 200336.3 Business Academic Skills

**Credit Points** 10 **Level** 1

#### Assumed Knowledge

HSC English or equivalent

### Equivalent Units

H1745 - Business Skills for Professionals, 200155 - Business Skills and Communication, 100483 - Principles of Professional Communication 1

### Special Requirements

External offerings for this unit are only available to students who are enrolled in a Property course, Key Program or Major.

.....

This is a foundation unit that addresses academic essay writing skills relevant to business and economic issues. The unit is designed to develop basic student proficiencies such as information collection, analysis and evaluation, and logical reasoning skills. Through the analysis of ethical issues, this unit teaches students to research; reference using the College of Business and Law's Harvard style; analyse data; develop an argument; and write an academic essay.

### 200091.3 Business to Business Marketing

**Credit Points** 10 **Level** 3

### Assumed Knowledge

Basic knowledge of marketing concepts, theories and frameworks

### Prerequisite

**200083.2** Marketing Principles

### Equivalent Units

MK318A - Business-to- Business Marketing, 61723 - Business-to-Business Marketing

.....

This unit encompasses introduction to B2B Marketing, differences between B2B and consumer marketing, organizational buying behaviour, B2B market segmentation, business marketing strategy, management of the 4P's in B2B Marketing, relationship and network marketing, Supply Chain Management and CRM strategies, and evaluating the marketing efforts and making the marketing strategy work.

### 200158.3 Business, Society and Policy

**Credit Points** 10 **Level** 2

### Corequisite

**200571.2** Management Dynamics OR **61611.1** Management Studies OR **H1727.1** Business Management OR **MG102A.3** Management Foundations

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The purpose of this unit is to explore through reflection and social inquiry the complex relationships between businesses and their stakeholders, critically evaluating social and political impacts of business decisions and practices and the challenges and ethical dilemmas emerging in the context of global capitalism. Students will examine these relationships within the framework of the development of capitalism, considering the importance of government roles to regulate the impacts of business actions on society and vice versa. It emphasises the social

responsibility of the firm and the role of ideology used to justify the actions of business, society and government.

### 400984.1 Cardiorespiratory Physiotherapy

**Credit Points** 10 **Level** 3

### Prerequisite

**400982.1** Core Competencies in Physiotherapy Practice AND **400981.1** Clinical Pharmacology AND **400870.1** Population Health and Society AND **400864.2** Research Methods (Quantitative and Qualitative)

### Corequisite

**400984.1** Cardiorespiratory Physiotherapy AND **400986.1** Neurological Physiotherapy AND **400985.1** Clinical Education A

### Special Requirements

Students must be enrolled in 4662 Bachelor of Health Science/Master of Physiotherapy, 4668 Bachelor of Health Science (Honours)/Master of Physiotherapy or Graduate Entry Master of Physiotherapy programs. Students in this program are required to participate fully in practical classes. This involves disrobing to shorts and singlet or swim-suit equivalent in mixed gender classes. Students will practice hands-on physiotherapy examination and treatment techniques on both genders, and will personally experience these techniques which will be performed on them by other students and relevant academic staff. Students cannot enrol in Year 3 Physiotherapy units until they have completed 160 credit points in the Bachelor of Health Science/Master of Physiotherapy and 4668 Bachelor of Health Science (Honours)/Master of Physiotherapy programs.

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This unit builds on the knowledge and skills developed in the first two years of physiotherapy study. It focuses on client assessment and evidence-based management in acute cardiorespiratory physiotherapy contexts. This will require strong communication skills, ethical and professional behaviour and an appreciation of interprofessional care. Professional competencies addressed in this unit include introductory skills in cardiorespiratory physiotherapy assessment, interpretation and prioritisation of findings along with the implementation and evaluation of appropriate treatment strategies.

### 300816.1 Cell Biology

**Credit Points** 10 **Level** 1

### Assumed Knowledge

Basic understanding of biology and chemistry

### Equivalent Units

300543 - Cell Biology, 300793 - Biology B - Cellular Processes, 300221 - Biology 1

### Special Requirements

Students require safety glasses, laboratory coat and laboratory book.

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Cells are the most basic form of all life, and underlying normal cell function are the molecules used to build complex cellular structures, generate energy, and

propagate dynamic life. The unit will study the fundamental processes through which key biomolecules, including lipids, carbohydrates, amino acids and nucleic acids, are manipulated to generate and store energy, and build a broad array of important biological macromolecules including DNA, membranes and proteins. To sustain life, cells respire for energy and replicate for growth and sexual reproduction. Accordingly the unit will examine cellular respiration, transcription, translation, mitosis, meiosis, transmission and how the genetic code is inherited and modified providing students insights into the phenomena of life. The role of DNA technology in the fields of medicine, biomolecular plant and animal science, food, forensic and environmental science will provide students with real world applications.

### 700125.1 Cell Biology (UWSC)

**Credit Points** 10 **Level** 1

#### Assumed Knowledge

Basic understanding of biology and chemistry

#### Equivalent Units

300543 Cell Biology, 300793 Biology B – Cellular Processes, 700034 Cell Biology (UWSC), 300816 Cell Biology

#### Special Requirements

Students must be enrolled at UWSCollege in either 7003 Diploma in Science or 7009 Diploma in Science Fast Track.

Cells are the most basic form of all life, and underlying normal cell function are the molecules used to build complex cellular structures, generate energy, and propagate dynamic life. The unit will study the fundamental processes through which key biomolecules, including lipids, carbohydrates, amino acids and nucleic acids, are manipulated to generate and store energy, and build a broad array of important biological macromolecules including DNA, membranes and proteins. To sustain life, cells respire for energy and replicate for growth and sexual reproduction. Accordingly the unit will examine cellular respiration, transcription, translation, mitosis, meiosis, transmission and how the genetic code is inherited and modified providing students insights into the phenomena of life. The role of DNA technology in the fields of medicine, biomolecular plant and animal science, food, forensic and environmental science will provide students with real world applications.

### 400874.2 Channels and Points 1

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Assumed knowledge equivalent to Theories of Traditional Chinese Medicine 1.

#### Equivalent Units

400347 - Acupuncture 1

Acupuncture is one of the principal therapeutic interventions in Traditional Chinese Medicine (TCM). This unit introduces students to acupuncture theory and practice, and provides opportunity to develop practical

skills. It covers the theory of channels and points, channel pathway, point location and indication of the three yin/yang channels of hand and points, and the three yin channels of foot and points. This unit also expands upon the student's understanding of TCM theory and practice principles.

### 400875.2 Channels and Points 2

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Assumed knowledge equivalent to Channels and Points 1.

#### Equivalent Units

400347 - Acupuncture 1

Acupuncture is one of the principal therapeutic interventions in Traditional Chinese Medicine (TCM). This unit completes the study of system of channels and points, which forms the basis of clinical application of acupuncture. It covers the channel pathway, point location and indication of the three yang channels of foot and points, and Du and Ren channels and points. It also introduces the points of ear and scalp acupuncture. This unit expands upon the student's understanding of TCM theory and practice principles.

### 700043.1 Chemistry (UWSCFS)

**Credit Points** 10 **Level** Z

#### Special Requirements

Students must be enrolled at UWS College.

This unit introduces students to the basic concepts required to satisfy the needs of most first year university science courses in both skill and content areas. It is intended that students will gain a greater understanding of the theoretical concepts covered in the course by completing the practical component of the course.

### 400162.2 Child and Adolescent Occupations

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

First and second year specialty occupational therapy units or Occupational Therapy Theory and Practice.

#### Special Requirements

Students must be enrolled in courses 4663 - Bachelor of Health Science/Masters of Occupational Therapy and 4664 - Master of Occupational Therapy. To undertake this unit, students must comply with the following special requirements: Prior to enrolling in this unit students must have: 1) successfully completed an approved Child Protection Workshop 2) submitted a Prohibited Employment Declaration prior to 1 June 2010 or a Working with Children Check Student Declaration after 1 June 2010 3) if students are visiting a NSW Health facility they will need to comply with the occupational screening and immunisation policy of NSW Health.

Students learn about paediatric and adolescent occupational therapy practice in different practice settings.

This unit examines child development and explores the occupations of childhood and adolescence. Occupational therapy models, frames of reference, assessments and interventions are applied to practice scenarios. Family-centred practice is a key focus of this unit. There will be a self directed and reflective learning approach in this unit.

### 101265.2 Children's Culture

**Credit Points** 10 **Level** 3

#### Special Requirements

Successful completion of 60 credit points at Level 1.

This unit explores the concept of children's culture and the diversity of cultures to which children belong. The unit focuses on current debates about childhood and children's culture, including the rise of children's consumer culture. Students will gain insights into children's lives and culture by critically engaging with a variety of objects and institutions that are part of children's lives, for example, toys, videogames, children's television programs, films and books. The unit will also examine the role of adults in children's culture, including in marketing and advertising to children.

### 101242.3 Children's Literature

**Credit Points** 10 **Level** 3

#### Special Requirements

Successful completion of 60 credit points

This unit explores a wide range of literary texts created for children, from folktales, fairytales and myths to contemporary examples. It focuses on the relationship between children's texts, society and culture. The unit will examine a variety of genres and themes, for example, the experience of childhood as constructed by adult authors of children's texts; post-colonial children's literature; the emergence and development of distinctly Australian children's texts; the development of "young adult" literature; the impact of new technologies on children's literature; and role of art in children's literature.

### 101626.3 Children's Literature: Image and Text

**Credit Points** 10 **Level** 2

#### Special Requirements

Successful completion of 40 credit points at level 1

Note: The unit offerings for the 1H Teaching Period at Bankstown and Penrith campuses listed above are available only for students enrolled in course 1670 - Bachelor of Education (Birth - 5 years). Please note that enrolments will be monitored and students who are NOT enrolled in course 1670 will be required to withdraw from 1H and enrol in one of the alternative Teaching Periods listed above. This unit focuses on the interrelationships between image and text in children's literature. The unit examines both picture books and other image-based children's texts, including electronic texts and graphic

novels. The unit will examine children's texts as cultural artefacts, theories of visual literacy and how image and text combine to create meaning. Students will have the option of creating their own picture book for their final project or undertaking a critical analysis of a number of contemporary picture books.

### 100056.2 Chinese 101

**Credit Points** 10 **Level** 1

Note: The unit offerings for the 1H Teaching Period at Bankstown and Penrith campuses listed above are available only for students enrolled in course 1670 - Bachelor of Education (Birth - 5 years). Please note that enrolments will be monitored and students who are not enrolled in course 1670 will be required to withdraw from 1H and enrol in one of the alternative Teaching Periods listed above. The unit is offered in Autumn at Penrith for students enrolled in Course 1671 - Bachelor of Social Science (Pathway to Early Childhood Teaching). This unit is an introduction to the (Mandarin) Chinese language as well as aspects of Chinese culture which are necessary for language competency, using Pinyin and simplified characters. It is intended for students who are not from a Chinese-speaking background and who are at beginner level in all four skills -listening, speaking, reading and writing in Modern Standard Chinese. Components of this unit may be presented in English.

### 100057.2 Chinese 102

**Credit Points** 10 **Level** 1

This is a post-beginner level unit in (Mandarin) Chinese intended for those with knowledge of Chinese 101 or equivalent. This unit builds on the knowledge and skills developed in (Mandarin) Chinese 101 and aims to further develop listening, speaking, reading and writing skills in elementary Modern Standard Chinese. The unit includes a socio-cultural component which will examine some aspects of China and Chinese culture as well as the Chinese community in Australia.

### 100063.2 Chinese 302

**Credit Points** 10 **Level** 3

This unit further develops students' proficiency in both spoken and written Chinese acquired in 100062 - Chinese 301, with an emphasis on oral expression, reading and writing skills. It enhances students' ability to interact with native speakers in both spoken and written Chinese in various situations, and expands their understanding of Chinese culture. Some authentic materials are used in order to enhance students' understanding of the language in its cultural context and their ability to interact in similar settings.

### 100064.2 Chinese 303: Twentieth-Century Chinese Literature

**Credit Points** 10 **Level** 3

This unit introduces students to modern and contemporary Chinese literature in the Chinese language. It includes a brief overview of Twentieth-century Chinese literature, and exposes students to a variety of literary genres. Students are expected to work individually and in groups in order to analyse, evaluate and critique these works, whose social and cultural context is integral to understanding them. This process will not only increase students' understanding and appreciation of Twentieth-century Chinese literature, but it will also develop their critical thinking skills.

### **100065.2 Chinese 304: Chinese Classical Literature**

**Credit Points 10 Level 3**

.....

This unit introduces students to Chinese classical literature in the Chinese language. It includes a brief overview of Chinese classical literature and exposes students to the prose, poetry, drama and fiction genres of Chinese classical works from the Han dynasty to the Qing dynasty. Through selected readings, students will gain some knowledge of the stylistic and linguistic features of classical prose and develop skills in reading classical Chinese. Students will also develop an understanding of the Chinese literary tradition and an appreciation of the continuing relevance of classical Chinese in contemporary China.

### **100066.2 Chinese 305: Chinese Cinema**

**Credit Points 10 Level 3**

.....

This unit offers a brief review of Chinese film and introduces some of the best Chinese-language productions of the last two decades from mainland China and Taiwan. Students will be required to work individually and in groups to critique the social and moral issues raised in these films. They will also consider the historical context from which these films emerged. This process will develop a deeper understanding of Chinese society and the lives of Chinese people of different eras. It will also enhance students' appreciation of Chinese cultural identity and moral values.

### **100067.2 Chinese 307: The Cultural Context of China**

**Credit Points 10 Level 3**

.....

This unit provides a brief overview of Chinese culture and examines the cultural interchanges of which it has been a part throughout history. Students will analyse the effects of these cultural contacts, both positive and negative. They will also evaluate and critique relevant cultural issues, from a comparative perspective. This process will increase students' understanding of the cultural identity of China, and it will also enable them to appreciate the importance of outside cultural influences, thereby reinforcing an open and mature attitude towards multiculturalism. The unit will be conducted in Chinese.

### **400918.1 Chinese Internal Medicine 1 (PG)**

**Credit Points 10 Level 7**

#### **Assumed Knowledge**

Traditional Chinese Medicine 3, Acupuncture Techniques, Chinese Medicinal Formulas

#### **Incompatible Units**

400357 - Chinese Internal Medicine

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The study of internal medicine forms the basis of clinical practice in traditional Chinese medicine. This unit begins to bridge the gap between theory and practice. It enables the health professional to analyse, diagnose and treat common internal diseases with both acupuncture and herbal medicine and using a TCM approach. The focus of this unit is on the analysis of major presenting symptoms.

### **400922.1 Chinese Internal Medicine 2 (PG)**

**Credit Points 10 Level 7**

#### **Assumed Knowledge**

Traditional Chinese Medicine 3, Acupuncture Techniques, Chinese Medicinal Formulas

#### **Incompatible Units**

400360 - Chinese Internal Medicine 2

.....

This unit builds on Chinese Medicine 1 and extends the students ability to analyse, diagnose and treat common and difficult diseases in internal medicine with both acupuncture and herbal medicine and using a Traditional Chinese Medicine approach. Students will develop an understanding of the causes and pathophysiological mechanisms of a wide range of diseases.

### **400876.2 Chinese Materia Medica 1**

**Credit Points 10 Level 2**

#### **Assumed Knowledge**

Assumed knowledge equivalent to Traditional Chinese Medicine 1.

#### **Equivalent Units**

400349 - Chinese Herbal Medicine 1

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Herbal medicine is one of the principal therapeutic interventions in Traditional Chinese Medicine. This unit introduces students to the therapeutic and reference organisation of Chinese medicinal herbs, and enables students to commence using the materia medica. It covers the commonly used herbs in each of the six categories of the Chinese materia medica, including the herbal properties, actions, indications, contraindications, combined usage as well as herbal dispensing. This unit also expands upon the student's understanding of TCM theory and practice principles.

## 400877.2 Chinese Materia Medica 2

**Credit Points** 10 **Level** 2

### Assumed Knowledge

Assumed knowledge equivalent to Chinese Materia Medica 1.

### Equivalent Units

400351 - Chinese Herbal Medicine 2

.....

This unit completes the study of Chinese medicinal herbs, which forms the basis for Chinese herbal medicine. It covers the commonly used herbs in each of the twelve categories of the Chinese materia medica, including the herbal properties, actions, indications, contraindications and combined usage. It also introduces the basic knowledge of Traditional Chinese Medicine (TCM) dietary therapy and herbal pharmacognosy. This unit also expands upon the student's understanding of TCM theory and practice principles.

## 400878.1 Chinese Medicinal Formulas

**Credit Points** 10 **Level** 3

### Assumed Knowledge

Assumed knowledge equivalent to Chinese Materia Medica 1 and 2.

### Equivalent Units

400351 - Chinese Herbal Medicine 3

.....

Herbal medicine is the principal therapeutic intervention in Traditional Chinese Medicine (TCM). This unit follows from Chinese Materia Medica 1 and 2, and begins the study of major Chinese herbal formulas, which form the basis for clinical prescribing in Chinese herbal medicine. The focus of this unit is to compare and contrast the main formulas in specified categories, and to analyse the specific actions of the herbs that make up the formula. Students will be required to formulate, assemble and prepare complex prescriptions. This unit expands upon the student's knowledge of the Chinese Materia Medica, as well as the understanding of TCM theory and practice principles.

## 100989.2 Cinema and Realism

**Credit Points** 10 **Level** 3

### Equivalent Units

100272 - Montage, Theory, Cinema

### Special Requirements

Successful completion of 60 credit points at Level 1.

.....

This unit explores the idea of realism in both fiction and non-fiction film as it has been articulated in film theory and explored in various film movements. The unit will start from early actuality film, will examine the principles which animate documentary cinema, and will explore the idea of realism as it has developed in fiction film. The unit will discuss a range of approaches to documentary realism, and explore contemporary challenges to the documentary

idea in arguments that fictive elements exist in all documentary film. The unit will also examine various historical schools of realist filmmaking in the fiction film, such as Italian neo-realism. By the juxtaposition of ideas of realism in documentary and fiction, the subject will explore the blurred boundaries of non-fiction and fiction in contemporary cinema.

## 100990.2 Cinema, Culture, Memory

**Credit Points** 10 **Level** 3

### Equivalent Units

100249 - Cinema, Culture and Memory.

### Special Requirements

Successful completion of 60 credit points.

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This unit will examine the role of cinema in forming images of national and cultural identity. The unit will study approaches in film theory to national cinemas, and will explore the development of indigenous and postcolonial cinemas. The unit will discuss political debates and issues in national cinemas, and will raise questions about the nature of memory as it is mediated by cinematic experience, the representation of history, and the history of representation of indigenous cultures and peoples. The unit will introduce these questions and examine them within the framework of a case study of one national or postcolonial cinema.

## 300005.2 Circuit Theory

**Credit Points** 10 **Level** 2

### Assumed Knowledge

Content contained in 200238 - Mathematics for Engineers 2. Ordinary Differential Equations, including first and second order. Laplace transforms: definition, inverse transform, s-shift, unit step function and Dirac delta function, transform of a derivative, solving differential equations.

### Prerequisite

**300021.2** Electrical Fundamentals

.....

This unit aims to equip students with the tools needed for the design and analysis of electrical and electronic circuits. The unit also introduces various techniques of circuit analysis, convolution, mutual coupling, frequency response and two ports loop.

## 100991.2 Citizenship Ancient and Modern

**Credit Points** 10 **Level** 3

### Equivalent Units

100851 - Citizenship Ancient and Modern

### Special Requirements

Successful completion of 60 credit points at Level 1.

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There are repeated calls for greater involvement by citizens in public life or the community. Generally such appeals draw upon an image of ancient Western citizenship derived



from the Greek city-state or ancient Rome. Yet the history of citizenship and civic identity in the West is long and varied. This unit surveys the historical literature from a number of different periods of Western history, from the ancient city-states to the Roman Empire, from Medieval merchants to Renaissance scholars, through to early modern debates around sovereignty and religious toleration. It also examines modern debates around the greater complexity of modern societies as against ancient, and the perceived greater focuses upon privacy and personal autonomy in the modern world - all of which are claimed to have diminished the civic impulse. The unit should be of interest to history, politics and education students.

### 300930.1 Classical Physics and Advanced Technologies

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Introductory mechanics: Newton's laws, work, conservation of energy and momentum. Introductory Electrostatics: Electric forces and Coulomb's law; DC electricity, voltage, current, resistance, Ohm's law, electric power, circuit laws. Introduction to Magnetic fields: production by magnets & currents, magnetic forces on currents & charges; Induced EMF, Faraday's law and electrical generators; AC current & voltage, peak & rms values, capacitance and inductance.

#### Prerequisite

**300829.1** Physics 2

#### Equivalent Units

300413 - Applied Instrumentation in Nanotechnology

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This unit explains in depth aspects of classical mechanics related to forced and damped oscillations. Physical waves are introduced and formalized by describing applications of the wave equation to mechanical systems and electromagnetic radiation. Interference and diffraction are detailed using electromagnetic fields (physical optics). Main technological applications of mechanical oscillations and electromagnetic waves are also explained, such as the atomic force microscope, laser, optical tweezers and the zeta-sizer.

### 400969.1 Classical Texts in Chinese Medicine (PG)

**Credit Points** 10 **Level** 7

#### Assumed Knowledge

Traditional Chinese Medicine 3, Chinese Medicinal Formulas

#### Incompatible Units

400355 - Classical Texts in Chinese Medicine

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This unit provides further learning experiences that enable the students to explore the original theories on physiology, pathology, diagnosis, differentiation and treatment of diseases through select periods of Chinese history. Many theoretical concepts, diagnostic systems and therapeutic methods of Traditional Chinese Medicine (TCM) are still in current usage, and will be covered through the study of

important classical texts and academic schools of TCM thought. This unit expands upon the students understanding of TCM theories and practice principles through studies of the classical literature.

### 100852.2 Classics of Modern Philosophy

**Credit Points** 10 **Level** 2

#### Equivalent Units

63049 - Critical and Modern Philosophy

#### Special Requirements

Successful completion of 60 credit points at Level 1.

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Classics of Modern Philosophy introduces students to a selected number of 'great' (highly influential) philosophical texts of the late nineteenth and twentieth centuries. Addressing fundamental issues such as human freedom, the nature of truth and knowledge, technological progress, problems of modern life, this unit guides students through key statements with supporting explanation of the philosophers, their projects and careers, and relevant social contexts.

### 101870.1 Climate Change and Culture

**Credit Points** 10 **Level** 3

#### Special Requirements

Successful completion of 60 credit points.

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This unit introduces climate change as a complex social, cultural and political phenomenon, one that is re-shaping the way we live in the world and future lifestyles. Because climate change is highly contested, the course critically examines the issue from different theoretical, disciplinary, social and cultural perspectives. Topics range from cultural theory and forms of social action to the history and construction of climate change as concepts and debates around nature, culture, science, economics and consumption; to social justice, Indigenous knowledge systems, popular culture, the media and Australian politics, global governance, cities and urban planning.

### 300837.1 Climate Change Science

**Credit Points** 10 **Level** 2

#### Prerequisite

**300808.1** Introductory Chemistry OR **300800.1** Essential Chemistry 1 OR **300802.1** Biodiversity

#### Equivalent Units

300781 - Atmospheric Science

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A factual understanding of the energy balance of the globe, how this impacts on climate and how climate has varied in the past, is essential for any person working in the climate change area. This unit will introduce students to the concept of energy balance and climate, our understanding of how climate works, and how it has changed through time. Topics in basic atmospheric science will give students a critical understanding of current environmental concerns and debates about radiative forcing (the greenhouse

effect), climate change, ozone depletion, photochemical pollution and acid precipitation.

### 400879.1 Clinical Assessment Methods

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Understanding of human anatomy & physiology and pathophysiology of common impairments of health.

#### Prerequisite

**400138.1** Pathophysiology 1 AND **400868.1** Human Anatomy and Physiology 1 AND **400869.1** Human Anatomy and Physiology 2

#### Equivalent Units

400262 - Clinical Diagnosis

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This unit is designed to introduce students to basic principles and essential skills of physical examination and diagnostic/laboratory investigation procedures, required for successful approach to diagnosis of health impairment states. Primary contact health practitioners are expected to have sound understanding of disease presentation, techniques of patient interviewing and examination for collection of relevant clinical information as well as the ability to select appropriate laboratory tests and interpret their findings. This unit will also help students to develop fundamental clinical reasoning skills required in the medical decision making process.

### 400985.1 Clinical Education A

**Credit Points** 10 **Level** 3

#### Prerequisite

**400982.1** Core Competencies in Physiotherapy Practice AND **300754.1** Neuroanatomy AND **400981.1** Clinical Pharmacology AND **400864.2** Research Methods (Quantitative and Qualitative)

#### Corequisite

**400983.1** Orthopaedic Physiotherapy AND **400986.1** Neurological Physiotherapy AND **400984.1** Cardiorespiratory Physiotherapy AND **400987.1** Neurological Physiotherapy Practice

#### Special Requirements

Students must be enrolled in 4662 Bachelor of Health Science/Master of Physiotherapy, 4668 Bachelor of Health Science (Honours) / Master of Physiotherapy or 4667 Master of Physiotherapy. Prior to enrolling in this unit students must have: 1) submitted a Criminal Record Check form prior to 1 June 2010 or a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate 2) submitted a Prohibited Employment Declaration prior to 1 June 2010 or a Working with Children Check Student Declaration after 1 June 2010. 3) A senior first aide certificate which includes cardiopulmonary resuscitation. If students are visiting a NSW Health facility they will need to comply with the NSW Health Occupational Screening and Vaccination Against Infectious Diseases Policy. Students are required to wear the UWS physiotherapy uniform which complies with NSW Health uniform requirements. Students cannot enrol in Year 3 Physiotherapy units until they have completed 160 credit

points in the Bachelor of Health Science/Master of Physiotherapy and 4668 Bachelor of Health Science (Honours)/Master of Physiotherapy programs.

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This unit focuses on the core competencies of physiotherapy professional practice in acute care settings. These competencies will be developed through a supervised, community-based clinical education placement. Professional competencies addressed in this unit include communication, documentation, reflection, professional and ethical behaviour. In addition, students will develop skills in physiotherapy assessment and treatment in acute care settings which may span the musculoskeletal, neurological and cardiorespiratory domains.

### 400887.1 Clinical Exercise Physiology 1

**Credit Points** 10 **Level** 3

#### Prerequisite

**400326.1** Exercise Prescription for General Populations AND **400885.1** Sport and Exercise Physiology

#### Equivalent Units

400328 - Exercise Prescription For Special Populations

#### Special Requirements

Students must be enrolled in course 4658 - Bachelor of Health Science (Sport and Exercise Science).

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Clinical Exercise Physiology 1 is primarily concerned with teaching students how to design and implement exercise assessments and exercise prescriptions for clinical populations (high-risk). Emphasis is placed on cardiovascular, metabolic, pulmonary and immunological diseases. Unit content relates to how exercise can be applied to prevent, manage and/or treat chronic diseases, informed by an understanding of the pathophysiology and its impact on health status. Students will be involved in designing exercise programs using an evidence-based approach, which will enable a client to achieve optimum results whilst maintaining a high regard for safety, adherence and motivation. Students will be involved in practical sessions aimed at developing the skills necessary for exercise screening, testing and prescription in clinical populations.

### 400964.1 Clinical Neurosciences

**Credit Points** 10 **Level** 2

#### Prerequisite

**400130.1** Human Medical Sciences 1

#### Equivalent Units

400166 - Clinical Neurosciences

#### Incompatible Units

E2046 - Neurology and Clinical Psychiatry

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This unit is intended to provide students with an in depth study of those human medical sciences which underpin specific intervention principles and procedures to be taught in the professional units. Primary contact health care providers have professional requirements that cover a

broad spectrum of diagnostic, medical and physical practices. In order to ensure a suitable basis for later practice, students require a detailed knowledge and understanding of clinical neurosciences including histology, embryology, anatomy, and physiology of nervous system and the clinical implications.

### 400981.2 Clinical Pharmacology

**Credit Points** 10 **Level** 2

**Prerequisite**

[400138.3](#) Pathophysiology 1

**Equivalent Units**

400135 - Clinical Pharmacology and Microbiology

**Incompatible Units**

300505 - Pharmacology

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This unit explores in depth clinical pharmacology fundamental to the practice of allied health (physiotherapy and podiatric medicine) and complementary medicine (traditional Chinese Medicine). General principles of pharmacology, pharmacokinetics and pharmacodynamics will be discussed. Key drug categories affecting the main body systems will be introduced in terms of their mechanisms of action, adverse reactions and clinical applications. In the context of antimicrobial pharmacology, general concepts of microbiology will be introduced offering students an understanding of the causative microorganisms, the complex relationship between host and pathogen, the pharmacological actions of antimicrobial drugs and the principles of infection control.

### 101677.3 Cognitive Processes

**Credit Points** 10 **Level** 3

**Assumed Knowledge**

Basic understanding of core concepts of cognition, perception and biological psychology

**Prerequisite**

[101183.2](#) Psychology: Behavioural Science

**Equivalent Units**

100016 - Human Learning and Cognition

**Special Requirements**

Prerequisites will not apply to students enrolled in 1630 Graduate Diploma of Psychological Studies.

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Cognitive psychology studies the mental processes that underpin attention, perception, learning and memory. Conceptual and research questions include: How do we recognize speech, faces, or music? What are the structures and mechanisms of human memory? What processes underpin acquisition of language, and are the processes similar when we learn a second language? What processes are involved in reading? What factors affect attention and performance? Is creativity anything more than problem solving? Contemporary theories will be discussed and evaluated. Investigative research methods include experiments, computer modelling, clinical case studies, and brain imaging.

### 100900.3 Comedy and Tragedy

**Credit Points** 10 **Level** 2

**Equivalent Units**

B2857 - Comedy and Tragedy

**Special Requirements**

Successful completion of 60 credit points at Level 1.

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This unit will examine the theory, writing and performance of Western Tragedy and comedy. The generic terms "tragedy" and "comedy" will provide signposts for both historical and theoretically modern approaches to a range of plays. Texts selected from the period since 1950 may represent comedy and/or tragedy in popular culture, and may have been written for media other than the stage, such as television and film.

### 300089.5 Commercial Applications Development

**Credit Points** 10 **Level** 2

**Assumed Knowledge**

It is assumed that students have an introductory programming ability and are familiar with using the information technology facilities at UWS.

**Prerequisite**

[300580.2](#) Programming Fundamentals OR [300585.2](#) Systems Analysis and Design OR [300104.4](#) Database Design and Development

**Incompatible Units**

300940 - Commercial Applications Development (Advanced)

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This unit builds on programming principles to develop software applications based on commonly used off the shelf packages such as Microsoft Word, Excel and Access. It covers the development of programs for these packages using macro programming techniques and programming language such as Visual Basic for Applications. It provides a solid understanding along with practical applications of macro and scripting language usage, development, debugging and possible application interactions. It is a preparation and foundation for the scripting and macros as found in IS systems/packages from operating system shell scripts, web applications to database stored procedures.

### 300940.1 Commercial Applications Development (Advanced)

**Credit Points** 10 **Level** 2

**Prerequisite**

[300580.2](#) Programming Fundamentals AND [300585.2](#) Systems Analysis and Design AND [300104.4](#) Database Design and Development OR [300941.1](#) Database Design and Development (Advanced)

**Incompatible Units**

300089 - Commercial Applications Development

### Special Requirements

Students must be enrolled in 3685 - Bachelor of Computing (Information Systems) Advanced

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This unit enables students to develop software applications situated within the Microsoft Office environment. It provides a preparation and foundation for the construction of related, but more complex, applications using the Microsoft API or VB.NET. The unit also provides a foundation for the use of scripting and macro languages both for the web and for operating systems. The advanced component of the unit will be offered via a series of seminars including other Office applications such as Outlook and PowerPoint so that students taking this unit can develop more powerful interactive applications which enable use of email and calendar facilities. Advanced techniques such as user-defined classes and objects will be included in this series.

### 300068.3 Communication Electronics

**Credit Points** 10 **Level** 5

#### Prerequisite

**200238.2** Mathematics for Engineers 2 AND **300025.3** Electronics

#### Equivalent Units

84488 - Advanced Electronics

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The unit presents the theory and many of the devices used in radio frequency (RF) communication electronics. S-parameters are presented and advanced to cover areas such as- multiport networks and lossless networks. S-parameter measurement techniques are presented and tested in the lab. The analysis/design of common RF components including power splitters, directional couplers, circulators and phase shifters are developed. Microstrip transmission lines are presented as a practical means of interconnecting devices at RF frequencies. RF transistor amplifier and oscillator design is presented in detail. RF mixers, RF filters and RF receiver architectures are also discussed in detail.

### 400732.2 Communication in Health

**Credit Points** 10 **Level** 1

#### Equivalent Units

400131 - Communication for the Helping Professions.

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Communication is integral to professional relationships, whether working individually with a client, educating community members on health matters, or working with other professionals as part of a multidisciplinary team. This unit aims to develop communication skills in preparation for work within the health professions across these areas. Communication skills will include those needed to form therapeutic relationships with individual clients and groups, as well as those required to communicate health information to clients, groups and the wider community. Students will develop skills to establish appropriate working relationships with professional colleagues.

### 700062.2 Communication in Health (UWSC)

**Credit Points** 10 **Level** 1

#### Equivalent Units

400732 - Communication in Health, 400131 - Communication for the Helping Professions

#### Special Requirements

Students must be enrolled at UWS College.

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Communication is integral to professional relationships, whether working individually with a client, educating community members on health matters, or working with other professionals as part of a multidisciplinary team. This unit aims to develop communication skills in preparation for work within the health professions across these areas. Communication skills will include those needed to form therapeutic relationships with individual clients and groups, as well as those required to communicate health information to clients, groups and the wider community. Students will develop skills to establish appropriate working relationships with professional colleagues.

### 300007.2 Communication Systems

**Credit Points** 10 **Level** 3

#### Prerequisite

**300057.3** Signals and Systems

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This unit will provide a basic introduction to communication systems and techniques. Specific topics covered include energy and power spectral density, amplitude modulation, frequency modulation, pulse modulation, an overview of digital modulation techniques, noise in communication systems and an overview of current telecommunication systems; spread spectrum systems, optical communication systems, radio broadcasting and mobile communication systems.

### 100992.3 Communication: Power and Practice

**Credit Points** 10 **Level** 3

#### Equivalent Units

63195 - Communication Theory

#### Special Requirements

Successful completion of 60 credit points

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Human communication takes many forms, and has many corresponding capacities: to bond, to represent, to express, to reveal, to record, to encode, to network - and more. Through communicative connections and associated actions human societies aim to accomplish ethical, political and personal tasks. This unit aims to examine communications as actions and forces as much as making meanings: verbal confession reveals personal truths and cultural belief; the printed word enables dissemination of new ideas about society and its structures; electronic messages connect in novel ways. Through looking at

crucial forms and evolving communication techniques, this unit examines the powers of communication.

### 300838.1 Comparative Physiology

**Credit Points** 10 **Level** 2

#### Equivalent Units

300608 - Animal Physiology

#### Special Requirements

Successful completion 60 credit points at Level 1 and 20 credit points at Level 2.

Building on the underlying physical and chemical principals/laws that define physiology, this unit from both a systems (e.g. Respiratory) and environmental (e.g. Marine) perspective, seeks to compare the functional physiology of organisms at all levels of organisation. Particular attention will be paid to respiration, temperature tolerance & regulation, living in water, sensory and neurophysiology. Students will have the opportunity to carry out a defined research project.

### 300911.1 Complex Forensic Studies

**Credit Points** 10 **Level** 3

#### Prerequisite

[300874.1](#) Digital Forensic Photography AND [300873.1](#) Crime Scene Investigation AND [300806.1](#) Forensic Science

#### Equivalent Units

300373 - Complex Forensic Case Studies

#### Special Requirements

Students must be enrolled in course 3589 - Bachelor of Science (Forensic Science) or 3562 - Bachelor of Science (Advanced Science).

This is an advanced and integrating capstone unit for students studying forensic science. It incorporates previous science, forensic science and social science units to form a comprehensive examination of the functionality of forensic evidence within the contemporary Australian judicial system. This capstone highlights the needs for an interdisciplinary approach to define and critique forensic science evidence from various perspectives including science, law, criminology, policing and social science. Students are required to use their skills and knowledge with additional independent research and inquiry using a range of set literature. The unit will study a range of contemporary issues including how the judicial system evaluates the reliability of evidence from an admissibility threshold, identification evidence from CCTV, contextual bias with forensic examination, contamination issues with forensic evidence and methods of expressing forensic findings and/or significance.

### 300092.1 Computer Architecture

**Credit Points** 10 **Level** 3

#### Prerequisite

[300096.1](#) Computer Organisation

#### Equivalent Units

14949 - Computer Architecture

This unit is designed for computer science students, particularly those interested in systems programming, hardware/software interfaces, and computer system performance evaluation. The topics cover memory system organisation and architecture, CPU functional organisation, pipelined and superscalar microarchitectures, multiprocessor systems, and I/O systems. After completing this unit students will understand the major issues in the state-of-the-art computer architecture, especially modern microprocessors, and will be able to use this knowledge as a basis for product choice and systems configuration.

### 300447.2 Computer Forensics Workshop

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

This is the capstone practical unit for Computer Forensics major of the Bachelor of Computer Science, as such it is assumed that the students of this unit will have completed all other units in the major.

#### Prerequisite

[300143.3](#) Network Security AND [300149.2](#) Operating Systems AND [300165.3](#) Systems Administration Programming

#### Special Requirements

This unit requires specialised technical laboratory facilities, and specialist academic staff that are very limited in number. As such the School of Computing & Math believes it can support the running of this unit for no more than 20-24 students per year which is the expected number completing the Computer Forensics major. In addition the specified pre-requisites are unlikely to be met by students not enrolled in the Bachelor of Computer Science.

This unit is composed of a series of investigative workshops that put into practice, in a Computer Forensics context, many of the technical skills developed in earlier pre-requisite units. The unit is intended to not only further develop these skills but to instil best technical practice, sound understanding of technical investigative techniques and documentation of the results of investigation. Workshop topic areas include: clean media copying techniques, search and identification of hidden data, building profiles of computer activities through probing and analysis of log files and how to prepare a system and network to best support subsequent intrusion and activity detection.

### 300093.3 Computer Graphics

**Credit Points** 10 **Level** 3

#### Prerequisite

[300027.2](#) Engineering Computing OR [300581.2](#) Programming Techniques

#### Equivalent Units

14956 - Computer Graphics

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Computer Graphics will examine elementary graphics concepts, algorithms and programming skills for producing graphical applications, in both two-dimension (2D) and three-dimension (3D) using Open GL. Techniques and algorithms will be programmed in Processing, which is a very easy-to-learn programming language yet powerful and comprehensive.

### 300565.2 Computer Networking

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Fundamentals of computer architecture, binary and hexadecimal numbering systems, and programming principles. They should also have a working knowledge of the World Wide Web.

#### Equivalent Units

300094 - Computer Networking Fundamentals, 300086 - Applied Data Communications and Networking

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Computer Networking is an introductory unit in computer systems networking. It covers basic networking technologies, Ethernet fundamentals, ISO OSI model, routing, switching and subnetting, the Internet architecture, networking protocols including TCP/IP, important networking devices such as repeaters, hubs, bridges, switches, routers and gateways, basic management and security issues. This unit is also the first of three units, which will prepare students for industry based networking certification (CCNA).

### 300946.1 Computer Networking (Advanced)

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Fundamentals of computer architecture, binary and hexadecimal numbering systems, and programming principles. They should also have a working knowledge of the World Wide Web.

#### Incompatible Units

300094 - Computer Networking Fundamentals, 300086 - Applied Data Communications and Networking, 300565 - Computer Networking

#### Special Requirements

Students must be enrolled in course 3685 - Bachelor of Computing (Information Systems) Advanced or 3684 - Bachelor of Information and Communication Technology (Advanced)

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Computer Networking is an introductory unit in computer systems networking. It covers basic networking technologies, Ethernet fundamentals, ISO OSI model, routing, switching and subnetting, the Internet architecture, networking protocols including TCP/IP, important networking devices such as repeaters, hubs, bridges, switches, routers and gateways, basic management and security issues. This unit is also the first of three units, which will prepare students for industry based networking certification (CCNA). Students in this advanced unit will be

required to undertake individual assessment activities demonstrating a high level of technical and applied theoretical competency.

### 700012.1 Computer Networking (UWSC)

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Fundamentals of computer architecture, binary and hexadecimal numbering systems, and programming principles. Students should also have a working knowledge of the World Wide Web.

#### Equivalent Units

300094 - Computer Networking Fundamentals, 300086 - Applied Data Communications and Networking, 300565 - Computer Networking

#### Special Requirements

Students must be enrolled at UWS College.

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This introductory unit in computer systems networking covers basic networking topologies, Ethernet fundamentals, ISO OSI layers, routing, switching and sub-nets, the Internet architecture, networking protocols including TCP/IP, important networking devices such as repeaters, hubs, bridges, routers and gateways, basic management and security issues. This unit is also the first of three units which will prepare students for industry based networking certification.

### 300095.4 Computer Networks and Internets

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Fundamentals of data communications and computer networking, such as that covered in the prerequisite unit.

#### Prerequisite

**300565.2** Computer Networking OR **300095.4** Computer Networks and Internets OR **300086.2** Applied Data Communications and Networking OR **300946.1** Computer Networking (Advanced)

#### Special Requirements

This unit is offered at an advanced level and students need to have a good knowledge in fundamentals of data communications, computer networking and basic knowledge of programming in C++ language to successfully complete the unit.

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This unit extends on the work undertaken in the prerequisite unit and provides students with an in-depth understanding of the role of TCP/IP, ICMP and routing protocols used in IP networks and internets. Students will learn about the critical role of routing protocols and how to design, construct and implement small internets. Students will also learn how to perform basic management and security tasks in a practical, hands-on fashion using Cisco routers and other networking equipment. This is the second of three units that prepares the student for industry based networking certification (CCNA).

### 300096.5 Computer Organisation

**Credit Points** 10 **Level** 2

**Prerequisite**

**300027.2** Engineering Computing OR **300580.2** Programming Fundamentals

**Corequisite**

**20025.2** Discrete Mathematics OR **200237.3** Mathematics for Engineers 1

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This unit is designed for computer science students, particularly those interested in systems programming and hardware development. The students will learn about the interface between the hardware and software of a computer system. This will involve study of some aspects of computer architecture and low level interfacing to gain an insight into CPU organisation at the assembly language level. After completing this unit students will be able to write procedures in an assembly language, and use their understanding of the relationship between the instruction set architecture and the implementation of high level languages to write efficient programs.

### 300569.2 Computer Security

**Credit Points** 10 **Level** 3

**Assumed Knowledge**

The students are expected to have general understanding on computer systems; computer fundamentals, databases, and web technologies.

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This unit identifies and analyses various principles and technologies related to security and privacy and discusses practical application of those principles and technologies in securing computer systems. It is designed to provide basic computer security skills required by any discipline that uses computer systems and also lays a solid foundation for individuals who are keen to pursue a career in computer security. In particular, but not limited to, this unit aims at the implementation and management of security and privacy policies of organisations within the standards and legal framework that is also applicable to the Australian standards.

### 300364.3 Computing Honours Seminar Program

**Credit Points** 10 **Level** 5

**Special Requirements**

Students must be enrolled in an Honours degree.

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The seminar program is an integral part of the Bachelor of Computing (Honours) program. It is structured in such a way that there are extensive links with the other components in the program (Research Process and Practice and Computing Honours Thesis). In undertaking and completing tasks associated with this component the student will be working towards the ultimate goal of completion of the thesis document. Successful completion

of the seminar program will allow development of skills, knowledge and a way of thinking which, with the research process and practice component, will assist in the production of the thesis. In this program, students will be given the opportunity to present work in progress reports to peers and academic staff, attend and report research seminars and develop practical experience in articulation of ideas.

### 300363.3 Computing Honours Thesis

**Credit Points** 60 **Level** 5

**Corequisite**

**300364.3** Computing Honours Seminar Program

**Special Requirements**

Students must be enrolled in an Honours degree.

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The aim of this unit is to further develop the student's research and problem solving skills. The student is required to implement the research plan, complete a substantive piece of research in the field of Computing and IT and to communicate the results of that work to an interested and technically literate audience. All projects will therefore contain at least two broad areas of assessment: the substantive work itself and the oral and written communication of the work to others. All assessment components submitted in both of these areas are expected to be of a high professional standard. Students will present their research in the thesis. The thesis topic and structure will vary according to the area of interest of the student and the expertise of the supervisor. The project may comprise theoretical investigation, software or hardware development or some combination of these. The project is meant to be a significant undertaking and to incorporate some element of innovation. Throughout this unit regular planned consultations between the student and supervisor will occur. Students are expected to work to a schedule devised in consultation with their supervisor. The schedule will include set dates for the presentation of draft chapters for review by the supervisor.

### 300365.1 Computing Research Process and Practice

**Credit Points** 10 **Level** 7

**Equivalent Units**

300244 - Information Technology Research Methodology

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The purpose of this unit is to develop knowledge, understanding and application of the process and the practice of inquiry in the field of Computing and IT. This unit does not involve sophisticated, higher order qualitative or quantitative data treatment techniques, but it is expected that students will acquire research knowledge and skills, develop a research design and operationalise it with appropriate procedures. Students will be able to select from a range of research methods appropriate to their individual projects. A major outcome/focus of the unit is on the individualised conceptualisation and development of a structured proposal for conducting dissertation inquiry in the student's area of interest. Ethical issues such as confidentiality and responsibility to those who participate in

research projects are stressed and attention is drawn to the political nature of all research. While this unit is intended to formalise research process and practice, students will be working closely with their supervisors applying their knowledge and skills to their individual projects under the guidance of their supervisor. Emphasis will be placed on consultation and negotiation with supervisors and producing deliverables for students' individual projects.

### **300736.2 Concrete Structures (UG)**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

Knowledge of engineering mechanics and statics.

#### **Prerequisite**

**300733.2** Introduction to Structural Engineering

#### **Corequisite**

**300732.2** Structural Analysis

#### **Equivalent Units**

85251 - Concrete Structures (UG)

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This unit covers the basic elements of structural behaviour and design with reinforced and pre-stressed concrete. Students will learn to analyse the section capacity of reinforced concrete beams, slabs, and columns, and design simple suspended structures. The unit places a strong emphasis on the process of structural design.

### **400184.2 Conducting Medicolegal Assessments**

**Credit Points** 10 **Level** 3

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Experienced health professionals may choose to conduct medicolegal assessments as part of their business. These assessments and subsequent reports are different in their intent and format to those completed by treating professionals. This unit teaches students about relevant state and federal legislation and statutes, legal terminology and practices, the personal injury claim process, what is expected of an expert witness, the process of conducting an assessment, report writing skills, and giving evidence in court. While the focus will be on occupational therapy medicolegal assessments, students and professionals from other disciplines should also find this unit of interest.

### **300855.1 Conservation Biology**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

Knowledge of first-year university biology or equivalent and the concepts of classification, evolution, plant and animal structure and function.

#### **Equivalent Units**

300466 - Environmental Biology, 300617 - Conservation Biology

### **Special Requirements**

Successful completion of 40 credit points at level 2 and 20 credit points at level 3. Students are required to wear a lab coat and enclosed footwear in this unit.

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Most species disappearances have occurred in major extinction events spread over geological time. Are we in the midst of and the cause of another mass extinction event? This unit will explore this idea by examining the processes that have led to, and are leading to species extinction and the current biodiversity crisis. Many of the methods and issues used in and associated with conservation will be covered in a variety of case studies, field and laboratory activities.

### **200504.2 Construction Economics**

**Credit Points** 10 **Level** 4

#### **Assumed Knowledge**

Building construction including residential, light industrial and small commercial as well as building measurement and estimating.

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This subject is designed to provide students with: an understanding of economic principles, national and international economic issues; general investment issues; how the national and international economy functions; how the building industry and the building firm relates to the national and international economy; and how economic reasoning may be applied to various problems in the building industry.

### **200482.2 Construction in Practice 1**

**Credit Points** 10 **Level** 2

#### **Assumed Knowledge**

Local Government planning requirements, residential construction details, quantity surveying, contract documentation, site planning.

#### **Prerequisite**

**BG101A.1** Building 1 AND **BG103A.1** Building 2 AND **BG105A.1** Graphic Communication and Design (V1)

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This unit is designed to allow the student to gain experience with the complexity of the construction industry by integrating knowledge from earlier units. The unit involves group work on construction planning and management, regulatory control and client liaison required for initiating and completing a residential construction project.

### **200484.3 Construction in Practice 3**

**Credit Points** 10 **Level** 4

#### **Prerequisite**

**200482.2** Construction in Practice 1 AND **MG313A.1** Project Management AND **PL302A.1** Construction Planning (V1)

#### **Equivalent Units**

BG408A - Building in Practice 3



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This unit enables students to integrate and develop knowledge gained earlier in the course allowing them to simulate industry practice. Students are given a brief to undertake large and complex construction projects (eg. high rise buildings, airport construction, or sports stadium construction). They then take account of regulatory control, financial limitations, and stakeholder impacts whilst managing a team and being flexible and responsive to changing demands.

### 200503.2 Construction Information Systems

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Students must be familiar with spreadsheet and database software. Students should also have a basic understanding of contract administration.

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This unit is designed to provide skills and knowledge for information management technology and practice as it relates to the building industry. The unit gives an overview of information management, data collection and storage, information classification systems, communications, specialist computer applications and artificial intelligence.

### 300728.2 Construction Planning

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Understand estimating preliminaries for multi storey construction.

#### Prerequisite

**200468.2** Estimating 1

#### Equivalent Units

PL302A - Construction Planning

.....

This unit is intended to provide students with the ability to organise the resources required for a major construction project; to plan the sequence and timing of construction operations; and to assess the risk inherent in achieving a construction schedule.

### 300720.2 Construction Technology 1 (Civil)

**Credit Points** 10 **Level** 2

#### Prerequisite

**300706.2** Building 1 OR **300707.2** Building 2

#### Equivalent Units

BG204A - Construction Technology 1 (Civil)

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This unit develops students' knowledge and skills in appraising site requirements for construction purposes, both at the pre tendering and construction phase of a project. Content: Soil classification, site investigation, site safety, plant and equipment, trenches, detention/retention pits and basins, temporary structures, demolition, site

dewatering, building surveying, and site environmental control.

### 300721.2 Construction Technology 2 (Substructure)

**Credit Points** 10 **Level** 2

#### Equivalent Units

BG207A - Construction Technology 2 (Substructure)

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This unit will aim to further develop students knowledge of substructures. Content: Retaining walls and footing structures; strip footings, piling, piers, raft slabs, waffle-pod structures, load bearing capacity, impact of structure on surface and sub-surface drainage, underpinning and temporary substructures, waterproofing techniques.

### 200502.3 Construction Technology 3 (Concrete Construction)

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

It is expected that students will have first studied the Building 1 and 2 units as well as Construction Technology 2.

#### Prerequisite

**BG207A.1** Construction Technology 2 (Substructure)

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The aim of this unit is to introduce students to the concept of structures, loads and the effect of loads on structures in relation to concrete construction. Students will have an in-depth understanding of concrete as a construction material. It covers the construction technology aspects of concrete structural components and systems, including beams, columns, slabs and frames. Emphasis will be given to formwork design and construction. Students will be introduced to the relevant Australian Standards for concrete construction. The unit also aims at developing students' ability to deal professionally with other building professionals, including architects and structural engineers.

### 200470.4 Construction Technology 4 (Steel Construction)

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

300706 - Building 1, 300707 - Building 2, 300720 - Construction Technology 1, 200502 - Construction Technology 2

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This unit deals with the construction of structural steelwork. Students will gain better understanding of mechanical properties of steel. It covers various components in structural steelwork, and their behaviour under loads. Students will also be introduced to various frame systems in multi-story and high-rise construction and relevant Australian Standards for steel construction. Emphasis will be given to safe erection and assembly of structural steelwork. Due consideration will be given to the requirements of Workcover in relation to site safety and

material handling. An introduction will also be given for Steel-concrete composite construction.

### **200471.3 Construction Technology 5 (Envelope)**

**Credit Points** 10 **Level** 4

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After undertaking this unit, you should understand the way internal spaces are designed and constructed to optimise thermal, visual and acoustic comfort and for energy efficiency. You will also appreciate how cladding systems are designed to resist fire and the ingress of moisture. The unit is part of the Construction technology strand of the Bachelor of Construction Management course. It can also be taken as an elective in the Bachelor of Planning and Bachelor of Engineering degrees.

### **300725.2 Construction Technology 6 (Services)**

**Credit Points** 10 **Level** 4

#### **Equivalent Units**

BG406A - Construction Technology 6 (Services)

#### **Special Requirements**

Students must be enrolled in courses 2607 - Bachelor of Construction Management, 3621 - Bachelor of Engineering - Construction Key Program, 3636 - Bachelor of Engineering (Advanced) - Construction Key Program

.....

To provide students with a vehicle to develop knowledge and skills needed to comprehend the design of services in major buildings, and in so doing engender a life-long interpretation of the intricacies of physical installation and their critical sequence in the construction process.

### **200084.2 Consumer Behaviour**

**Credit Points** 10 **Level** 1

#### **Equivalent Units**

61721 - Consumer Behaviour, MK105A - Buyer Behaviour

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A focus on the consumer is critical in marketing philosophy. Effective marketing strategies are necessarily formulated as a result of the understanding of basic consumer behaviour. This unit covers assumptions and concepts related to understanding the consumer, including but not limited to cultural and ethnic values, social class and status, personal influence, family and household influences, situational influences, consumer resources, involvement, motivation and knowledge, attitudes, individual differences in behaviour, personality, values and lifestyle, information processing, learning, influencing attitudes, diagnosis of decision process and behaviour, consumer decision-making process and need recognition, information search, alternative evaluation, purchase and its outcomes, retailing and consumer trends, market segmentation, diffusion of innovations, global consumer markets, consumerism and social responsibility.

### **100994.2 Consumer Culture**

**Credit Points** 10 **Level** 3

#### **Equivalent Units**

100901 - Consumer Culture, SS243A - Consumer Culture

#### **Special Requirements**

Successful completion of 60 credit points at Level 1.

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Consumption and consumerism are words that frequently have negative connotations in popular usage. The consumer society has been widely criticised, from a diverse range of political perspectives. This unit introduces students to some of these critiques, including those relating to issues of gender. It also aims to introduce students to other ways of thinking about commodities and consumption - ways that focus on the active processes involved in making meaning out of commodities and on the popular pleasures involved in such processes. This unit focuses on the rise of consumer society and of the cultural paradigm of consumerism. Students analyse a range of cultural products and practices, such as shopping, as well as considering the role of commodities in meaning making and identity formation.

### **300928.1 Consumer Issues in Nutrition**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

A basic understanding of human nutrition and the food supply chain. Computer literacy.

#### **Equivalent Units**

300360 - Consumer Issues in Nutrition

.....

This unit explores current food and nutrition issues relevant to health and wellbeing. It introduces students to the factors that influence public health nutrition and explores (a) the contribution food systems and food security makes to consumer wellbeing; (b) the changing global marketplace and the impact of globalisation on food security and ecological sustainability; and (c) the complex inter-connections between government policy, globalisation, consumerism and nature of human health. The current metabolic disease epidemic highlights the importance of public health nutrition research and health promotion practice in this field as affluence is threatening personal health and sustainability. Students will assess nutritional status from available data and explore the role of community food systems in this assessment. Students will also be introduced to social research methods and plan a social research study that explores current consumer and producer challenges.

### **100800.2 Consumer Psychology**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

Assumed knowledge of 100020 - Social and Developmental Psychology. Consumer Psychology is an applied field. Assumed knowledge of core psychological issues will facilitate learning.

.....

Consumer Psychology is the study of how people relate to and involve with products and services that they purchase or use. It attempts to describe, predict, explain, and/or influence consumer responses to products and service-related information and experiences. It contains a broad range of theoretical, conceptual, and methodological perspectives. It is indeed the psychology of how consumers think, feel, reason, and select between different alternatives (e.g., brands, products); how the consumer is influenced by his or her environment (e.g., culture, family, signs, media) and what leads to buying behaviour. By understanding the consumer, we will be able to make informed decisions and apply appropriate marketing and advertising strategies.

### **400335.3 Contemporary Issues in Sport Management**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

Students should have an understanding of the objectives in Sport Marketing 1

#### **Equivalent Units**

B3087 - Contemporary Issues in Sport Management

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Sport management operates in an environment where political, economic and legal influences impact on the running of sporting organisations. This unit critically examines contemporary issues influencing the management of sport in Australia.

### **100855.2 Contemporary Japan: Culture and Society**

**Credit Points** 10 **Level** 2

#### **Equivalent Units**

63021 - Communication and Culture in Asia 1: Contemporary Japan

#### **Special Requirements**

Successful completion of 60 credit points at Level 1.

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An introduction to aspects of contemporary Japanese society and culture chosen to introduce key aspects of Japanese society and culture, to position Japan in a global perspective, to investigate questions of how we form knowledge of societies other than our own.

### **200108.2 Contemporary Management Accounting**

**Credit Points** 10 **Level** 2

#### **Prerequisite**

**200116.4** Management Accounting Fundamentals

#### **Equivalent Units**

61122 - Advanced Management Accounting, AC303A - Advanced Management Accounting (V1), H2762 - Management Accounting

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This unit views contemporary areas of management accounting from a strategic perspective, and critically examines some of the traditional concepts and techniques discussed in Management Accounting Fundamentals.

### **200568.3 Contemporary Management Issues**

**Credit Points** 10 **Level** 3

#### **Prerequisite**

**200571.2** Management Dynamics OR **MG102A.3** Management Foundations

#### **Equivalent Units**

H3740 - Contemporary Management Issues

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This is an engaged unit that requires students to undertake real-world projects to support selected industry or community partners. The unit also blends in-class and online activities as well as individual and group work, with self-directed problem-based learning. The focus of students' learning is on social and environmental issues in management, and the in-class workshops support students to conduct the required engagement activities with industry or community partners. As a third-year unit, attention is given to students' application of the knowledge and skills already acquired in their degree programs, and on the practice of business management skills.

### **100854.3 Contemporary Popular Cultures**

**Credit Points** 10 **Level** 2

#### **Incompatible Units**

VP204A - Reading Popular Culture, 63123 - Contemporary Popular Cultures

#### **Special Requirements**

Successful completion of 40 credit points at Level 1

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This unit looks at popular culture in contemporary society and the ways it functions to give shape and meaning to social life. It considers issues around the politics of popular culture, questions of value, taste, subjectivity, resistance and pleasure. It invites students to reflect upon their own experiences of and relations to popular culture as well as those of others to develop skills of analysis and interpretation. It covers topics as diverse as shopping, TV Talk Shows, tattooing, celebrity and fandom.

### **400894.1 Contemporary Youth Health Issues**

**Credit Points** 10 **Level** 3

#### **Incompatible Units**

400795 - Contemporary Youth Health Issues, 400280 - Sexuality, 400791 - Introduction to Drug Use in Society

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The unit explores contemporary health issues which relate to young peoples health and wellbeing through a range of topics and issues that construct young peoples lives. Students will examine the nature of young peoples lives and the biological, psychosocial, sociological, and political environments that significantly impact and influence young

peoples lives and health. The nature, extent and social determinants of risk taking will be explored in light of the tasks of adolescence. The unit will further equip students with the skills to seek out appropriate support networks and agencies within the community, and to put into place processes that will assist young people to better deal with these health issues.

### 101751.2 Contextualising Indigenous Australia (Day Mode)

**Credit Points** 10 **Level** 1

#### Equivalent Units

300455 - Indigenous Australia: Back to the Future

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This unit will provide a comprehensive overview of Indigenous Australian cultures, histories and identities. The scope of the unit spans pre-colonisation to the twenty-first century across Australia and all relevant fields of study. A cross-section of institutional, community and popular culture contexts will be explored. This body of knowledge will provide a context for various professions and discussions. Students will have the exciting opportunity to hear from a diverse range of Indigenous educators from academics to artists through to performers and community elders. A broad understanding of Indigenous Australia will position students to be advocates for change in contemporary Australia.

### 300009.3 Control Systems

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

200238 - Mathematics for Engineers 2 • Ordinary Differential Equations • First order, Second order, and Higher order. • Laplace transforms • Multivariable Calculus • Functions of two or more variables • Double integrals • Triple integrals. Similar to that contained in 200238 - Mathematics for Engineers 2. Students should also have the appropriate background and competence in the safe use of computers, test equipment, components and data sheets.

#### Prerequisite

**300057.3** Signals and Systems OR **300480.2** Dynamics of Mechanical Systems

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This unit introduces the fundamental concepts of automatic control engineering. It covers traditional and contemporary design and analysis techniques; the concepts required to design continuous time and discrete time controllers. Matlab is utilized considerably.

### 101799.2 Convicts and Settlers - Australian History 1788 - 1840

**Credit Points** 10 **Level** 3

#### Special Requirements

Successful completion of 60 credit points of study

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In little more than half a century Australia was transformed from a convict prison to a parliamentary democracy. The people who made this transformation were the ex-convicts, free settlers and first generation of colonial born children. The survival of data about ordinary people between 1788-1840 makes it possible to investigate families, communities, employment, law and order and the daily experiences of urban and frontier life in these formative years. Using family history resources on the internet and sophisticated digital archives of historical records in Australia and overseas, this unit will challenge assumptions about "who do you think we were?"

### 400982.2 Core Competencies in Physiotherapy Practice

**Credit Points** 10 **Level** 2

#### Prerequisite

**400138.3** Pathophysiology 1 AND **400732.2** Communication in Health AND **400881.3** Functional Anatomy AND **400882.2** Introduction to Biomechanics AND **400906.2** Introduction to Physiotherapy Practice

#### Corequisite

**400981.2** Clinical Pharmacology

#### Special Requirements

Students must be enrolled in 4662 Bachelor of Health Science/Master of Physiotherapy or 4668 Bachelor of Health Science (Honours)/Master of Physiotherapy. This is a specialty unit offered as a compulsory core unit of the physiotherapy program. It is profession specific, preparing students to practice as physiotherapist and not relevant as an elective for non-physiotherapy students. Prior to enrolling in this unit students must have: 1) submitted a Criminal Record Check form prior to 1 June 2010 or a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate 2) submitted a Prohibited Employment Declaration prior to 1 June 2010 or a Working with Children Check Student Declaration after 1 June 2010. 3) A senior first aide certificate which includes cardiopulmonary resuscitation. If students are visiting a NSW Health facility they will need to comply with the NSW Health Occupational Screening and Vaccination Against Infectious Diseases Policy. Students in this program are required to participate fully in practical classes. This involves disrobing to shorts and singlet or swim-suit equivalent in mixed gender classes. Students will practice hands-on physiotherapy examination and treatment techniques on both genders, and will personally experience these techniques which will be performed on them by other students and relevant academic staff. Students are required to wear the physiotherapy student uniform to all tutorials and during the 2-week clinical placement.

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This unit builds on the knowledge and skills developed in first one and a half years of physiotherapy study. It focuses on the core competencies of physiotherapy professional practice, which will be developed through a variety experiential and community engagement learning activities. Professional competencies addressed in this unit include communication, documentation, reflection, professional and ethical behaviour. In addition, students will develop skills in client assessment, interpretation of findings and education.

A professional practice placement is incorporated into this unit.

### 200109.4 Corporate Accounting Systems

**Credit Points** 10 **Level** 3

**Prerequisite**

**200536.2** Intermediate Financial Accounting

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This unit builds on the fundamental knowledge of accounting procedures gained in Intermediate Financial Accounting. It involves the comprehensive study of aspects of corporate accounting and reporting which are regulated by legislation, accounting standards, Australian Securities and Investment Commission and Stock Exchange requirements. This unit is designed to provide students with grounding in the regulation and practice of corporate reporting in Australia. The major orientation is towards the theoretical and practical aspects of corporate reporting, whilst at the same time exploring the reasons for regulatory disclosures.

### 200488.3 Corporate Financial Management

**Credit Points** 10 **Level** 2

**Assumed Knowledge**

HSC Mathematics, introductory economics or microeconomics

**Prerequisite**

**200101.3** Accounting Information for Managers OR  
**200103.1** Accounting Reports and Decisions

**Equivalent Units**

200050 - Financial Management, 200110 - Corporate Financial Decision Making

.....

This unit introduces the fundamental concepts of finance theory and the tools of financial decision making in the context of the Australian institutional environment. These concepts relate primarily to the time value of money, risk and return, capital budgeting and capital structure. The unit's purpose is to develop an understanding of the basic practices of financial management from the perspective of a firm (both large and small). Students examine the investment, financing and dividend decisions of corporations.

### 100856.4 Creative Non-Fiction

**Credit Points** 10 **Level** 3

**Assumed Knowledge**

A good standard of written expression

**Equivalent Units**

CT209A - Texts and Techniques

**Special Requirements**

Successful completion of 60 credit points

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This unit provides students with an advanced understanding of the issues, processes and practical

questions involved in the writing of creative non-fiction. It is intended that students will gain both enhanced theoretical knowledge of writing practices and, through workshop participation and practical exercises, develop both their own writing skills and the ability to critique the writing of others on the basis of sound understanding of the characteristics of the genre.

### 100859.3 Creative Writing Project

**Credit Points** 10 **Level** 3

**Assumed Knowledge**

It is highly desirable that students should have successfully completed one of the following Level 2 units: 100896 - Writing Fiction, 100856 - Creative Non-Fiction or 101011 - Writing Poetry

**Special Requirements**

Successful completion of 60 credit points.

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This unit extends students beyond the writing of individual stories and poems into larger areas of creative writing, such as the discontinuous narrative, the novella, and the cycle of related poems and/or stories. It involves students in the process of developing a major project from an initial set of ideas, through the stages of drafting to a "finished" product, using workshop techniques, individual interviews and peer critiquing. It aims to give each student some experience of a relationship with readers (fellow students) and an editor (the tutor).

### 300873.1 Crime Scene Investigation

**Credit Points** 10 **Level** 2

**Prerequisite**

**300874.1** Digital Forensic Photography

**Equivalent Units**

300374 - Crime Scene Investigation

**Special Requirements**

Students must be enrolled in 3589 Bachelor of Science (Forensic Science). Students must have a crime scene suit for the simulated crime scene assessment. Students must supply their own grip kit including; forensic linear scales, a magnifying glass, markers, writing material, clip board, small measuring tape.

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Most forensic evidence used in the prosecution of criminal cases is initially established at the crime scene. Recognising, recovering, preserving and recording this evidence forms a critical function within forensic science and criminal investigation. This unit introduces the student to a range of crime scene practices that provides the knowledge and skill to unpack a complex scene with voluminous detail, into a more specifically targeted range of forensic evidence items. This unit will explore aspects of crime scene investigation including; crime scene processes, recognition of evidence, documentation of crime scenes, evidence detection and enhancement at the scene, maintaining evidence integrity, footwear impression evidence, fingerprinting, blood spatter analysis, toolmarks and trace evidence. It further introduces professional

practices associated with maintaining evidence integrity and continuity.

### 101408.2 Critical Discourse Analysis

**Credit Points** 10 **Level** 2

#### Equivalent Units

100888 - Studies in Language and Discourse

#### Special Requirements

Successful completion of 40 credit points at Level 1.

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The principal means of communication in our culture is language, it shapes and patterns our world, socialises us, and is fundamental to almost all forms of interaction. Critical Discourse Analysis takes language and text as its objects of study, seeing these as technologies for social interaction, representation and communication. By exploring both the grammatical structure of the English language and its use and development in and for social contexts and purposes within a post-structuralist framework, Critical Discourse Analysis develops analytical, interpretive and critical skills for students. Critical Discourse Analysis has the potential for application in many areas of study and professional work.

### 300815.1 Crop Production

**Credit Points** 10 **Level** 1

#### Assumed Knowledge

Basic knowledge of plants.

#### Equivalent Units

300451 - Horticultural Production 2, 300300 - Fruit Production, 300329 - Floriculture, 300616 - Crop Production

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This unit aims to provide students with an understanding of the scientific basis of sustainable crop and food production and security. These include broad-acre cropping, fruits/orchards and vegetables. In this unit students will gain an understanding of the physiological controls on crop yield in the variable Australian environment in which crops are grown. Students will become familiar with the science and practice of sustainable crop production and develop crop management skills through the production of nursery crops, vegetables and fruits. Students will also gain an understanding of processing these crops after harvest, to develop an appreciation of factors impacting upon produce quality and safety.

### 200586.2 Cross Cultural Management

**Credit Points** 10 **Level** 2

#### Equivalent Units

MG206A - Cross Cultural Management

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21st Century businesses are looking more and more similar in the way they are designed and operated. Yet to be successful and to gain comparative advantage it is imperative that these businesses manage their workforces differently. Critical to this different way of managing is culture. Culture is the cornerstone that makes people

similar, yet different. Taking a multidisciplinary and 'hands on' approach, this unit examines the impacts of culture on business practices and management styles.

### 300871.1 Culinary Science

**Credit Points** 10 **Level** 3

#### Prerequisite

**300879.1** Experimental Foods

#### Equivalent Units

300715 - Culinary Science, 300640 - Culinary Studies

#### Special Requirements

Students require personal protection equipment e.g. apron and closed in shoes.

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This unit applies scientific principles to the development, preparation and presentation of food products. Students are encouraged to become autonomous learners through problem-solving activities and experiential techniques. Students integrate and apply knowledge and skills from areas such as chemistry, biology, food science and nutrition to nutritionally focussed food products. Students are encouraged to keep abreast of food trends in the dynamic food industry as well as current nutritional issues within domestic, multicultural and indigenous communities. Students will utilise prior knowledge and skills to address specific nutritional issues and the development of new food products to fit within these boundaries.

### 100858.3 Culture and Globalisation

**Credit Points** 10 **Level** 3

#### Equivalent Units

63157 - Culture and Globalisation

#### Special Requirements

Successful completion of 60 credit points

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The unit introduces students to both the broad and specific concepts of globalisation. It covers such topic areas as the expansion and development of global capital and the ascendancy of the transnational over national forms of economy, society, communication, politics and culture. It also covers the contrasting increasing interest in and development of national and/or local forms of economy, society, politics and culture as they accommodate and reshape the global.

### 101249.2 Culture and Thought in Twentieth-Century China

**Credit Points** 10 **Level** 3

#### Equivalent Units

100967 - Nationalism and State Building in Asia

#### Special Requirements

Successful completion of 60 credit points.

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This unit is concerned with cultural and intellectual change in twentieth-century China, which saw the end of the

imperial system, the establishment of the Chinese Republic, the rise to power of the Chinese Communists, and the launching of the Four-Modernisation Program in the post-Mao era. It will offer insights into the Chinese search for modernity over the last one hundred years, especially the role of the intellectuals and their relations with society and state.

### 400866.3 Culture, Diversity and Health

**Credit Points** 10 **Level** 2

#### Equivalent Units

700072 - Culture, Diversity and Health (UWSC)

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This unit introduces skills for understanding and engaging effectively with the culturally and socially diverse world in which we live and work. Indigenous Australia is a major theme and students will gain an appreciation of the achievements and needs of Indigenous Australians. The unit examines cultural awareness more broadly and puts these issues in the context of health professionals working in multi-cultural settings and handling culturally different health philosophies and practices. Cultural diversity is increasingly recognised as a major issue in the delivery of health care and a major determinant of Indigenous health.

### 200036.3 Data Mining and Visualisation

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

200192 - Statistics for Science or 200032 - Statistics for Business or 200263 - Biometry

#### Prerequisite

**300104.3** Database Design and Development

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This unit presents data mining as a well structured standard process, namely, the Cross Industry Standard Process for Data Mining (CISP-DM). Further, this unit emphasizes (1) the presentation of data mining as a process, (2) the "White box" approach, emphasizing an understanding of the underlying algorithmic structures, (3) the graphical approach, emphasizing exploratory data analysis, and (4) the logical presentation, flowing naturally from the CRISP-DM standard process and the set of data mining tasks. This unit gives the insight of the data mining algorithms, by using small data sets and then provides examples of the application of the various algorithms on actual large data sets. Finally it provides the hands-on analysis problems, representing an opportunity to apply acquired data mining expertise to solving real problems using large data sets.

### 300010.3 Data Networks

**Credit Points** 10 **Level** 4

#### Assumed Knowledge

Students are expected to have done an introductory Electrical Engineering course in Signals and Systems that includes continuous-time and discrete time forms of signals, Fourier Transforms (in different forms) and an introduction to probability and random processes. An elementary knowledge of communication systems will also

be assumed. Prior completion of Engineering Maths 3 and Communication Systems is recommended.

#### Prerequisite

**300057.3** Signals and Systems

#### Equivalent Units

84355 - Data Communication & Computer Networks, 89038 - Data Communications & Network Technology

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This unit is concerned with the principles and topics of fundamental importance to data communication, computer communication networks and telecommunications. The lower layers of the OSI reference model are emphasized (hardware, physical layer, data link layer and network layer). Also, it will cover all major network technologies-SONET, ATM, Internet, and Telephony. Essential network engineering topics such as protocol layering, multiple access, switching, scheduling, routing, congestion control, error control, flow control, and network security shall also be included. An engineering approach will be taken to provide an insight into network design.

### 300103.2 Data Structures and Algorithms

**Credit Points** 10 **Level** 2

#### Prerequisite

**300027.2** Engineering Computing OR **300155.1** Programming Principles 1 OR **300405.2** Fundamentals of Programming OR **300580.2** Programming Fundamentals

#### Corequisite

**200025.2** Discrete Mathematics OR **200237.3** Mathematics for Engineers 1

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This unit introduces students to fundamental data structures and algorithms used in computing. The material covered forms the basis for further studies in programming and software engineering in later units. The unit focuses on the ideas of data abstraction, object-oriented programming, and software reuse. Issues relating to computational complexity of algorithms are addressed throughout the session. Topics covered include: the fundamental abstract data types (lists, stacks, queues, trees, hash tables, graphs); recursion; complexity of algorithms; internal and external sorting and searching algorithms; file structures; and B trees.

### 300104.4 Database Design and Development

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Basic programming skills, including variable declaration, variable assignment, selection statement and loop structure.

#### Incompatible Units

200129 - Database Management System for Business Information Systems.

.....

The main purpose of this unit is to provide students with an opportunity to gain a basic knowledge of database design and development including data modeling methods, techniques for database design using a set of business

rules that are derived from a case study and finally implementation of the database using a commercial relational database management system. The unit also examines a number of important database concepts such as database administration, concurrency, backup and recovery and security. At the same time student learning and intercommunication skills are enhanced by running tutorial presentations and group assignments.

### **300941.1 Database Design and Development (Advanced)**

**Credit Points** 10 **Level** 2

#### **Assumed Knowledge**

Basic programming skills, including variable declaration, variable assignment, selection statement and loop structure.

#### **Incompatible Units**

200129 - Database Management System for Business Information Systems, 300104 - Database Design and Development

#### **Special Requirements**

Students must be enrolled in course 3685 - Bachelor of Computing (Information Systems) Advanced or 3684 - Bachelor of Information and Communication Technology (Advanced)

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This unit covers the principles, methodologies and technologies for the database design and development, exploring in particular the data modelling methods and the use of the language SQL for the database applications. The unit also examines a number of important database concepts such as database administration, concurrency, backup and recovery, and security. Students in this advanced unit are furthermore required to investigate new technological and theory advances in the database industry and apply them to the solution of concrete database problems.

### **700011.1 Database Design and Development (UWSC)**

**Credit Points** 10 **Level** 1

#### **Equivalent Units**

300104 - Database Design and Development

#### **Special Requirements**

Students must be enrolled at UWS College.

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The main purpose of this unit is to provide students with an opportunity to gain a basic knowledge of database design and development including data modeling methods and techniques and database implementation using a database management system.

### **100996.3 Death and Culture**

**Credit Points** 10 **Level** 3

#### **Equivalent Units**

SS240A - Death and Culture, 100902 - Death and Culture

### **Special Requirements**

Successful completion of 60 credit points.

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This unit is a critical introduction to the social practices surrounding death in modernity. Although primarily addressing social arrangements in the West, the unit examines the bio-politics of death in a wider cultural framework, with attention to geographies of power and economic influence. The unit traces the historical development of concepts of the individual; the impact on Western ideas around death of genocide and modern warfare; and assesses contemporary ethical, social and medical controversies (like euthanasia and the trade in body parts). The unit attempts to demonstrate the relationship of death to: social institutions; ideas of community and the construction of self in modernity.

### **200485.2 Decision Making for Construction Professionals**

**Credit Points** 10 **Level** 2

#### **Prerequisite**

**300674.2** Engineering, Design and Construction Practice

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This unit will provide you with an understanding of decision-making and support the development of critical thinking skills. The skills that are learnt in this unit will be applied in the Construction in Practice strand, Major Project in Construction and Honours Thesis.

### **100903.2 Democracy in Asia**

**Credit Points** 10 **Level** 3

#### **Equivalent Units**

63033 - Democracy in Asia.

#### **Special Requirements**

Successful completion of 60 credit points at Level 1.

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This unit is concerned with the theory and practice of democracy in modern and contemporary history of Asia. It explores a range of issues relating to liberalism, human rights, political reform and democratization. It seeks to explain the differences in the ways in which democracy has been conceived, understood and practiced in different cultures and societies. It also examines the East-West debate on "Asian values" and the suitability of Western-style democracy to Asia. Finally, it discusses the prospects for democracy in Asia.

### **200079.2 Derivatives**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

200052.1 - Introduction to Economic Methods OR 200031.1 - Mathematics for Business 200488.1 - Corporate Financial Management

#### **Equivalent Units**

61344 - Risk Management, H3686 - Options, Futures and Derivative Products



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This unit provides an introduction to trading and the theory of pricing of options, futures and other derivative products currently used in the domestic and international financial markets.

### **300012.3 Design Management 1: Product Design Audit**

**Credit Points** 10 **Level** 2

#### **Equivalent Units**

10884 - Design Management 1: Corporate Image

.....  
Design Management 1 focuses on the development of the product / service audit process and study of a firm's corporate image, identity, brand, and products as perceived by the target groups it aims to reach. Students will study the approach taken to develop a strategic design management plan that guides the way a firm presents itself to its target audience and differentiates itself against its competition in the targeted markets. Foundation design principles involving the evaluation of two-dimensional and three-dimensional design are explored through a series of firm-level case studies of firms with prominent and commercially successful design management strategies.

### **300013.3 Design Management 2: Corporate Image and Identity**

**Credit Points** 10 **Level** 2

#### **Prerequisite**

**300012.3** Design Management 1: Product Design Audit

#### **Equivalent Units**

10885 - Design Management 2: Corporate Identity

#### **Special Requirements**

The Company chosen by a student as a case study in 300012 - Design Management 1, on which the assignments are based, should be followed through to 300013 - Design Management 2.

.....  
In Design Management 2 students will develop, based on the Corporate Image Brief and Research established in Semester 1, a methodology and program to study a corporation's approach(es) to communicate with its market audience. The evaluation of the study leads to the formulation of the corporate identity design strategy and brief. The information summarised in the design brief is then used to establish the corporate identity design program, which informs the development of the components of a client company's corporate identity. The company chosen by the students as a case study in Design Management 1, on which the assignments are based, should be followed through to Design Management 2.

### **300014.3 Design Management 3: Organisational Skills for Designers**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

Ability to use: e-mail, internet web browser, WebCT or equivalent, word processing program. Knowledge and/or experience in: referencing, essay writing, group work and the successful completion of Level 2 units would be of advantage and will be assumed.

#### **Equivalent Units**

10886 - Design Management 3B: Professional Practice

.....  
Key learning outcomes include that students: understand manufacturing paradigms and their impact on the product development process and the design process; understand the impact of organisational structures, strategies and processes on the design process; develop and gain experience of using key skills that will enable them to work successfully with various organisational members in the product development process. These skills include teamwork, decision-making and communication, analysis and problem solving. Develop and gain experience of using distance communication and virtual teamwork skills, skills that are becoming increasingly important in new product development.

### **300015.3 Design Management 4: Design Process**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

The successful completion of Level 2 units and 300014 Design Management 3 or equivalent would be of advantage and will be assumed.

#### **Equivalent Units**

10887 - Design Management 4: Corporate Design

.....  
Design Management 4 focuses on fundamental issues of the design process and design management. It exposes students to the various theories and models underlying trade-offs and choices made during the design process and issues of intellectual property. Experiential exercises and contemporary case studies are used throughout the unit. Students will consider how models of design processes impact on existing products and their own design work. This unit is part of a sequence of four units that constitute the sub-major in Design Management and eight units that constitute the major in International Design Management and Innovation Design Management.

### **300016.2 Design Science**

**Credit Points** 10 **Level** 1

#### **Assumed Knowledge**

Any two units of HSC Mathematics

#### **Equivalent Units**

J1807 - Engineering Science, 700126 - Design Science (UWSC)

.....

An understanding of how the built environment works is essential to designers and construction professionals. This unit provides an introduction to physical units of measure, tolerance, statics, dynamics and optics. It also introduces students to electricity and magnetism as well as the concepts of momentum, energy, work, power and the operation of motors and machine. Students engage with these concepts through a hands-on learning experience including practical projects and live demonstrations.

### **700126.1 Design Science (UWSC)**

**Credit Points** 10 **Level** 1

#### **Assumed Knowledge**

The content of any NSW HSC Mathematics subject

#### **Equivalent Units**

300016 - Design Science

#### **Special Requirements**

Students must be enrolled at UWSCollege in 7015 Diploma in Construction Management or 7016 Diploma in Construction Management Fast Track. UWS students may only enrol in this unit with the permission of their Director of Academic Program and UWSCollege.

.....

An understanding of how the built environment works is essential to designers and construction professionals. This unit provides an introduction to physical units of measure, tolerance, statics, dynamics and optics. It also introduces students to electricity and magnetism as well as the concepts of momentum, energy, work, power and the operation of motors and machine. Students engage with these concepts through a hands-on learning experience including practical projects and live demonstrations.

### **300305.3 Design Studio 1: Themes and Variations**

**Credit Points** 10 **Level** 2

#### **Assumed Knowledge**

It is assumed that students have completed Applied Ergonomics and Industrial Graphics 1.

#### **Prerequisite**

**300462.2** Engineering and Design Concepts

#### **Equivalent Units**

10953 - Design Process 1: The Design Concept, J2815 - Design Principles 2D/3D, J2869 - Design Principles

.....

In this unit students are given the opportunity to apply their design and communication skills to generate a wide range of concepts in response to a number of design briefs. Students explore concepts according to aesthetic and functional criteria through hand sketching, rendering and model-making.

### **300308.3 Design Studio 2: The Design Proposal**

**Credit Points** 10 **Level** 2

#### **Assumed Knowledge**

300305 - Design Studio 1: Themes & Variations, 300309 - Sustainable Design: Life Cycle Analysis, 300302 - Industrial Graphics 1: Presentation, 300282 - Industrial Graphics 2: Transition

#### **Equivalent Units**

10954 - Design Process 2: The Design Proposal, J2870 - Design Application, J3804 - Design Project 1

.....

Design Studio 2 will develop the ability of students to advance a design concept up to the point of pre-production. The unit explores the often complex influences on a design proposal - from the methods used to identify the needs of people, future purchase patterns, production limitations to price point analysis. It focuses on the integrative nature of the process of designing.

### **300311.3 Design Studio 3: Product Realisation**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

300308 - Design Studio 2: The Design Proposal, 300309 - Sustainable Design: Life Cycle Analysis, 300306 - Sustainable Design: Sustainable Futures, 300282 - Industrial Graphics 2: Transition, 300310 - Industrial Graphics 3: 3D Solids.

#### **Equivalent Units**

10955 - Design Process 3: Product, J3765 - Advanced Design Application, J3805 - Design Project 2, J3825 - Design Project (Integrated)

.....

In this unit, students respond to a set design brief so that they can develop a more comprehensive understanding of the design process, from initial briefing to product realisation. Students first investigate the task from multiple perspectives then generate a wide range of possible solutions. The most promising concept, the most feasible, innovative and appropriate to the specific user and context, is then refined, developed and professionally communicated using a wide range of design techniques and media.

### **300313.3 Design Studio 4: Simulate to Innovate**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

It is assumed students have completed Industrial Graphics 2 and Industrial Graphics 3 and are proficient in computer solid modelling. Knowledge of plastic manufacturing is also essential.

#### **Prerequisite**

**300311.3** Design Studio 3: Product Realisation

**Equivalent Units**

10956 - Design Process 4: The Design Context

.....

Design Studio explores the strategies for Industrial Design within the complex and contradictory context of operating as designers in late-industrial cultures. The complexity of designing in Australia for a global economy with local peculiarities will be studied with a particular emphasis on designing for users who are increasingly difficult to know. These same users are also demanding more protection from goods and services they consume and demonstrate increasing doubts about the claims that advertisers make. These factors are bringing new issues into the Industrial Design context. Product innovation with an emphasis on rapid prototyping will form the basis of assessment in this unit.

**300314.2 Designed Inquiry**

**Credit Points** 10 **Level** 3

**Assumed Knowledge**

Knowledge related to the successful completion of Year 1 and 2 is assumed.

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This unit instructs students in the practical techniques required for designing, conducting and presenting research, in an action-learning environment. Actual research projects based on design-related issues will be explored. A range of research methods will be presented and students will be assisted in the strategic selection of appropriate methods in designing their research. This unit provides a forum for students to bring together and present both the design and results of research. Students will have the opportunity to select and explore their own research topics developed in consultation with the lecturer or tutor, design data collection instruments, analyse data and engage in peer discussions about the significance of their findings.

**300111.2 Developing Web Applications with XML**

**Credit Points** 10 **Level** 3

**Assumed Knowledge**

300582-Technologies for Web Applications, 300580-Programming Fundamentals

.....

This third year unit provides a comprehensive coverage of XML, related emerging technologies and their use in web applications. Students will be given opportunities to develop web based information systems which rely upon these technologies. This unit is heavily oriented to practical based work.

**300723.2 Development Control**

**Credit Points** 10 **Level** 2

**Assumed Knowledge**

Basic understanding of residential construction.

**Equivalent Units**

BG303A - Development Control

**Incompatible Units**

200435 - Property Development Controls

.....

In this unit current issues related to development control will be critiqued. These include: planning law as it relates to the development application process; the assessment of applications for approval for development as an integrated process; the evaluation of the impact assessment process; appropriate consideration of urban design, streetscape, heritage and conservation issues; and the evaluation of the impact of parking, traffic, landscape and services in development proposals.

**101682.4 Developmental Psychology**

**Credit Points** 10 **Level** 3

**Assumed Knowledge**

Basic understanding of core concepts of personality, social and developmental psychology

**Special Requirements**

Prior to enrolling in this unit students must have submitted a Working with Children Check.

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Note: The unit offerings for the 1H and 2H Teaching Periods at Bankstown and Penrith campuses listed above are available only for students enrolled in courses 1670 - Bachelor of Education (Birth - 5 years) and 1615 - Bachelor of Early Childhood Studies (Child and Family). Please note that enrolments will be monitored and students who are not enrolled in courses 1670 or 1615 will be required to withdraw from 1H/2H and enrol in one of the alternative Teaching Periods listed above. Structured around an overview of lifespan development including diversity, this unit explores the holistic nature of growth and development through developmental theory and research. This unit highlights the interactive nature of three main areas of development: biological, cognitive, and psychosocial changes that affect the individual from conception to end of life. The unit encourages observation as a means for understanding development and promoting individuals well being. An understanding of indigenous development will be integrated into the unit alongside an appreciation of richness in diversity within various cultural contexts.

**200030.2 Differential Equations**

**Credit Points** 10 **Level** 2

**Assumed Knowledge**

Algebra - competency in manipulation of algebraic terms including powers, sigma notation Elementary functions - polynomial, power, exponential, logarithmic, circular and hyperbolic, inverse functions Differentiation - derivatives of standard functions, product/quotient/composite function rules Integration - integrals of standard functions, change of variable, integration by parts

**Incompatible Units**

200238 - Mathematics for Engineers 2

.....

Differential equations arise naturally, both in abstract mathematics and in the study of many phenomena. This

unit provides the theory of ordinary differential equations and an introduction to partial differential equations, together with methods of solution. Examples are drawn from a wide range of biological, chemical, physical and economic applications.

### 200030.3 Differential Equations

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Algebra - competency in manipulation of algebraic terms including powers, sigma notation Elementary functions - polynomial, power, exponential, logarithmic, circular and hyperbolic, inverse functions Differentiation - derivatives of standard functions, product/quotient/composite function rules Integration - integrals of standard functions, change of variable, integration by parts

#### Incompatible Units

200238 - Mathematics for Engineers 2

.....

Differential equations arise naturally, both in abstract mathematics and in the study of many phenomena. This unit provides the theory of ordinary differential equations and an introduction to partial differential equations, together with methods of solution. Examples are drawn from a wide range of biological, chemical, physical and economic applications.

### 300112.1 Digital Communication Technology

**Credit Points** 10 **Level** 2

#### Prerequisite

**300086.1** Applied Data Communications and Networking OR **300094.1** Computer Networking Fundamentals

#### Equivalent Units

J3750 - Advanced Data Communications, 14961 - Data Communications 2

.....

This unit is designed for students majoring in data communications. The unit introduces students to the principles, theories, techniques, and systems used in the vast area of digital communications. Students learn about coding and compression, and their corresponding industry standards. The characteristics and performance of various data communication systems such as analog and digital are also examined.

### 300370.1 Digital Control Systems

**Credit Points** 10 **Level** 4

#### Assumed Knowledge

Prior knowledge assumed: Continuous time control systems, the use of the Laplace transform, ADC and DAC, Z-transform, vector matrix difference equations, state variable representation helpful and familiarity with Matlab or similar software.

#### Equivalent Units

84465 - Real Time Control

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This unit is a first course in discrete, single rate sampled linear control systems and introduces the use of a computer as the main control element in a feedback system and as a data acquisition tool in real time. Methods of analysis and design are examined, using s-domain and state space methods, with an emphasis on the practical aspects of designing and implementing digital control systems. Less emphasis on theoretical issues. Direct design and emulation methods are included. Practical laboratory work is included along with the use of Matlab software tools

### 300874.1 Digital Forensic Photography

**Credit Points** 10 **Level** 2

#### Equivalent Units

300375 - Digital Forensic Photography 1

#### Special Requirements

Students must be enrolled in 3589 Bachelor of Science (Forensic Science).

.....

Documenting perishable and non-perishable forensic evidence is an important element of forensic science practice. This unit introduces the student to the fundamental principles and practices of forensic photography. Topics include; conceptual and applied aspects of maintaining image integrity for forensic evidence, principles of light science, digital imaging, camera and lighting operations, concepts associated with visual communication in forensic science, and concepts associated with technical photography composition.

### 101250.3 Digital Futures

**Credit Points** 10 **Level** 2

#### Special Requirements

Successful completion of 40 credit points at Level 1

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This unit examines the role of digital technologies in contemporary cultural production, exploring the impact digital technologies have had on the design and construction of images, spaces and bodies in the late 20th and early 21st centuries. The unit traces the development of technologies from analogue, to electronic, to digital, and analyses key topics in media studies including the cyborg, virtual reality, artificial life and simulation. The unit contextualizes conceptual issues with reference to design, film, art and new media works.

### 300069.3 Digital Signal Processing

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Students should be able to apply knowledge from 300005 - Circuit Theory: employ the basic principles of analysing an AC electric circuit; apply Kirchhoff's Voltage and Current laws and their use in electric circuits; apply Nodal analysis, mesh analysis and superposition analysis to AC electric circuits; utilise Laplace Transform and its applications to Electric Circuits; demonstrate the concept of Bode plot and frequency response; examine passive and active filters.

**Prerequisite**

**300057.3** Signals and Systems

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This unit is aimed to provide an introduction to fundamental concepts and principles in digital signal processing. It focuses on signal analysis, digital filter design, hardware implementation and applications.

**300018.2 Digital Systems 1**

**Credit Points** 10 **Level** 1

**Assumed Knowledge**

Topics from 300021 - Electrical Fundamentals: Understand the basic principles of analysing an electric circuit; understand Kirchoff's Voltage and Current laws and their use in electric circuits; understand the concept of operational amplifier and its circuit.

.....

This unit provides students with a solid background in digital logic design. Students are introduced to the fundamentals of digital logic with number systems, basic logic devices and Boolean algebra. Analysis and design of combinational and sequential logic circuits is covered in detail. Design with programmable logic devices is introduced.

**300019.2 Digital Systems 2**

**Credit Points** 10 **Level** 2

**Prerequisite**

**300018.1** Digital Systems 1

.....

This unit covers modern digital design techniques and the process of creating a digital circuit from design specifications to the implementation of more complex digital circuits and systems. Specific topics include a review of logic design techniques; hardware description languages, HDL; digital circuit modeling using an HDL; logic simulations; state-of-the-art digital circuit design tools; programmable logic devices; digital circuit implementation rapid circuit prototyping; integration of HDL, a digital circuit design tool and programmable logic devices in a single design process.

**300019.3 Digital Systems 2**

**Credit Points** 10 **Level** 3

**Prerequisite**

**300018.1** Digital Systems 1

.....

This unit covers modern logic design techniques and the process of creating logic circuits and systems from design specifications to implementation. Topics include logic design techniques for combinational and sequential logic circuits; hardware description language (HDL); logic circuit implementation using an HDL; state-of-the-art logic circuit design tools; and programmable logic devices.

**300880.1 Disaster and Emergency Management**

**Credit Points** 10 **Level** 3

**Equivalent Units**

300449 - Environment, Health and Emergency Management, 300702 - Disaster and Emergency Management

**Special Requirements**

Successful completion of 60 credit points at Level 1 and 40 credit points at Level 2. Students are required to have access to a personal computer.

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This unit explores the management of planning and preparation for and community responses to disasters and emergencies. Through case studies and presentations from current and cutting-edge professional practitioners in the field, students develop a 'hands on' understanding of risk assessment and prevention strategies for community safety during times of critical incidents. This includes emergency management strategies for community recovery and public education and preparation for potentially critical incidents. Workshop activities facilitate collaborative student learning through the use of developing scenarios including infectious disease pandemics, natural disasters and manmade emergencies such as terrorism.

**200025.2 Discrete Mathematics**

**Credit Points** 10 **Level** 1

**Assumed Knowledge**

HSC Mathematics or equivalent

**Equivalent Units**

ST107A - Discrete Mathematics, 14349 - Discrete Mathematics

**Incompatible Units**

14950 - Algebra 1A and 1B, 14503 - Maths 3, 14323 - Maths for Computing

.....

This Level 1 unit introduces set theory, symbolic logic, graph theory and some counting problems. It provides a solid foundation for further study in mathematics or computing.

**300699.2 Discrete Structures and Complexity**

**Credit Points** 10 **Level** 2

**Assumed Knowledge**

Basic programming such as that in 300580 - Programming Fundamentals.

**Prerequisite**

**300700.5** Statistical Decision Making

**Incompatible Units**

200025 - Discrete Mathematics

### Special Requirements

To enrol in this unit students must be in 3639 Bachelor of Information and Communications Technology or the following double degrees 3654, 3655, 3656, 3657, 3661

.....

The fact that computers work at all in the way they do is due to the formal mathematical structure that is used in their design. The same holds for establishing important matters such as the reliability of our computer networks. This unit presents, in their computing context, a range of mathematical concepts that are essential for understanding a number of topics concerning computers: the ways they work, they ways they interact, and the ways we interact with them.

### 300867.1 Disease Prevention and Control

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

A background knowledge of microbiology, and epidemiology

#### Equivalent Units

300782 - Disease Prevention and Control

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This unit focuses primarily on disease prevention and control as it relates to professional environmental health practice. Changes in human lifestyles, rapid urbanisation, industrial expansion, environmental degradation, international migration and travel, changing demography, and demands for mass-produced food have promoted diseases which require integrated population health management strategies. While the newer environmentally-induced epidemics such as obesity, depressive disorders, cardiovascular diseases and cancers predominate in industrialised nations, communicable conditions of a bacterial, viral or parasitic nature remain prevalent internationally and in some cases have re-established to epidemic or even pandemic proportions. The unit addresses both communicable and non-communicable/chronic diseases of public health significance and develops skills for planning integrated strategies for their prevention and control at the population level.

### 300115.2 Distributed Systems and Programming

**Credit Points** 10 **Level** 3

#### Prerequisite

**300167.3** Systems Programming 1 AND **300094.2** Computer Networking Fundamentals OR **300565.2** Computer Networking

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This unit covers concepts and design of, and programming for distributed systems. It builds on basic network communication protocols (specifically IP) to cover client-server programming using both the system level socket interface and remote procedure calls. It also examines large-scale distributed system architectures, particularly those based on distributed objects, and considers the complexities inherent in distributed transactions. Key concepts covered include data and algorithmic distribution,

idempotent protocols, stateless and stateful servers, and distributed system transparency. Illustrative case studies are included.

### 101857.1 Doing Business in China

**Credit Points** 10 **Level** 2

#### Special Requirements

Successful completion of 40 credit points at Level 1.

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This unit is primarily aimed at acquainting undergraduate students with the academic theory and debates surrounding China's business etiquette and its globalizing economy. Drawing on a wide range of English-language studies, unit lectures will cover in broad strokes the historic background of the economic reforms carried out in China over the last three decades, as well as their societal implications. They will discuss, for example, the evolution of corporate law and property rights in the PRC since 1949, and the underlying differences and interdependence between the Chinese and Australian economies.

### 300479.1 Drainage Engineering

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

300674 - Engineering Design & Construction Practice and 300027 - Engineering Computing.

#### Prerequisite

**85009.2** Water Engineering OR **300740.1** Water Engineering

#### Equivalent Units

85017 - Foundation and Drainage, 85025 - Hydrometeorology

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This unit will introduce the basic concepts of drainage analysis. Basic concepts of hydrology will be introduced. This will be integrated with the hydraulic principles learned in Water Engineering to perform hydrologic analysis of catchments.

### 400961.1 Drugs on Line

**Credit Points** 10 **Level** 1

#### Equivalent Units

E1250 - Drugs On Line

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This unit deals with selected issues in drug use, misuse and abuse. An introductory section discusses mechanisms of drug action in the body and their likely effects. Some topical areas include recreational drugs, drugs in sport, vitamins and herbal supplements, oral contraceptives, antidepressants and weight management therapeutic agents.

### 300480.2 Dynamics of Mechanical Systems

**Credit Points** 10 **Level** 3

**Prerequisite**

**300035.3** Kinematics and Kinetics of Machines AND  
**300040.2** Mechanics of Materials

**Equivalent Units**

300020 - Dynamics and Mechanical Systems

.....

This unit looks at how non-rigid components deform and oscillate. It looks at undamped and damped systems undergoing free vibration, steady state forced vibration and transient forced vibration. The principles of virtual work are used to investigate the equilibrium and dynamics of mechanisms.

### 200120.1 E-Business Fundamentals and Systems

**Credit Points** 10 **Level** 2

.....

Developments in information systems, particularly those associated with the Internet, have created new opportunities for businesses. Organisations can better manage their internal operations and obtain competitive advantages such as breaking into new markets or offering enhanced levels of service by exploiting these systems. As a consequence, the term 'e-business' (electronic business) has arisen. It refers to activities such as buying and selling, servicing customers and collaborating with business partners, as well as conducting business transactions within an organisation, where these are computer-based or use digital communications. This unit introduces students to the concept of e-business (and its subset, electronic commerce or e-commerce) and shows how this is impacting on the ways businesses are conducted. The unit examines major examples of the types of systems supporting e-business, employing, where appropriate, case studies drawn from business, government, industry and society. It considers the characteristics of these systems, how they are utilised, the opportunities they create, the practical limitations they face, current developments and future trends. The unit particularly looks at their business, legal, ethical and social impacts and implications, both at national and international level.

### 300839.1 Ecology

**Credit Points** 10 **Level** 2

**Assumed Knowledge**

Knowledge of first-year university biology satisfactory completion of Biodiversity and Cell Biology or equivalent and the concepts of classification, evolution, taxonomy, cellular processes plant and animal structure and function.

**Equivalent Units**

EY210A - Ecology 2.1; 300634 - Ecology; EY201A - Ecology 2.1 (V1)

.....

We live in a society where environmental problems dominate public debate. Ecology is one of the sciences

required to find solutions to such problems; terms and ideas that came originally from ecology are used in public discussions, and in legislation. This unit will introduce students to ecology: what is studied, how it is studied, what are the strengths and limitations of ecology. Current ecological thinking will be covered, from the scale of individual organisms, through populations, and up to communities and ecosystems. Methods of study will be highlighted using evidence from molecular ecology through to field investigations.

### 200053.3 Economic Modelling

**Credit Points** 10 **Level** 3

**Prerequisite**

**200032.5** Statistics for Business OR **200052.4** Introduction to Economic Methods

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This unit builds on concepts explored in Introduction to Economic Methods. The unit broadens the application of the stochastic linear model in econometrics, exploring its use in the estimation of economic models and in the testing of economic hypotheses associated with these models. The emphasis is on learning by doing in small group workshops.

### 200537.3 Economics and Finance Engagement Project

**Credit Points** 10 **Level** 3

**Assumed Knowledge**

Students need to have completed at least four semesters of a course, key program or major run by the School of Economics and Finance.

**Special Requirements**

Successful completion of 150 credit points within the key programs of Economics and Finance, Applied Finance, International Trade and Finance or Applied Economics of course 2739 or 2753 Bachelor of Business and Commerce or successful completion of 150 credit points within the key programs of Applied Finance or Applied Economics of courses 3659 Bachelor of Science/Bachelor of Business and Commerce and 3655 Bachelor of Information and Communications Technology/Bachelor of Business and Commerce or successful completion of 150 credit points within the course 2504 Bachelor of Economics or the course 2526 Bachelor of Economics/Bachelor of Laws.

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This unit will provide students with exposure to problems with which economists and finance professionals are confronted in their daily work. They will be confronted with the multi-dimensional nature of the issues addressed by economists and finance professionals in real-life. Students will need to consider the nature of the problems as well as how realistic the solutions they are proposing are, and will learn how to systematically reflect on their contribution to the industry or community setting with which they engage.

### 300856.1 Ecosystem Carbon Accounting

**Credit Points** 10 **Level** 3

**Prerequisite**

**300837.1** Climate Change Science

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A critical part of societies response to climate change is to measure the movement of greenhouse gases. Once this is done, steps taken to reduce these gases can be correctly targeted and the impact of such steps monitored. This unit will introduce students to the scientific measurement of greenhouse gas uptake and emissions, including assessment of uncertainties and verifiability of measurement. Ecosystem-level models will be used to estimate and quantify movement of greenhouse gases, allowing quantification of the net greenhouse gas emissions over the life cycle of a product. These approaches are vital steps in moving our society to a sustainable future.

### **101263.1 Education and Transformation**

**Credit Points 10 Level 2**

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The unit provides opportunities for students to examine theories and practices associated with Transformative Learning (TL), within oneself and society, and its potential role for the development of professional educators, change agents and leaders in society. TL is learning that is liberating, emancipatory, empowering, profound, deep, and life changing. It occurs through critical reflection on experience, subsequent testing through discourse, and also through intuitive and affective processes. This unit enables students to design and facilitate life-affirming and transformative learning experiences in others.

### **101663.1 Education for Sustainability**

**Credit Points 10 Level 2**

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Sustainable learning requires students to appreciate key ecological issues and to reflect upon their place in contemporary teaching and learning. These ecological issues suggest the need for ongoing reflection upon subject matter in all discipline alongside reflection upon the ways in which learning relationships are imagined and enacted. Here personal sustainability, the sustainable school and the sustainable society are subject matter alongside social-ecological relationships and the learning systems that underpin them. This unit serves as an introduction to these matters and a provocation to develop a personal relationship to key issues in the area.

### **101661.1 Education in a Cosmopolitan Society**

**Credit Points 10 Level 3**

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This unit responds to the question of what it might mean to educate "world teachers" for cosmopolitan classrooms and schools. For some time multicultural education as policy and practice has dominated schooling in Australia. In globalizing times there has been a shift to considering alternatives and one of these is cosmopolitanism. The unit examines the thesis that cosmopolitanism as a philosophy already underpins western education. The central component of this ideal is the facilitation of reason. In the light of this philosophy, the unit explores arguments about

inclusion, examines NSW curricula and pedagogical frameworks.

### **300567.3 e-Health**

**Credit Points 10 Level 3**

#### **Prerequisite**

**300566.2** Introduction to Health Informatics

#### **Special Requirements**

Students in 3663 – Graduate Certificate in Health Informatics are not required to complete the pre-requisite unit 300566 – Introduction to Health Informatics before enrolling in 300567 – e-Health.

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This unit exposes students to the processes and techniques of the development of e-Health applications. It extends the students knowledge of Health Informatics by introducing concepts relating to electronic communications within the Health Industry. Areas include the Electronic Health Record Standards, Security, Privacy and Trust together with TeleHealth / TeleMedicine approaches, methodologies, tools and techniques.

### **300070.4 Electrical Drives**

**Credit Points 10 Level 3**

#### **Prerequisite**

**300071.2** Electrical Machines 1

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The unit aims to introduce the study of electrical machines and drives. The subject covers various types of electrical motors and drive systems, their applications and control. The unit covers various types of the speed control, starting and braking systems and the dynamics of different electrical drives.

### **300021.2 Electrical Fundamentals**

**Credit Points 10 Level 1**

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The objective of this unit is to introduce to the student a number of concepts within electrical engineering. These include: The basic definitions of charge, current, potential difference, power; Electric circuits and basic laws such as Ohm's and Kirchoff's Laws; Thevenin, Nortons and the maximum power theorems; Electromagnetism and the associated fundamental laws; Capacitor and resistor circuits and time constants and An introduction to the operational amplifier. Basic principles are explained and applied to a range of typical electrical circuits and devices. These foundations provide students with the basic requirements for a career in engineering where the concepts can be developed or applied to more complex engineering systems.



**700104.1 Electrical Fundamentals (UWSC Assoc Deg)**

**Credit Points** 10 **Level** 1

**Equivalent Units**

300021 - Electrical Fundamentals, 700024 - Electrical Fundamentals (UWSC)

**Special Requirements**

Students must be enrolled in 7022 Associate Degree in Engineering

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The objective of this unit is to introduce to the student a number of concepts within electrical engineering. These include basic definitions of charge, current, potential difference, power; electric circuits and basic laws such as Ohm's and Kirchoff's Laws; Thevenin, Norton's and the maximum power theorems; electromagnetism and the associated fundamental laws; capacitor and resistor circuits and time constants and an introduction to the operational amplifier. Basic principles are explained and applied to a range of typical electrical circuits and devices. These foundations provide students with the basic requirements for a career in engineering where the concepts can be developed or applied to more complex engineering systems.

**700024.1 Electrical Fundamentals (UWSC)**

**Credit Points** 10 **Level** 1

**Equivalent Units**

300021 - Electrical Fundamentals

**Special Requirements**

Students must be enrolled at UWS College.

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The objective of this unit is to provide the student's first introduction to fundamental electromagnetism and electric circuit principles. Discussion is restricted to DC, although first-order systems are discussed and second order systems introduced as a pointer to on-going development. Basic definitions of charge, current, potential difference/ relative potential, power, and the electric circuit as a complete path are presented, together with the basic laws - Ohm's Law and Kirchoff's nodal and loop laws. Examples from different engineering disciplines are related to circuit's laws. Basic nodal and mesh analysis are presented together with Thevenin and Norton circuit equivalents, real versus ideal current and voltage sources and the maximum power transfer principle. The operational amplifier as a circuit element is introduced. Energy storage elements (capacitors and inductors) are discussed leading into first-order systems and their natural responses and time-constants. Several basic electromagnetic concepts related to electric and magnetic flux and induced voltage are also discussed.

**300071.2 Electrical Machines 1**

**Credit Points** 10 **Level** 3

**Prerequisite**

**300052.2** Power and Machines

**Equivalent Units**

89010 - Electrical Machines, Electrical Machines 1 (unit codes 84742, 81441, 84140, 84232, 84240, 84243), Electrical Machines 2 (unit codes 84272, 84872, 84280)

.....

This unit introduces the fundamental principles of electrical machines: DC generators and motors, induction motors and synchronous machines. The unit also introduces various special purpose electrical machines, such as permanent magnet machines, step motors and reluctance machines.

**300024.1 Electronic Systems Design**

**Credit Points** 10 **Level** 3

**Prerequisite**

**300069.1** Digital Signal Processing AND **300025.1** Electronics AND **300076.1** Microprocessor Systems

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This unit is concerned with the processes involved in the design and production of complete electronic systems. The product development cycle is considered from concept to market and commercialisation. The design of a large electronic system is undertaken as a group project. Production processes explored are printed circuit board (PCB) design and computer aided design (CAD) tools, and PCB manufacture and assembly. Management of the processes are studied including the application of total quality management (TQM) and just-in time management (JIT).

**300024.2 Electronic Systems Design**

**Credit Points** 10 **Level** 3

**Assumed Knowledge**

300075 - Instrumentation and Measurement, and 300069 - Digital Signal Processing

**Prerequisite**

**300025.2** Electronics AND **300076.1** Microprocessor Systems

.....

This unit is concerned with the processes involved in the design and production of complete electronic systems. The product development cycle is considered from concept to market and commercialisation. The design of a large electronic system is undertaken as a group project. Production processes explored are printed circuit board (PCB) design and computer aided design (CAD) tools, and PCB manufacture and assembly. Management of the processes are studied including the application of total quality management (TQM) and just-in time management (JIT).

**300025.3 Electronics**

**Credit Points** 10 **Level** 2

**Assumed Knowledge**

Topics associated with the unit 300464 - Physics and Materials: Vibrations and wave phenomena; Photoelectric

effect, atomic structure and periodic table; Electricity and magnetism.

**Prerequisite**

**300021.2** Electrical Fundamentals

**Special Requirements**

Students should have a sound understanding of: The basic principles of analysing an electric circuit; Kirchhoff's Voltage and Current laws and their use in electric circuits; Nodal analysis, mesh analysis and superposition analysis in DC electric circuits; Thevenin and Norton equivalent and their use in electric circuits; The storage elements capacitor and inductor and understand their performance in first and second order circuits.

.....

This unit further develops skills in the analysis, design, practical implementation and testing of the main analogue electronic circuits. Topics covered are: semiconductor diodes and their applications, Bipolar Junction Transistors (BJT), Field Effect Transistors (FET), analysis of BJT and FET, design of discrete operational amplifiers, and operational amplifier characteristics and circuit configurations.

**300584.3 Emerging Trends in Information Systems**

**Credit Points** 10 **Level** 3

**Prerequisite**

**300573.2** Information Systems in Context AND **300583.2** Web Systems Development

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This unit provides a means for students to explore the changing nature of information systems in organisations. Specifically, the role that emerging technologies play in both the design and development of information systems is critically examined. Students will be able to research and assess new technologies, as well as develop and implement effective strategies for achieving change in information systems based on the feasibility of the introduction of the technologies.

**300942.1 Emerging Trends in Information Systems (Advanced)**

**Credit Points** 10 **Level** 3

**Prerequisite**

**300573.2** Information Systems in Context AND **300583.2** Web Systems Development OR **300902.1** Web Systems Development (Advanced)

**Incompatible Units**

300584 - Emerging Trends in Information Systems

**Special Requirements**

Students must be enrolled in 3685 - Bachelor of Computing (Information Systems) Advanced

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In this unit students explore the changing nature of information systems in organisations. Apart from being encouraged to research and assess new technologies and

implement effective strategies for achieving change within organisational information systems, in this advanced unit students will be required to undertake an individual, but closely supervised research project. The project will help stimulate inquiry, strengthen needs for academic research and encourage students to actively participate in new knowledge generation. Furthermore, students in this unit will be required to present their findings in a form of an academic paper with a possibility of publishing.

**100860.3 Emotions, Culture and Community**

**Credit Points** 10 **Level** 3

**Special Requirements**

Successful completion of 60 credit points

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This unit examines forms of cultural expression and collective selfunderstanding articulated as emotional identifications. Topics covered may include shame, pride, responsibility, forgiveness, resentment, hope, disgust, generosity, happiness, hate and love. The unit explores how these have been taken up in contemporary cultural analysis as a focus for understanding affinities and conflicts between individuals and communities and for how Australians imagine their historical interconnectedness. It introduces some key theoretical perspectives that have been, and might be, applied to the study of emotions, culture and community.

**100861.3 Empire: European Colonial Rule and its Subjects, 1750-1920**

**Credit Points** 10 **Level** 2

**Equivalent Units**

63125 - The World Encircled 1100 - 1600

**Special Requirements**

Successful completion of 40 credit points at Level 1

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A historical investigation of the experience of the 19th century European empires from the perspectives of both the colonized and colonizers. It examines the combination of domination and cultural negotiation between colonizers and colonized. It examines both how peoples were managed as imperial subjects and how they responded to this management. It looks both at the effect of imperial rule on the colonized, and of empire upon the colonizers. It draws upon historical literature from a variety of sources and perspectives, and within European and Asian history. The focus is chiefly, though not exclusively, upon the British empire and its subject peoples.

**200610.2 Employee Training and Development**

**Credit Points** 10 **Level** 2

**Prerequisite**

**200300.2** Managing People at Work

**Equivalent Units**

61422 - Employee Training and Development

.....

This unit explores such questions as: Training -- what is it!! How is it linked to strategic development!! It explores education versus training versus development; managing the training department, upper management involvement, career development; cost-effectiveness of training and development; training and development needs -- how people learn, implications for training and development of staff, models and roles for training; needs analysis, objective setting, and the implications of politics, culture and government; curriculum -- methods content, people, sequencing of curriculum; the advantages and disadvantages of various training methods; measurement of success philosophies, instruments of measurement and post-training measurement.

### 300026.3 Energy Systems

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Basic knowledge of power frequency devices and systems

#### Prerequisite

**300025.3** Electronics AND **300052.2** Power and Machines

The unit introduces the global energy picture of electric energy systems, including a look at alternative energy sources where time permits. It deals with mainly power systems on a macroscopic scale and with power electronics to a lesser extent and on a smaller scale. Basic processes of energy generation, distribution and conversion are presented, along with the use of semiconductor power switching devices.

### 300462.2 Engineering and Design Concepts

**Credit Points** 10 **Level** 1

#### Equivalent Units

300011 - Design Issues and Principles, J1803 - Impact of Design and Technology, J1757 - Design Issues, J1758 - Engineering Design

This unit equips students with the fundamental skills that will enable them to use creative design and engineering approaches to solve challenging problems and to understand the design process. Students will be exposed to 2D and 3D visualisation techniques, will learn how to interpret abstract information, and will work on practical projects in an interdisciplinary context. The aim is to provide a common first-year subject that is thematic, rather than discipline-centred and presents students with foundation concepts in engineering and industrial design.

### 700105.1 Engineering and Design Concepts (UWSC Assoc Deg)

**Credit Points** 10 **Level** 1

#### Equivalent Units

300462 - Engineering and Design Concepts, 700021 - Engineering and Design Concepts (UWSC)

#### Special Requirements

Students must be enrolled in 7022 Associate Degree in Engineering

This unit equips students with the fundamental skills that will enable them to use creative design and engineering approaches to solve challenging problems and to understand the design process. Students will be exposed to 2D and 3D visualisation techniques, will learn how to interpret abstract information, and will work on practical projects in an interdisciplinary context. The aim is to provide a common first-year subject that is thematic, rather than discipline-centred and presents students with foundation concepts in engineering and industrial design.

### 700021.1 Engineering and Design Concepts (UWSC)

**Credit Points** 10 **Level** 1

#### Equivalent Units

300462 - Engineering and Design Concepts

#### Special Requirements

Students must be enrolled at UWS College, except under specific circumstances approved by UWS.

This unit equips students with the fundamental skills that will enable them to use creative design and engineering approaches to solve challenging problems and to understand the design process. Students will be exposed to 2D and 3D visualisation techniques, will learn how to interpret abstract information, and will work on practical projects in an interdisciplinary context. The aim is to provide a common first-year subject that is thematic, rather than discipline-centred and presents students with foundation concepts in engineering and industrial design.

### 300027.2 Engineering Computing

**Credit Points** 10 **Level** 1

#### Assumed Knowledge

Basic knowledge in use of computers and Windows operating system

Students are introduced to the techniques of data manipulation and presentation using the common functions of a spreadsheet facility. The unit also aims to instil sound principles of program design that can be utilised in many units throughout the student's course. The basic elements and structures of a high level language are taught. Students are exposed to many engineering problems and are encouraged to implement solutions using an algorithmic approach.

### 700106.1 Engineering Computing (UWSC Assoc Deg)

**Credit Points** 10 **Level** 1

#### Assumed Knowledge

Basic knowledge in use of computers and Windows operating system

### Equivalent Units

300027 - Engineering Computing, 700018 - Engineering Computing (UWSC)

### Special Requirements

Students must be enrolled in 7022 Associate Degree in Engineering

.....

Students are introduced to the techniques of data manipulation and presentation using common functions of a spreadsheet facility. The unit also aims to instil sound principles of program design that can be utilised in many units throughout the students' course. The basic elements and structures of a high level language are taught. Students are exposed to many engineering problems and are encouraged to implement solutions using an algorithmic approach.

### 700018.1 Engineering Computing (UWSC)

**Credit Points** 10 **Level** 1

### Assumed Knowledge

Basic knowledge in use of computers and Windows operating system

### Equivalent Units

300027 - Engineering Computing

### Special Requirements

Students must be enrolled at UWS College.

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Students are introduced to the techniques of data manipulation and presentation using the common functions of a spreadsheet facility. The unit also aims to instill sound principles of program design that can be utilized in many units throughout the students' course. The basic elements and structures of a high level language are taught. Students are exposed to many engineering problems and are encouraged to implement solutions using an algorithmic approach.

### 700038.2 Engineering Design and Construction Practice (UWSC)

**Credit Points** 10 **Level** 1

### Equivalent Units

300034 - Introduction to Professional Practice, 300461- Engineering and Industrial Design Practice, 300674 - Engineering, Design & Construction Practice

### Special Requirements

Students must be enrolled at UWS College.

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This unit encourages students to explore the professional responsibilities and challenges faced by Engineers, Designers and Building professionals. Students are introduced to emerging issues and approaches to sustainability and the complex nature of the design problems they will encounter in professional practice. Students engage in a semester-long research and problem solving task that addresses environmental and social sustainability imperatives and fosters fundamental

research, design and communication skills. Special emphasis is placed on lifelong learning, academic literacy and professional skills including information literacy, project management, and teamwork which equip students for subsequent academic and professional contexts.

### 300481.2 Engineering Electromagnetics

**Credit Points** 10 **Level** 2

### Assumed Knowledge

The students should have a good understanding of 300021 - Electrical Fundamentals

### Prerequisite

**300464.2** Physics and Materials AND **200238.2** Mathematics for Engineers 2

### Equivalent Units

300022 - Electromagnetics, 300073 - Electromagnetic Compatibility

.....

This unit introduces Maxwell's equations in integral and differential form and their application to basic theory and application of electromagnetic structures, wave propagation, guides waves, antennas and Electromagnetic compatibility.

### 300482.2 Engineering Geology and Concrete Materials

**Credit Points** 10 **Level** 1

### Equivalent Units

85002 - Engineering Geophysics, 300039 - Mechanics and Materials

.....

Students are introduced to the principles of Civil and Environmental Engineering Chemistry, Civil and Environmental Engineering Geology, and Concrete Materials. The students are exposed to real world engineering problems requiring knowledge of Civil and Environmental Engineering Chemistry, Civil and Environmental Engineering Geology and Concrete Materials. The knowledge gained from this unit will be directly applicable to other units of Civil and Environmental Engineering key programs.

### 700109.1 Engineering Management for Engineer Associates (UWSC Assoc Deg)

**Credit Points** 10 **Level** 2

### Special Requirements

Students must be enrolled in 7022 Associate Degree in Engineering

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The unit will provide the knowledge and skills to enable students to support the achievement of organisational goals through applying knowledge of environment and internal culture. The unit evaluates planning processes and goal setting to achieve superior performance and compares alternative approaches to motivation of work team members. Students will consider types of managerial

communications and their associated communications channels in achieving best professional practice.

### 300483.3 Engineering Project

**Credit Points** 20 **Level** 4

**Prerequisite**

**300053.3** Professional Practice

**Equivalent Units**

85018 - Civil and Environmental Engineering Project 2

**Incompatible Units**

300484 - Engineering Thesis, 300668 - Advanced Engineering Thesis

**Special Requirements**

Must have completed at least 240 credit points in their course so that they have a sufficiently solid grasp of their particular major field of engineering.

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This unit includes a capstone project which demonstrates student's professional level of identifying, planning, designing, executing, testing and documenting an engineering project or activity.

### 700110.1 Engineering Project (UWSC Assoc Deg)

**Credit Points** 10 **Level** 2

**Prerequisite**

**700118.1** Professional Practice for Engineer Associates (UWSC Assoc Deg)

**Special Requirements**

Students must be enrolled in 7022 Associate Degree in Engineering

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In this unit, students will use project management tools, techniques and practices to plan and control a project that achieves stated requirements on time and within budget. Students will plan a project including the creation of a statement of work, a work breakdown structure and an appropriate set of supporting work packages.

### 300029.3 Engineering Visualization

**Credit Points** 10 **Level** 2

**Assumed Knowledge**

C++ Programming and 3-D Geometry

**Prerequisite**

**300027.2** Engineering Computing

**Equivalent Units**

80151 - Computer Graphics

.....

This unit is aimed to provide a comprehensive introduction to fundamental concepts and algorithms in engineering visualization. Topics covered include visualization hardware, scan conversion of geometric primitives, 2D and 3D transformations, 3D viewing and projection, hidden

surface removal, solid modeling, illumination models and image manipulation.

### 300674.2 Engineering, Design and Construction Practice

**Credit Points** 10 **Level** 1

**Equivalent Units**

300461 Engineering and Industrial Design Practice; 300034 Introduction to Professional Practice; 700038 - Engineering Design and Construction Practice (UWSC)

.....

This unit encourages students to explore the professional responsibilities and challenges faced by Engineers, Designers and Building professionals. Students are introduced to emerging issues and approaches to sustainability and the complex nature of the design problems they will encounter in professional practice. Students engage in a semester-long research and problem solving task that addresses environmental and social sustainability imperatives and fosters fundamental research, design and communication skills. Special emphasis is placed on lifelong learning, academic literacy and professional skills including information literacy, project management, and teamwork which equip students for subsequent academic and professional contexts.

### 700107.1 Engineering, Design and Construction Practice (UWSC Assoc Deg)

**Credit Points** 10 **Level** 1

**Equivalent Units**

300674 - Engineering Design and Construction Practice, 700038 - Engineering Design and Construction Practice (UWSC)

**Special Requirements**

Students must be enrolled in 7022 Associate Degree in Engineering

.....

This unit encourages students to explore the professional responsibilities and challenges faced by Engineers, Designers and Construction professionals. Students are introduced to emerging issues and approaches to sustainability and the complex nature of the design problems they will encounter in professional practice. Students engage in a semester-long research and problem solving task that addresses environmental and social sustainability imperatives and fosters fundamental research, design and communication skills. Special emphasis is placed on lifelong learning, academic literacy and professional skills including information literacy, project management, and teamwork which equip students for subsequent academic and professional contexts.

### 101441.2 English Semantics and Pragmatics

**Credit Points** 10 **Level** 3

**Assumed Knowledge**

A2912 - The Structure of English or equivalent knowledge

**Equivalent Units**

A3038 - English Semantics and Pragmatics

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This unit is part of the English Linguistics Major. It introduces students to two important fields of linguistics, semantics and pragmatics, with special reference to English. It intersperses the theoretical elements with practical applications through examples, exercises and textual analysis, which enable students to understand the significance of these fields of linguistics to the languages professions, such as interpreting and translation and language teaching. The unit also aims to refine students' academic writing skills through the preparation of a short research paper.

### **100862.2 English, Text & Writing**

**Credit Points** 10 **Level** 1

#### **Equivalent Units**

100344 - Introduction to English, Text and Writing, 63259 - Introduction to Text and Writing, B1858 - Introduction to English Studies 1, B1859 - Introduction to English Studies 2, VP103A - Introduction to Comparative Media

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This unit covers a number of issues within literary and textual studies and creative writing, focusing on the areas of modernism and postmodernism. It considers the historical and cultural contexts of literary and textual production, examines a variety of literary genres and styles, and covers a range of contemporary critical and theoretical approaches.

### **300117.3 Enterprise Database**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

General understanding of database design and development processes and techniques. Familiarity with at least one programming language.

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The emphasis of this unit is to expose students to the process and techniques of the development of enterprise databases. This unit extends students' basic knowledge of database systems through analysis of suitable strategies for record storage, primary file organisation and database indexing techniques, transaction recovery and concurrency control strategies, general security and integrity considerations, understanding of emerging technologies in distributed databases, object-oriented databases and the world wide web.

### **200614.2 Enterprise Industrial Relations**

**Credit Points** 10 **Level** 2

#### **Prerequisite**

**200300.2** Managing People at Work

#### **Equivalent Units**

61432 - Enterprise Industrial Relations

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This unit looks at workplace reform and restructuring -- the devolution approach to industrial relations management, workplace reform, organisation and behaviour, the role of

workplace committees, trade unions at the enterprise level, shop-floor and industry unionism; the enterprise bargaining process -- overall framework definitions, dimensions and scope; strengths and weaknesses; the processes -- negotiation, psychological, sociological and economic approaches, stages; impact of enterprise bargaining, workplace flexibility, efficiency, remuneration practices and employee satisfaction; grievance handling and grievance procedures; differences with other forms of negotiation, formal or informal; consultation and participation; issues involved, differences with negotiation; impact of changes in wage determination on workplace, particularly the work choices changes and current and future strategic and legislative directions in enterprise bargaining and workplace agreements.

### **200154.3 Entrepreneurial Management and Innovation**

**Credit Points** 10 **Level** 2

#### **Corequisite**

**200571.2** Management Dynamics

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This unit examines the theory, practice and nature of entrepreneurship, as a virtual but often neglected and misunderstood mode of management. A basic premise underlying this unit is that all business entities require enterprising management to enhance their survival ability. This proposition is relevant to new and older, small and large organisations. Additionally, contemporary management practice requires the modern manager to be creative in a learning context and the ways in which these creative environments are reached through entrepreneurship are explored.

### **300821.1 Environment and Health**

**Credit Points** 10 **Level** 1

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This unit introduces students to the holistic and socio-ecological nature of human health and its linkages with the socio-cultural and physical environment, focussing specifically on environmental noise as a significant risk to both physical and mental health. Students are challenged to identify and reflect on the underlying causes of traditional and contemporary environmental health issues and to explore the changing nature of environmental health, its professional practice, associated policy and the changing roles and responsibilities in government, business and industry. The unit introduces a range of health promotion and community education models for the design and evaluation of environmental health interventions.

### **300857.1 Environmental Geochemistry**

**Credit Points** 10 **Level** 3

#### **Prerequisite**

**300800.1** Essential Chemistry 1 OR **300803.1** Essential Chemistry 2

#### **Equivalent Units**

300614 - Environmental Geochemistry

**Incompatible Units**

300218 - Applied Aspects of Inorganic Chemistry; 300611 - Chemical Mineralogy

.....

The unit deals with how the lithosphere, hydrosphere, biosphere and atmosphere are interconnected through global biogeochemical processes. Topics include the composition of ocean, ground and surface waters and their interactions with the atmosphere, rocks, soils, sediments and man-made pollutants; transfer of dissolved material between environments, and detection and control of toxic waste materials; environmental quality criteria, field sampling and modelling of selected environmental systems. These topics will be brought to life in a two-day field trip to Sunny Corner undertaken in the mid-session break.

**300840.1 Environmental Planning and Climate Change**

**Credit Points 10 Level 2**

**Equivalent Units**

300629 - Environmental Planning; 300783 - Environmental Planning & Climate Change

**Incompatible Units**

300704 - Healthy Built Environments

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This unit is an introduction to environmental planning in local and state government and in particular the role of planning in protecting the natural environment, enhancing population health and/or encouraging sustainable development practices. Students focus on goal-setting for environmental protection and then explore how planning policy can assist with achieving these goals. Current metropolitan planning and strategy is examined using the Metropolitan Strategy for Sydney as the primary case study. The unit scopes environmental planning policies introduced by state, local and Commonwealth governments to adapt to climate induced impacts on the environment and on community health and well being.

**300841.1 Environmental Regulation and Policy**

**Credit Points 10 Level 2**

**Equivalent Units**

300784 - Environmental Regulations and Policy; 300630 - Environmental Regulations

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This unit aims to provide students with a broad understanding of the current environmental regulations available to environment protection and planning authorities at the State and Local Government level to protect and manage the natural and built environments. This unit will also consider environmental policy introduced by the State and Commonwealth governments to manage land use activities so as to encourage sustainable development practices. It is a suitable subject for students entering government or industry in environmental management, health and planning roles. There is a particular focus on the

use of legislation and preparation of policy to address environmental and health risks to the community.

**300858.1 Environmental Risk Management**

**Credit Points 10 Level 3**

**Equivalent Units**

300284 - Environment Risk Management; 300532 - Agriculture Risk

**Special Requirements**

Successful completion of 120 credit points to enrol in this unit.

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This unit examines the world of environmental risk management and will introduce students to environmental management systems including Environmental Impact Assessment and Environmental Auditing. The unit considers and examines the application of the precautionary principle in real world situations. Students will also be introduced to methods of quantitative risk assessment as applied to environmental and agricultural risks such as urban, peri-urban and rural growth; industrial and agricultural land use; contaminated land, and climate change.

**300284.4 Environmental Risk Management**

**Credit Points 10 Level 3**

**Equivalent Units**

EH309A - Environmental Management 1, 300532 - Agricultural Risk

.....

This unit examines the world of environmental risk management and will introduce students to environmental management systems, methods of quantitative risk assessment together with processes of Environmental Impact Assessment and Environmental Auditing. With an emphasis on solving real world problems, this unit covers environmental and agricultural risks such as urban, peri-urban and rural growth; industrial and agricultural land use; contaminated land, and climate change.

**300872.1 Epidemiology**

**Credit Points 10 Level 2**

**Equivalent Units**

300626 - Epidemiology

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Epidemiology is an analytical science concerned with the distribution and determinants of health-related states in populations, aimed at the management of health problems. Epidemiology is not limited to controlling epidemics but assesses and manages physical, mental and social well-being in living, working and recreational environments. The unit introduces identification and understanding of risk factors for health and disease, and assists the student to develop an investigation protocol for assessing a specific health state within their own field of interest. This addresses career needs for a range of health studies while introducing the epidemiological analytical approach to risk assessment and research.

## 400168.2 Ergonomics and Work Occupations

**Credit Points** 10 **Level** 3

### Equivalent Units

E2044 - Ergonomics 1, E3025 - Ergonomics 2

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In 2013 this unit will be replaced by 400926 - Ergonomics and Work Occupations. The productivity role is a key aspect of adult life for most people. Occupational therapists and other professionals play a major role in assisting clients who have had their productivity role affected in some way. This unit explores the importance of productivity for adults, in particular those engaged in paid employment. The focus of this unit is the rehabilitation of the injured worker within the context of the OHS legislation and the WorkCover case management system. In addition, this unit will explore vocational counselling and rehabilitation for clients with psychosocial, cognitive and physical disabilities.

## 400926.1 Ergonomics and Work Occupations

**Credit Points** 10 **Level** 7

### Assumed Knowledge

Human anatomy, functional anatomy.

### Special Requirements

Students must be enrolled in courses 4663 - Bachelor of Health Science/Masters of Occupational Therapy and 4664 - Master of Occupational Therapy. To undertake this unit, students must comply with the following special requirements: Prior to enrolling in this unit students must have: 1) successfully completed an approved Child Protection Workshop 2) submitted a Prohibited Employment Declaration prior to 1 June 2010 or a Working with Children Check Student Declaration after 1 June 2010 3) possess a current WorkCover Authority approved First Aid Certificate.

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The productivity role is a key aspect of adult life for most people. Occupational therapists play a major role in assisting clients who have had their productivity role affected in some way. This unit explores the importance of productivity for adults, in particular those engaged in paid employment. The focus of this unit is the rehabilitation of the injured worker within the context of the OH&S legislation and the WorkCover case management system. In addition, this unit will explore vocational counselling and rehabilitation for clients with psychosocial, cognitive and physical disabilities.

## 300800.1 Essential Chemistry 1

**Credit Points** 10 **Level** 1

### Assumed Knowledge

HSC Chemistry (2 unit) or HSC Multi-strand Science (3 or 4 unit) or equivalent. General Mathematics bands 5 and 6 or Mathematics band 4 or equivalent.

### Equivalent Units

300224 - Chemistry 1, 300554 - Principles of Chemistry

### Incompatible Units

300469 - Introductory Chemistry, 300808 - Introductory Chemistry

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This unit provides an introduction to some of the essential knowledge, concepts and skills of chemistry, to serve the needs of students majoring in chemistry and those requiring a working knowledge of chemistry. Observable chemical facts and phenomena including structure, dynamics, and energetics, are explained in terms of current mathematical and visual models and further developed in Essential Chemistry 2. Evidence for chemical understanding is provided using IR spectroscopy, mass spectrometry, and computer molecular modelling. Laboratory skills relate theory to practice through the development of practical skills required to determine the concentration of an analyte using volumetric and spectrophotometric analysis.

## 700121.2 Essential Chemistry 1 (UWSC)

**Credit Points** 10 **Level** 1

### Assumed Knowledge

HSC Chemistry (2 unit) or HSC Multi-strand Science (3 or 4 unit) or equivalent. General Mathematics bands 5 and 6 or Mathematics band 4 or equivalent. UWSCollege Foundation chemistry

### Equivalent Units

300224 - Chemistry 1, 300800 - Essential Chemistry 1, 300554 - Principles of Chemistry, 700036 - Chemistry 1 (UWSC)

### Special Requirements

Students must be enrolled at UWSCollege in either 7003 Diploma in Science or 7009 Diploma in Science Fast Track

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This unit provides an introduction to some of the essential knowledge, concepts and skills of chemistry, to serve the needs of students majoring in chemistry and those requiring a working knowledge of chemistry. Observable chemical facts and phenomena including structure, dynamics, and energetics, are explained in terms of current mathematical and visual models and further developed in Essential Chemistry 2. Evidence for chemical understanding is provided using IR spectroscopy, mass spectrometry, and computer molecular modelling. Laboratory skills relate theory to practice through the development of practical skills required to determine the concentration of an analyte using volumetric and spectrophotometric analysis.

## 300803.1 Essential Chemistry 2

**Credit Points** 10 **Level** 1

### Assumed Knowledge

An understanding and competence with basic chemical principles including SI units, chemical symbols, formulas and equations, nomenclature, stoichiometry, the mole concept, bonding, molecular shape and polarity, states and properties of matter, thermodynamics, equilibria, acids and bases, pH and electrochemistry. General Mathematics bands 5 and 6 or Mathematics band 4 or equivalent



### Equivalent Units

300225 - Chemistry 2, 300550 - Medicinal Chemistry, 14102 - Foundation Chemistry 2, CH104A - Chemistry 1.2, J1754 - Organic Chemistry 1

### Incompatible Units

CH102A - Biological Chemistry 1.2D

### Special Requirements

Students must have safety goggles, cloth laboratory coat and enclosed footwear.

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This unit introduces an investigation of the reactivity of covalent molecules, in particular, of carbon-based compounds. Focussing on introductory chemical dynamics and thermodynamics, students will develop an in-depth understanding of the structure, nomenclature and reactivity of the principal organic functional groups, extending their basic principles of chemistry. They will also understand how molecules are synthesised and the ways they react being important in the function and role of chemistry in biological systems in our domestic and industrial worlds.

## 700122.1 Essential Chemistry 2 (UWSC)

**Credit Points** 10 **Level** 1

### Assumed Knowledge

An understanding and competence with basic chemical principles including SI units, chemical symbols, formulas and equations, nomenclature, stoichiometry, the mole concept, bonding, molecular shape and polarity, states and properties of matter, thermodynamics, equilibria, acids and bases, pH and electrochemistry. General Mathematics bands 5 and 6 or Mathematics band 4 or equivalent

### Equivalent Units

300225 - Chemistry 2, 300550 - Medicinal Chemistry, 700037 - Chemistry 2 (UWSC), 300803 - Essentials of Chemistry 2

### Special Requirements

Students must be enrolled at UWSCollege in either 7003 Diploma in Science or 7009 Diploma in Science Fast Track

.....

This unit introduces an investigation of the reactivity of covalent molecules, in particular, of carbon-based compounds. Focussing on introductory chemical dynamics and thermodynamics, students will develop an in-depth understanding of the structure, nomenclature and reactivity of the principal organic functional groups, extending their basic principles of chemistry. They will also understand how molecules are synthesised and the ways they react being important in the function and role of chemistry in biological systems in our domestic and industrial worlds.

## 200468.2 Estimating 1

**Credit Points** 10 **Level** 2

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To provide an understanding of factors that affect the cost of buildings; introduce costing techniques for new and existing buildings and provide students with the skills necessary to prepare builder's estimates.

## 300726.2 Estimating 2

**Credit Points** 10 **Level** 4

### Assumed Knowledge

Building construction including residential, light industrial and small commercial as covered in the subjects Building 1 and Building 2 and building measurement as covered in Building Quantities and Estimating as covered in Estimating 1.

### Equivalent Units

BG412A - Estimating 2

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The aim of this unit is to give students a hands-on experience of the tendering process for construction professionals. Students undertake a team research project to determine the optimum parameters for a civil/building infrastructure estimation.

## 400249.2 Ethical and Legal Issues in Health Care

**Credit Points** 10 **Level** 3

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This unit enables students to explore and develop an understanding of the ethical and legal issues important within contemporary health care. Through the use of case studies students will analyse profound ethical and legal challenges facing current health care that are equally important to health professionals, patients/clients and society generally. Critical thinking about these issues will be encouraged. Students will also be encouraged to consider differing theoretical perspectives in their examination of ethical issues. Additionally, students studying to work within health care, including complementary medicine, will develop a comprehensive understanding of the requirements for ensuring that their practice conforms to legal doctrines and ethical standards.

## 100863.3 Ethical Cultures

**Credit Points** 10 **Level** 3

### Special Requirements

Successful completion of 60 credit points

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The unit provides an historical overview of the different types of ethical beliefs and practices that have been used in specific social settings from the classical world to the modern West. It looks at different types of spiritual and secular ethical behaviours, and the doctrines associated with each. It focuses upon the types of ethical argument and judgment-making specific to particular professions, occupations and social statuses over time. It concludes by surveying the different types of ethics taught to professionals today in the West, and on the differences between each, as well as the specific requirements of each. It will be of interest both to students with an interest in the history of ideas, and to students who want to learn more about ethics and moral decision-making.

### **400893.1 Ethical Issues in Sports and Athletics**

**Credit Points** 10 **Level** 3

#### **Prerequisite**

**300361.1** Introduction to Human Biology OR **400868.1** Human Anatomy and Physiology 1 AND **400880.1** Fundamentals of Exercise Science AND **400892.1** Physical Activity, Nutrition and Health

#### **Special Requirements**

Students must be enrolled in course 4659 - Bachelor of Health Science (PDHPE).

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This unit examines the growing importance of the study of ethics and sports. Such study not only includes the increasing incidence of the abuse of nutritional and pharmacological ergogenic aids, but also address local and global socio-economic and cultural issues such as the inequalities in opportunity for sport participation and excellence, professional athlete challenges to the Olympic movement, age appropriateness of youth talent identification and specialized training, etc.

### **101466.2 Ethical Traditions in Islam**

**Credit Points** 10 **Level** 3

#### **Special Requirements**

Successful completion of 60 credit points of study, inclusive of either of the following two units: 101462 - Understanding Islam and Muslim Societies (Level 1) or 101464 - Great Texts of Islam: Quran and Hadith (Level 2) or equivalent unit.

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This unit introduces students to the rich heritage of ethical traditions in Islamic thought. Students will study and critically evaluate the key features and contributions of Muslim theologians, philosophers and Sufis, who attempted to deal with revelation and rationalistic discourse in exploring the meaning of ethical life for Muslims and discussing whether philosophy and religious wisdoms were equals and allies in the pursuit of happiness. The origin and development of these traditions will be introduced with an emphasis on the relevance and application of some ethical issues, such as free will, predestination, human responsibility, and bioethics, to contemporary Muslim societies.

### **100864.2 Europe in the Twentieth Century**

**Credit Points** 10 **Level** 3

#### **Equivalent Units**

B3681 - Twentieth Century Europe

#### **Special Requirements**

Successful completion of 60 credit points.

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This unit examines the relationship between social change, ideology and politics in twentieth-century Europe. Three competing ideologies from 1900 are examined, authoritarianism, liberalism and socialism. With a special

focus on the period 1914 to 1945, the unit examines the interaction between these ideologies and the polarization of politics through the major social upheavals of the period. Case studies will be drawn from the history of Britain, Germany, Russia, Italy, France and Spain in the twentieth century.

### **100897.2 Everyday Life**

**Credit Points** 10 **Level** 1

#### **Equivalent Units**

63234 - Introduction to Cultural Studies

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This unit introduces students to key themes and issues in the study of everyday life. It draws on different disciplinary areas - especially anthropology, sociology and cultural studies - and different theoretical and methodological perspectives to examine the ways cultural practices and meanings are used to shape human identities and societies in everyday life. It will focus on rituals and routines in the different spaces of everyday life, and the ways these contribute to the production of local worlds and the key cultural categories that give meaning to these worlds. It will include a focus on how we research everyday life.

### **300935.1 Evidence and Crime Scene Management**

**Credit Points** 10 **Level** 2

#### **Equivalent Units**

300746 - Evidence and Crime Scene Management

#### **Incompatible Units**

300374 - Crime Scene Management

#### **Special Requirements**

Successful completion of 60 credit points in their enrolled course. Students enrolled in the 3589 - Bachelor of Science (Forensic Science) are not eligible to take this unit as an elective.

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The integrity of evidence and crime scene management is critical in preparing evidence for legal proceedings. The unit is particularly designed for students wishing to enter professional domains involving; policing, nursing, animal welfare, workplace investigators, health inspectors, OH&S officers, fire investigation, council and park rangers, social welfare, fraud and insurance investigation and others where the collection of evidence is a component of professional practice within the discipline. The unit covers topics such as; recognition of various evidence, the recording and documentation of evidence, crime scene or site photography, managing scenes, CCTV as evidence, maintaining evidence integrity, sexual assault evidence, the reporting and presentation of evidence in court and others.

### **101567.3 Evidence, Investigations and Police Intelligence**

**Credit Points** 10 **Level** 2

#### **Equivalent Units**

400296 - Criminal Investigations

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This unit aims to provide an overview to police investigations with a specific focus on the use of physical and behavioural types of evidence, in the context of information-based investigative practices. The lectures will consider the objectives and history of investigation and forensic science, the impact of science on criminal law, modes of criminal identification, information-gathering, as well as criminal motivation and victimology. Specific investigative challenges - such as responding to serial crimes and international criminal networks - are also considered in this unit as they defy traditional investigative methods to produce innovative responses. The unit includes both theoretical and practical perspectives relating to evidence in order to situate criminal investigations in a larger historical, social and legal context. The tutorials will adopt a workshop approach to assist students to engage with and critically evaluate contemporary criminal investigations.

**400755.2 Evidence-Based Nursing 1**

**Credit Points** 10 **Level** 2

**Equivalent Units**

400057 Nursing Context 4

**Special Requirements**

Students must be enrolled in a Bachelor of Nursing program.

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This unit explores concepts related to 400755 Evidence Based Nursing, which will further develop student understanding of the significance of scholarship, research and the research processes and how these may inform professional nursing knowledge and practice.

**400824.2 Evidence-Based Nursing 1 (Advanced)**

**Credit Points** 10 **Level** 2

**Incompatible Units**

400055 - Nursing in Context 4, 400755 - Evidence-Based Nursing 1 (EBN1)

**Special Requirements**

Students must be enrolled in 4648 - Bachelor of Nursing (Advanced)

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This unit explores concepts related to Evidence-Based Nursing which will further develop student understanding of the significance of scholarship, research and the research processes and how these may inform professional nursing knowledge and practice.

**400765.2 Evidence-Based Nursing 2**

**Credit Points** 10 **Level** 3

**Assumed Knowledge**

Knowledge and content related to 400755 - Evidence Based Nursing 1.

**Prerequisite**

**400755.1** Evidence-Based Nursing 1

**Equivalent Units**

400060 - Nursing Context 5

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This unit consolidates and assists student's synthesis of the major methodological approaches to support evidence-based practice, the process of research/inquiry and their application in the development of a defensible and justifiable nursing research project.

**400827.2 Evidence-Based Nursing 2 (Advanced)**

**Credit Points** 10 **Level** 3

**Assumed Knowledge**

Knowledge and content related to Evidence-Based Nursing 1 (Advanced) (EBN1-Adv).

**Prerequisite**

**400824.1** Evidence-Based Nursing 1 (Advanced)

**Incompatible Units**

400765 - Evidence-Based Nursing 2 (EBN2) or equivalent unit

**Special Requirements**

Students must be enrolled in course 4648 - Bachelor of Nursing (Advanced). Students must maintain a GPA of 5.5 or greater.

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This unit consolidates and assists students synthesis of the major methodological approaches to support evidence-based practice, the process of research/inquiry, and their application in the development of a defensible and justifiable nursing research project.

**400865.2 Evidence-Based Practice**

**Credit Points** 10 **Level** 3

**Assumed Knowledge**

Knowledge and skills of Foundations of Research & Evidence-based Practice and Research Methods (Qualitative and Quantitative).

**Prerequisite**

**400864.3** Research Methods (Quantitative and Qualitative)

**Equivalent Units**

400154 - Integrating Evidence into Practice

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In this unit, students incorporate previous research and biostatistics knowledge to develop new skills for using evidence to inform all aspects of their professional practice. Evidence-based practice uses an enquiry led approach to manage expanding and uncertain knowledge by formulating answerable questions, effectively searching literature, critically appraising evidence validity and results, and to assess its significance in clinical practice and healthcare decision-making.

### **400944.1 Evidence-Based Practice (Advanced)**

**Credit Points** 10 **Level** 5

#### **Assumed Knowledge**

The unit is intended for prospective honours students and will usually require a GPA of 5 (credit average) for enrolment

#### **Prerequisite**

**400864.1** Research Methods (Quantitative and Qualitative)

#### **Incompatible Units**

400865 - Evidence-Based Practice 400154 - Integrating Evidence into Practice 400180 - Occupational Therapy Honours Thesis 1

#### **Special Requirements**

Students must be enrolled in an honours course. The unit is only relevant to honours students in health science and is specifically tailored to accommodate the course and progression requirements of such students. It is not appropriate as a general elective.

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In this unit, students incorporate previous research and biostatistics knowledge to develop new skills for using evidence to inform all aspects of their professional and research practice. Evidence-based practice uses an enquiry led approach to manage expanding and uncertain knowledge by formulating answerable questions, effectively searching literature and critically appraising the validity of evidence to assess its significance in clinical practice and healthcare decision-making. Students will embark on research training through studying the theory and application of research methods to honours research in their chosen field and practising the skills to analyse evidence in the health sciences.

### **100998.4 Evolutionary Thinking**

**Credit Points** 10 **Level** 3

#### **Equivalent Units**

100865 - Evolutionary Thinking

#### **Special Requirements**

Successful completion of 60 credit points at Level 1.

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Evolutionary thinking has been one of the strongest and most pervasive influences on human thinking and behaviour in the modern era, leading in its most dangerous forms to eugenics, social engineering and theories of racial hierarchy. This unit examines various evolutionary modes of thought - focusing especially on Darwins The Origin of Species (1859) - their social and cultural impact, and challenges to their legitimacy.

### **400883.2 Exercise Bioenergetics**

**Credit Points** 10 **Level** 2

#### **Prerequisite**

**400880.2** Fundamentals of Exercise Science AND

**400885.2** Sport and Exercise Physiology

#### **Equivalent Units**

400325 - Bioenergetics of Exercise

#### **Special Requirements**

This unit is only available to students enrolled in course 4658 - Bachelor of Health Science (Sport and Exercise Science).

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This unit investigates exercise metabolism in an integrated fashion. Covering: energy pathways; metabolic control; metabolism, oxygen consumption and respiratory quotient relationships; metabolic responses to acute and chronic exercise; pathway contributions to exercise; metabolic limitations to exercise; metabolic contributions to fatigue; metabolic acidosis, cellular and systemic implications of metabolic thresholds, conditions that can alter cellular metabolism (eg. altitude, heat stress, anaemia, ischemia, ergogenic aids). Skeletal muscle metabolism is the primary focus, liver and adipose tissue metabolism are also considered as are anabolic pathways. Students will be exposed to basic biochemical assays of interest to the exercise physiologist.

### **400902.1 Exercise in Musculo-Skeletal Rehabilitation**

**Credit Points** 10 **Level** 3

#### **Prerequisite**

**400326.1** Exercise Prescription for General Populations

#### **Equivalent Units**

400327 - Exercise in Musculoskeletal Injury Rehabilitation

#### **Special Requirements**

Students must be enrolled in courses 4658 - Bachelor of Health Science (Sport and Exercise Science). To undertake this unit, students must comply with the following special requirements: Prior to enrolling in this unit students must have: 1) submitted a Criminal Record Check form prior to 1 June 2010 or a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate 2) submitted a Prohibited Employment Declaration prior to 1 June 2010 or a Working with Children Check Student Declaration after 1 June 2010 3) possess a current WorkCover Authority approved First Aid Certificate.

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This unit focuses on the role of exercise in the functional rehabilitation of musculoskeletal injuries including work and sporting injuries. It covers injury and re-injury prevention strategies; mechanisms of injury; patho-physiology of injury and repair process; design and evaluation of rehabilitation exercise programs; how the exercise program functions in concert with other methods of injury treatment and management; important pharmacological, communication, psychosocial and cultural considerations; the role of the exercise physiologist in the rehabilitation team; the effects of nervous system disorders and injury on skeletal muscle control, injury and rehabilitation are also considered.

### **400884.2 Exercise Nutrition, Body Composition and Weight Control**

**Credit Points** 10 **Level** 2

**Prerequisite**

**400880.2** Fundamentals of Exercise Science OR **400881.3** Functional Anatomy

**Special Requirements**

Students must be enrolled in course 4658 - Bachelor of Health Science (Sport and Exercise Science). To undertake this unit, students must comply with the following special requirements: Prior to enrolling in this unit students must have: 1) submitted a Criminal Record Check form prior to 1 June 2010 or a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate 2) submitted a Prohibited Employment Declaration prior to 1 June 2010 or a Working with Children Check Student Declaration after 1 June 2010 3) provide evidence of compliance with the occupational screening and immunisation policy of NSW Health 4) possess a current WorkCover Authority approved First Aid Certificate.

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This unit provides students with an understanding of the interdependent areas of nutrition, body composition and body weight control within the context of sport, physical activity, and exercise. Nutritional needs and recommendations for all levels and types of physical activity are covered along with the links between nutrition and health, body composition, control of body weight and composition. Students will develop skills in nutritional analysis, body composition assessment and the development of exercise programmes for weight control. Students will use these skills and knowledge in the individualisation of advice on exercise nutrition and body composition control.

### **400326.4 Exercise Prescription for General Populations**

**Credit Points** 10 **Level** 2

**Prerequisite**

**400882.2** Introduction to Biomechanics AND **400884.2** Exercise Nutrition, Body Composition and Weight Control AND **400885.2** Sport and Exercise Physiology

**Special Requirements**

Students must be enrolled in course 4658 - Bachelor of Health Science (Sport and Exercise Science). To undertake this unit, students must comply with the following special requirements: Prior to enrolling in this unit students must have: 1) submitted a Criminal Record Check form prior to 1 June 2010 or a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate 2) submitted a Prohibited Employment Declaration prior to 1 June 2010 or a Working with Children Check Student Declaration after 1 June 2010 3) possess a current WorkCover Authority approved First Aid Certificate.

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The exercise prescription area is designed to give students an understanding of and experience in exercise prescription and fitness program construction for the general population

of all ages and both genders, including pre exercise screening and fitness testing. It will focus on the development of general health related fitness programs which improve aerobic and anaerobic fitness, flexibility, muscular strength and endurance, including resistance training. Students will design, implement and evaluate a self-prescribed exercise program.

### **400997.1 Exercise Rehabilitation**

**Credit Points** 10 **Level** 3

**Assumed Knowledge**

Human anatomy, human physiology and pathophysiology.

**Prerequisite**

**400982.1** Core Competencies in Physiotherapy Practice OR **400987.1** Neurological Physiotherapy Practice

**Special Requirements**

Students must be enrolled in 4662 Bachelor of Health Science/Master of Physiotherapy, 4667 Master of Physiotherapy, and 4668 Bachelor of Health Science (Honours)/Master of Physiotherapy programs. Students in courses 4662 Bachelor of Health Science/Master of Physiotherapy and 4668 Bachelor of Health Science (Honours)/Master of Physiotherapy are to complete prerequisite unit 400982 - Core Competencies in Physiotherapy Practice. Students in course 4667 Master of Physiotherapy are required to complete prerequisite unit 400987 Neurological Physiotherapy Practice. Students in this program are required to participate fully in practical classes. This involves disrobing to shorts and singlet or swim-suit equivalent in mixed gender classes. Students will practice hands-on physiotherapy examination and treatment techniques on both genders, and will personally experience these techniques which will be performed on them by other students and relevant academic staff.

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Exercise Rehabilitation focuses on client management with exercise in a variety of settings across the lifespan. This will require effective communication skills, ethical and professional behaviour and an appreciation of interprofessional care. Professional competencies addressed in this unit include an understanding of the normal physiological responses to exercise, the implications of pathology and exercise and the integration of exercise based interventions with other physiotherapy modalities.

### **101874.1 Experiential Learning in Communities (ELC)**

**Credit Points** 10 **Level** 2

**Incompatible Units**

101117 - Learning through Community Service

**Special Requirements**

Some students may be required to complete a Working With Children Check Declaration and undertake Child Protection training. These students will be identified by the unit co-ordinator who will make arrangements for the relevant students to undertake the Working With Children Check Declaration and Child Protection training.

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Experiential Learning in Communities (ELC) is a 10 credit point unit in which students learn the value of service in communities, agencies and non-profit organisations, through designing and carrying out projects of substantial benefit to our communities. The unit is organised around a number of focus areas or strands. It includes 10 hours of face to face learning, a 45 hour placement in a community agency, and participation in blended learning.

### 100013.3 Experimental Design and Analysis

**Credit Points** 10 **Level** 2

#### Prerequisite

**101183.2** Psychology: Behavioural Science

#### Special Requirements

Pre-requisites will not apply to students enrolled in courses 1630 Graduate Diploma in Psychological Studies and 1501 Graduate Diploma in Psychology. Enrolment in these awards requires graduate status; hence the students have demonstrated proficiency in tertiary studies. Each applicant in these awards is assessed individually and provided with an individual study sequence by the Course Advisor.

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This unit is driven by the scientific method with a focus on experimental design and related data analysis. Although some of the methods and techniques are dealt with in passing in earlier units, a more complete approach is adopted here. Research design and methodology issues, statistical concepts and techniques, computer analysis of data, and communicating research findings are all features of this unit.

### 300879.1 Experimental Foods

**Credit Points** 10 **Level** 3

#### Prerequisite

**300805.1** Food Science 1 AND **300842.1** Food Science 2

#### Equivalent Units

300638 - Experimental Foods

#### Special Requirements

Students are required to have Personal Protection Equipment e.g. apron and closed-in shoes.

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This unit aims to build on students' knowledge of food preparation gained in Food Science 1 and 2, the focus of this unit includes; food science and principles, the interaction of ingredients and the added effects of physical procedures on the end product. Students develop advanced scientific methodologies to give reproducibility. This is a recommended unit for those intending to advance in the areas of recipe development and new product development.

### 100254.3 Exploring Local History

**Credit Points** 10 **Level** 3

#### Equivalent Units

63153 - Exploring the History of Western Sydney

#### Special Requirements

Successful completion of 60 credit points.

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Understanding local history is an integral part of establishing personal and community identities. Local studies are used as the foundation for many socio-economic studies across various disciplines as well as in school curricula. The University of Western Sydney is part of a region rich in history, little of which has been researched or published. Local history techniques involve understanding a variety of physical and documentary sources. Students learn the history of the Sydney region by assembling data from original historical sources, based at the Archives in Kingswood and Villawood and from on-line data repositories. There are opportunities for site visits to historical and archaeological sites and local museums.

### 200589.2 Export Strategy and Applications

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Principles of international business including the dynamics of foreign business markets, international marketing and research methods, comparative global economics, international corporate finance and strategy. The basics of economics, accounting, law, statistics and business communications are also assumed.

#### Prerequisite

**200591.2** Introduction to International Business

#### Equivalent Units

61126 - International Business Project 2

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Internationalisation has become a strategic necessity for many firms wishing to survive and grow in today's increasingly competitive domestic economy. Globalisation in its many forms is a powerful driver of change. 'Export Strategy & Applications' will give students the practical skills needed to manage the day to day international trading activities of any company. This unit examines how and why exporting firms select and plan their entry into foreign markets, the management of intermediaries in the distribution channel, ways of promoting goods and services overseas, and the methods of trade finance, insurance and logistics that companies use on a daily basis as they pursue success internationally. This unit provides students with those essential skills sought by any employer company operating in international markets.

### 300507.2 Extended Computing Project 1

**Credit Points** 20 **Level** 3

#### Prerequisite

**300104.3** Database Design and Development OR **300131.3** Introduction to Analysis and Design OR **300404.2** Formal Software Engineering AND **300156.1** Programming Principles 2 OR **300167.3** Systems Programming 1

#### Incompatible Units

300097 - Computing Project 1

**Special Requirements**

All students must have completed 160 credit points, including an Analysis and Design unit, a Programming unit and a Database unit. Students must have passed two units from the following: 300104 Database Design and Development or 300131 Introduction to Analysis and Design or 300404 Formal Software Engineering. Plus one unit from the following: 300156 Programming Principles 2 or 300167 Systems Programming 1.

This unit is the culmination and application of knowledge a student will have gained as part of their studies to date. The projects are undertaken within a team environment and are to provide solutions for real computing problems sourced from main ICT vendors, governmental departments and other relevant businesses. The problems will apply to a wide range of fields including but not limited to: computer science, computer forensics, e-Business, information systems, games and editors, e-Health, e-Government and e-Voting, biomedical applications, e-Learning and PDA, mobile and wireless technologies, latest technologies and service-oriented architectures (SOA). The group will follow established software engineering methodology in all stages of the design and implementation of project, including elements of project management, version control and required documentation. The focus of the unit is the delivery of a software product of a marketable quality, including complete technical documentation and user manuals.

**300508.2 Extended Computing Project 2**

**Credit Points** 20 **Level** 3

**Prerequisite**

**300507.2** Extended Computing Project 1

**Incompatible Units**

300098 - Computing Project 2

Extended Computing Project 2 builds on the experience gained in Extended Computing Project 1 (ECP1), which is its prerequisite unit. As in ECP1, the projects are undertaken within a team environment. This unit will maintain the range and scope of ECP1, but it will allow the students to further refine the projects undertaken as well as add to them the elements of research and innovation. Note: For those degrees where 300098 Computing Project 2 is a core unit, students will be able to complete the new extended unit as an alternative. Both units will be mutually exclusive, i.e. do not count for credit with one another.

**400760.2 Family Health Care: Child and Adolescent Nursing**

**Credit Points** 10 **Level** 2

**Incompatible Units**

400408 - Child and Family Health, 400643 - Child and Family Health Practice

**Special Requirements**

Students must be enrolled in the Bachelor of Nursing or the Bachelor of Early Childhood Studies (Child and Family).

This unit explores physical, social, political and community issues which impact on the health of children, adolescents and families. The knowledge gained will be appropriate for working with children and families within a hospital or community setting. The promotion of health and prevention of illness underpins this unit.

**400763.2 Family Health Care: Chronicity and Palliative Care Nursing**

**Credit Points** 10 **Level** 3

**Assumed Knowledge**

Completion of all Year 1 and Year 2 Nursing units

**Prerequisite**

**400753.1** Medical-Surgical Nursing 1 AND **400757.1** Medical-Surgical Nursing 2

**Equivalent Units**

400065 - Nursing Therapeutics 10

This unit engages students in the assessment, planning, implementation and evaluation of professional nursing care for those individuals and their families living with a chronic illness and those dying from a life threatening illness.

**400756.2 Family Health Care: Health Issues and Australian Indigenous People**

**Credit Points** 10 **Level** 2

**Special Requirements**

Students must be enrolled in the Bachelor of Nursing or the Bachelor of Nursing (Graduate Entry).

This unit provides the student with opportunities to investigate and discuss health issues as they relate to Aboriginal and Torres Strait Islander Peoples.

**400761.3 Family Health Care: High Acuity Nursing**

**Credit Points** 10 **Level** 3

**Assumed Knowledge**

Completion of all Year One and Year Two Nursing units.

**Prerequisite**

**400753.1** Medical-Surgical Nursing 1 AND **400757.1** Medical-Surgical Nursing 2 OR **400825.2** Medical Surgical Nursing 2 (Advanced)

**Equivalent Units**

400062 - Nursing Therapeutics 9

**Special Requirements**

Special Requirements are those stipulated by the NSW Health and UWS. At present these include: Prior to enrolling in this unit students must have: 1) submitted a Criminal Record Check form prior to 1 June 2010 or a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate 2) submitted a Prohibited Employment Declaration prior to 1 June 2010 or

a Working with Children Check Student Declaration after 1 June 2010 3) Adult Health Immunisation 4) Workcover accredited Senior First Aid Certificate

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This unit will elaborate and consolidate mechanisms of health breakdown and complex nursing concepts and professional nursing practices that promote, maintain and support health and wellness. The focus is on providing professional nursing care of people who are experiencing acute, profound physiological, psychosocial and spiritual health breakdown.

### **400767.3 Family Health Care: Older Adult Nursing**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

Knowledge and skill gained in Years 1 and 2 of a nursing degree.

#### **Prerequisite**

**400753.3** Medical-Surgical Nursing 1 AND **400757.3** Medical-Surgical Nursing 2 AND **400825.2** Medical Surgical Nursing 2 (Advanced)

#### **Equivalent Units**

400644 - Gerontic Practice

#### **Special Requirements**

Special Requirements are those stipulated by NSW Health and UWS. At present these include: Prior to enrolling in this unit students must have: 1) National Police Certificate or Criminal Clearance Card 2) Adult Health Immunisation with serology results 3) Working with Children Student Declaration 4) Code of Conduct 5) Form 2: TB Assessment form 6) Form 3: Student Undertaking/Declaration form 7) Workcover accredited Senior First Aid Certificate

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The health and wellbeing of older people reflect their genetic inheritance, the environment, lifestyle choices and a complex set of developmental experiences upon which individuals, groups and socio-political influences have impinged. Nevertheless, being or becoming old is only one part of a person's life experience. Thus, in order to understand being old, we need to have knowledge of such influences and experiences. By promoting the health and therefore the potential of people, nurses have the opportunity to be in the forefront of health care. This opportunity places nurses in a position to intervene therapeutically in the lives and upon the lifestyles of older people by working with individuals and groups to facilitate healthy ageing and by promoting positive attitudes towards ageing and older people.

### **400855.1 Family Health Care: Chronicity and Palliative Care Nursing (Advanced)**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

Completion of all Year 1 and Year 2 Nursing units. Completion of all Year 2 Bachelor of Nursing (Advanced) units.

#### **Prerequisite**

**400753.1** Medical-Surgical Nursing 1 AND **400825.1** Medical Surgical Nursing 2 (Advanced)

#### **Incompatible Units**

400763 - Family Health Care: Chronicity and Palliative Care Nursing

#### **Special Requirements**

Restrictions on clinical practicum placements students must be enrolled in the Bachelor of Nursing (Advanced) and meet special requirements for safety and professional issues when dealing with the public. Special Requirements are those stipulated by NSW Health and UWS. At present these include: Prohibited Employment Declaration (PED), Criminal Record Check (CRC), Adult Health Immunisation and Workcover accredited Senior First Aid Certificate.

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This unit engages students in advanced assessment, planning, implementation and evaluation of professional nursing care for those individuals and their families living with a chronic illness and those dying from a life threatening illness. The unit will enable the student to collaboratively work with medical students to apply nursing skills and critical thinking skills to the challenges of patients with chronic and life threatening illnesses. The unit will enable the student to undertake an advanced health assessment, apply critical thinking skills in nursing practice and to understand the impact of chronic and life threatening illness on the nurse, client and their family.

### **400854.2 Family Health Care: Health Issues and Australian Indigenous People (Advanced)**

**Credit Points** 10 **Level** 2

#### **Incompatible Units**

400756 - Family Health Care: Health Issues and Australian Indigenous People

#### **Special Requirements**

Restrictions on clinical practicum placements students must be enrolled in the Bachelor of Nursing (Advanced) and meet special requirements for safety and professional issues when dealing with the public. Special Requirements are those stipulated by the NSW Health and UWS. At present these include: • Prohibited Persons Employment Declaration (PPED) • Criminal Record Check (CRC) • Adult Health Immunisation • Workcover accredited Senior First Aid Certificate

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This unit provides the student with opportunities to investigate and discuss health issues as they relate to Aboriginal and Torres Strait Islander Peoples, the term Indigenous Australians is preferred by government bodies, both will be used in this unit. A compulsory 40 hour indigenous health clinical placement will be booked for you to transform the theoretical knowledge gained into clinical practice.



### 300804.1 Feeding the Planet

**Credit Points** 10 **Level** 1

#### Equivalent Units

300502 - Primary Production

#### Special Requirements

Students are required to have closed footwear, lab coat and secateurs in this unit.

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This unit overviews global population, food requirements and food security issues of feeding the world's growing population. The unit will involve the understanding, knowledge and practical hands-on experience of farming systems, primary production industries and related enterprises. The principles and techniques of agricultural, horticultural and livestock production in general will be analysed in terms of livelihood and food security. Ethical issues relating to primary production and its associated industries and the many constraints for food production and sustainable intensification of production with limited resources will be investigated. Opportunities will be provided for students to develop practical production management skills.

### 101844.2 Feminist Theories

**Credit Points** 10 **Level** 3

#### Special Requirements

Successful completion of 60 credit points

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This unit examines a variety of theoretical perspectives that inform feminist thought and practice. We will discuss diverse feminist analyses of gender relations and formations of power, intersections of gender with race, class, and culture, and possibilities for feminist solidarity in a global context.

### 300913.1 Field Project 1

**Credit Points** 10 **Level** 3

#### Prerequisite

**300662.1** Research Methods OR **300932.1** Natural Science Research Methods

#### Equivalent Units

300659 - Field Project 1

#### Special Requirements

Students enrolling externally must be externally enrolled in the 3672 - Bachelor of Natural Science (Environment and Health) course. All other students enrolling externally will need Unit Coordinator approval to do so. Students will need to complete a Risk Assessment form to approval of their supervisor before commencing field work for this unit. Animal and/or Human Ethics approvals may be needed before field data collection commences for some projects. Students requiring ACEC approval will need to submit these through their supervisor and the Unit Coordinator. Full ACEC approval applications need the signature of an appropriately qualified staff academic (agreeing to be the principal supervisor) before these can be submitted.

Students involving research on Human participants will need Human Ethics approval from their supervisor and the Unit Coordinator before commencing field data collection. This may be given in two stages: for pilot studies and subsequently for main field studies revised in light of the pilot. Other approvals (e.g. NPWS) may be needed for specific projects. A report detailing the outcomes and any changes to approved protocols will be required in the Spring Unit 300914 Field Project 2 for all studies where Ethics approvals have been granted.

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Unit 300913 (Field Project 1) and the associated Unit 300914 (Field Project 2) are designed as capstone units of study for the Bachelor of Natural Science Degree. They draw together the skills acquired in previous years of the degree course and apply them in the context of a year-long research project exploring a real world problem on behalf of a professional client. In this Unit the student will develop skills in scoping, planning and pilot testing the research project. They will then revise methods as appropriate, plan data collection and analysis.

### 300914.1 Field Project 2

**Credit Points** 10 **Level** 3

#### Prerequisite

**300913.1** Field Project 1

#### Equivalent Units

300660 - Field Project 2

#### Special Requirements

Students enrolling externally must be externally enrolled in the Bachelor of Natural Science (Environment and Health) course, all other students enrolling externally will need Unit Coordinator approval. Students who completed Field Project 1 Unit in a previous year (i.e. Are not continuing directly into this Unit) will need to demonstrate that they have the data from this earlier Unit that can be used to produce an analysis and a report for their original client. Students need to advise the Unit Coordinator of any changes to the Risk Assessment submitted for unit 300913 Field Project 1. Animal and Human Ethics reports will be required as part of this Unit where approvals were obtained for these in Unit 300913 Field Project 1. Other reports (e.g. NPWS) may be needed for specific projects

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This is the second of two Units (Field Project 1 & Field Project 2) that are designed as capstone units of study for the B Nat Sci Degree. Together they draw together the skills acquired in previous years of the degree course and apply them in the context of a year-long research project exploring a real world problem on behalf of a client in industry, government or community agency. In the first Unit the student will have developed skills in scoping, planning, and piloting methods for a research project. In this second Field Project Unit the student will collect and organise a significant body of relevant field data, analyse this and present the conclusions and recommendations in the form of a report to the client that provides the students answers to the clients initial problems. The student then undertakes a critical review of the whole process to identify lessons for both personal and professional development and future career planning.

### 100256.4 Film and Affect

**Credit Points** 10 **Level** 3

#### Equivalent Units

63062 - Film, Genre and Affect

#### Special Requirements

Successful completion of 60 credit points

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The concept of affect refers to intense feeling or emotion, and this unit examines different ways that affect has been understood in cinema. The unit explores the way that diverse cinematic genres have developed very different strategies to engage the spectator in this intense way, and discusses conventions, such as techniques of narrative, cinematography and performance. The unit examines models of affect derived from early film, the transformation of these models with the development of narrative, and the evolution of affective strategies in contemporary cinema. Examples may be drawn from early cinema, experimental cinema, political cinema, documentary or mainstream genres such as melodrama or horror. Through an analysis of the strategies used in various genres, we will raise broader questions about the nature of spectatorship in different historical and cultural contexts.

### 100866.3 Film and Drama

**Credit Points** 10 **Level** 3

#### Special Requirements

Successful completion of 60 credit points.

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This unit offers a survey of one or more of the following: drama, drama on film and film drama. It will examine key concepts in cinema theory, dramatic form and film production. Comparison may be made between theatre texts and film adaptations related to the work of specific dramatists; or drama texts may be considered in themselves (often with the screening of filmed versions of these dramas). Alternatively, film itself will be considered as a distinct dramatic form whose contours will be traced in relation to the work of important directors. Viewing films will form an integral part of this unit and students will be expected to attend screenings of films as well as a lecture and tutorial.

### 101856.1 Film and Philosophy

**Credit Points** 10 **Level** 2

#### Special Requirements

Successful completion of 40 credit points at Level 1.

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This unit considers the intimate relationship between film and philosophy through close examinations of key philosophical and theoretical writings on film (incorporating hermeneutic, phenomenological, ontological, psychoanalytic, cognitivist and aesthetic approaches). Treating cinema as a philosophical medium in its own right, the unit explores the ways in which philosophical concepts have been taken up and addressed by film, as well as

considering the ways in which cinema has in turn influenced philosophy.

### 200111.2 Financial Accounting Applications

**Credit Points** 10 **Level** 1

#### Prerequisite

**200101.3** Accounting Information for Managers OR  
**200103.1** Accounting Reports and Decisions

#### Equivalent Units

AC105A - Finance and Accounting, AC103A - Introductory Financial Accounting, H2818 - Financial and Management Accounting II, 61111 - Introductory Financial Accounting

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This unit gives students the practical skills necessary to analyse the accounting transactions of an entity and then be able to measure and record these transactions in a systematic manner for the preparation of accounting reports to external users.

### 200059.2 Financial Economics

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

200052 - Introduction to Economic Methods (or equivalent).

#### Prerequisite

**200488.3** Corporate Financial Management AND **200046.1** Microeconomics OR **200525.2** Principles of Economics

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This unit provides students with a unifying theoretical perspective on the most important concepts in the field of finance. The presentation is rigorous and students develop their ability to critically evaluate the principal theoretical results in the finance literature.

### 200048.2 Financial Institutions and Markets

**Credit Points** 10 **Level** 1

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The investment, financing and risk management decisions that all firms make are implemented by creating and trading financial instruments in financial markets, often with the involvement of a variety of institutions. Using the Australian financial system as an illustration, this unit introduces students to the theory and functions of financial intermediaries and the operation of financial systems. Students also develop an understanding of the role and functions of markets in equities, debt, foreign exchange, options and futures, and theories of interest rate determination and the term structure of interest rates.

### 300762.2 Fluid Mechanics

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

200238 - Mathematics for Engineers 2

#### Prerequisite

**200237.3** Mathematics for Engineers 1 AND **300464.2** Physics and Materials

**Equivalent Units**

300740 -Water Engineering

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The unit provides a basic understanding of fluid mechanics principles. While the main focus will remain on incompressible fluids, effects of compressible fluids will also be discussed. The theories learned in classes will be reinforced in laboratory sessions.

**700111.1 Fluid Mechanics (UWSC Assoc Deg)**

**Credit Points** 10 **Level** 2

**Assumed Knowledge**

700102 Mathematics for Engineers 2

**Prerequisite**

**700101.1** Mathematics for Engineers 1 (UWSC Assoc Deg) AND **700117.1** Physics and Materials (UWSC Assoc Deg)

**Equivalent Units**

300762 - Fluid Mechanics

**Special Requirements**

Students must be enrolled in 7022 Associate Degree in Engineering

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The unit provides a basic understanding of fluid mechanics principles. While the main focus will remain on incompressible fluids, effects of compressible fluids will also be discussed. The theories learned in classes will be reinforced in laboratory sessions.

**300915.1 Food Product Development**

**Credit Points** 10 **Level** 3

**Assumed Knowledge**

Understanding of food science principles, processing, evaluation and analysis. Experience in food formulation and ingredient manipulation coupled with a working understanding of nutritional requirements for a variety of nutritional issues and stages of the human life cycle.

**Equivalent Units**

300637 - Food Product Development Practicum

**Special Requirements**

Successful completion of 60 credit points at Level 1 and 20 credit points at Level 2 in order to enrol in this unit.

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Students enrolled in this unit to work in a product development team as in industry. The entire process of product development includes: idea generation; collating market, technical and consumer information; consumer surveying to establish the need/desire for a new product; development processing, testing and evaluation, packaging; promotion and marketing. Students will develop a specialised knowledge of the total product development system and the ability to design, conduct and analyse consumer surveys; develop product formulations and recipes with evaluation of sensory properties, nutritional composition and other functional attributes and design,

organise and analyse sensory/acceptance/ performance during the development of the product.

**300859.1 Food Safety**

**Credit Points** 10 **Level** 3

**Prerequisite**

**300844.1** General Microbiology OR **300833.1** Microbiology 1

**Equivalent Units**

300639 - Food Safety

**Special Requirements**

Students must have completed 120 credit points

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Food safety is rapidly evolving with the emergence of new foodborne diseases, changing disease patterns, evolving approaches to risk analysis and an emerging requirement that food producers, processors, handlers and consumers take shared responsibility for food safety. This unit aims to equip students with the necessary skills to identify, evaluate and control foodborne hazards in order to protect the safety and quality of the food supply and reduce associated risks to human health. Content includes the key elements of food safety and regulation, food contamination, food spoilage agents, foodborne hazards, principles of good hygienic practice and preservation in food production, preparation and distribution.

**300805.1 Food Science 1**

**Credit Points** 10 **Level** 1

**Equivalent Units**

300498 - Food Science 1, FS108A - Food Science & Technology Practicum 1.1

**Special Requirements**

Students are required to have enclosed footwear and lab coats to undertake this unit.

.....  
Food provides the sustenance of life with many roles, nutrition for good health, enjoyment and cultural identity. This unit introduces the basic principles for the understanding of food. Students will gain an awareness of the history and cultural significance of food and its traditions in Australia and around the world and the science behind food, its composition, physical and functional characteristics. Fruits and vegetables, cereal, meat and dairy products will be covered, how they are processed and impacts on food quality and nutrition. Current issues will be discussed, such as world food supply, food-borne disease, diet and health, obesity and new trends in food.

**300842.1 Food Science 2**

**Credit Points** 10 **Level** 2

**Assumed Knowledge**

Knowledge of first year chemistry and biology; understanding of food composition.

### Equivalent Units

FS109A - Food Science & Technology Practicum 1.2;  
300499 - Food Science 2

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This unit introduces students to the principles of food preservation including heat treatments, chilling, freezing, dehydration and fermentation. Factors affecting food quality are explored with respect to microbial, chemical and physical changes in food and their effects on food safety, nutritional value and sensory characteristics. The basic principles of good manufacturing practises, sanitation and Hazard Analysis Critical Control Point (HACCP) for control of food safety will be studied in relation to the design of safe food manufacturing processes. The processing of fruit, vegetables and meat products is covered through hands-on practicals in the food pilot plant.

### 300843.1 Forensic and Environmental Analysis

**Credit Points** 10 **Level** 2

#### Prerequisite

**300800.1** Essential Chemistry 1 AND **300803.1** Essential Chemistry 2

#### Equivalent Units

300493 - Forensic and Environmental Analysis

#### Incompatible Units

300297 - Analytical Chemistry 2; 300832 - Analytical Chemistry

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This unit extends the student's knowledge and experience of analytical techniques by applying them to forensic investigations and analysis in the environmental and food sciences. It will provide an understanding of the chemical and physical principles underlying the use of instrumentation in chemical analysis. Topics include principles of spectroscopic techniques, separation methods; sample collection and storage; presumptive testing; modern chemical instrumentation for gas and liquid chromatography; atomic spectroscopy; mass spectroscopy; x-ray methods and spectroscopic methods.

### 300882.1 Forensic Archaeology

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Knowledge of general aspects of recording and crime scene documentation

#### Equivalent Units

300378 - Forensic Archaeology

#### Special Requirements

Successful completion of 60 credit points at level 1 and 40 credit points at level 2. Students must have safety glasses and laboratory coat, laboratory book in this unit.

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This unit will provide an understanding of the forms of evidence that can be extracted from archaeological material remains and the procedures necessary to ensure

that the evidence is not lost or contaminated during the processes of investigation. Students will investigate the changes that occur in archaeological and the physico-chemical markers that are used to fingerprint excavated materials used in forensic examination. Important topics include the chemical enhancement and methods of trace biological with an emphasises the importance of false positives and the chemical tests for such reactions. Taphonomy and the diagenetic changes occurring in buried environments are covered using physical investigative techniques and computational methods.

### 300881.1 Forensic Biology

**Credit Points** 10 **Level** 3

#### Equivalent Units

300377 - Forensic Analysis of Physical Evidence

#### Special Requirements

Students must have safety glasses, laboratory coat and laboratory book.

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Forensic biology is a multi disciplinary science involving analysis of a variety of forensic samples such as; sexual assault, fingerprint, entomological and blood and serology evidence. Hair and fibre comparison, botanical identification, and DNA profiling. Students will investigate the scientific principles associated with determining the sources of biological evidence using a variety of microscopic and chemical techniques taking into account the changes that can occur in crime scene environment. This unit will expand on the detection methods of trace biological evidence already covered on other units and cover future directions in biometric identification from biological evidence. The use of the techniques in quarantine, customs and wildlife management will also be discussed.

### 300868.1 Forensic Chemistry

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Knowledge of general and analytical chemistry equivalent to satisfactory completion of Chemistry 1, Chemistry 2, Essentials of Chemistry 1, Essentials of Chemistry 2 and a second year analytical chemistry unit.

#### Prerequisite

**300297.2** Analytical Chemistry 2 OR **300843.1** Forensic and Environmental Analysis

#### Equivalent Units

300494 - Forensic Chemistry

#### Special Requirements

Students must have safety glasses and laboratory coat in this unit.

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This unit covers the underlying chemical and physical principles of advanced chemical topics relevant to forensic investigations. The investigation of these topics is informed by the correct principles and procedures for collecting and conserving evidence and the safe handling of chemical substances. Topics include the use of a range of modern

chemical instrumentation to analyse forensic samples; the chemistry and analysis of various classes of drugs; the investigation of clandestine drug laboratories; chemical aspects of fire, arson and accelerants; and the nature of explosions and explosives.

### 300806.1 Forensic Science

**Credit Points** 10 **Level** 1

#### Assumed Knowledge

Basic academic skills, including the ability to write essays in English at a level appropriate to a first-year undergraduate student.

#### Equivalent Units

300654 - Forensic Science, SC103A - Forensic Science

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This unit aims to give students a basic understanding of scientific methodology as it applies to the collection, analysis and interpretation of forensic evidence. Students are introduced to a range of analytical methods that are used with various types of forensic evidence, and these are discussed in relation to case studies. The role of human factors is discussed, together with the importance of critically evaluating forensic evidence and the means by which it was obtained.

### 300121.2 Formal Languages and Automata

**Credit Points** 10 **Level** 3

#### Prerequisite

[200025.2](#) Discrete Mathematics

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Three abstract models of computation are studied in this unit. The first is the finite automaton, together with regular languages and regular expressions. The second is the pushdown automaton, together with the associated languages and grammars. The third is the Turing machine. This allows study of the power of computers in general and their limitations, in particular situations: it is shown that there are problems for which there is no algorithmic solution. This unit explores the application of formal languages in the design of compilers and text processors.

### 300404.2 Formal Software Engineering

**Credit Points** 10 **Level** 3

#### Prerequisite

[200025.2](#) Discrete Mathematics AND [300103.2](#) Data Structures and Algorithms

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This unit is concerned with the design, development and post-delivery maintenance of software systems. The unit pays special attention to requirements engineering, formal specification techniques and design methodologies. The B-method is used to produce consistent, re-usable specifications and develop code that is both efficient and correct.

### 300485.3 Foundation Engineering

**Credit Points** 10 **Level** 3

#### Prerequisite

[300732.2](#) Structural Analysis AND [300731.2](#) Soil Engineering OR [85012.2](#) Soil Engineering

#### Equivalent Units

85017 - Foundation and Drainage

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This unit will present the application of principles of soil mechanics to the solution of foundation and geotechnical problems including the evaluation of allowable bearing capacity of shallow and pile foundations, the stability of earth retaining structures, the stability of slopes and soft soil engineering.

### 400861.1 Foundations of Medicine 1

**Credit Points** 80 **Level** 1

#### Assumed Knowledge

Year 12 Chemistry.

#### Special Requirements

Prior to enrolling in this unit students must have: 1) submitted a Criminal Record Check form prior to 1 June 2010 or a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate; 2) submitted a Prohibited Employment Declaration prior to 1 June 2010 or a Working with Children Check Student Declaration after 1 June 2010; 3) signed a declaration that they understand and comply with: - Infectious Diseases Policy - Health Records and Information Privacy Act (HRIPA), 2002 - UWS' submitting their details to the NSW Medical Board; 4) successfully completed a WorkCover accredited Senior First Aid Certificate and have an up to date Adult Vaccination Record.

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Students must be enrolled in 4641 Bachelor of Medicine, Bachelor of Surgery. The major objectives are to gain an integrated understanding of the structure and function of the human body. This will be addressed at the levels of organ systems, tissues, cells and molecules. The scientific basis of the following topics will be discussed: whole body organisation including basic anatomy, roles of the major organ systems, functional organisation of cells and their specific organelles, characteristics of specialised cells, structure-function characteristics of major biological molecules including carbohydrates, lipids, proteins, enzymes and DNA, the biochemical basis of complex processes such as homeostasis, reproduction and inheritance, growth and development, defence against infectious agents, pathological changes, ageing and death. The course then examines nutrition and metabolism before exploring the structure, function and pathology of the gastrointestinal system (including liver), cardiovascular system and respiratory system. The students will also explore the complexity of medical practice and areas from doctor/patient interaction to an examination of the health care system. A particular focus will be the communities that make up Greater Western Sydney. Topics covered include: communication skills, patient history and examination, ethics, psychosocial aspects of medicine, impacts of

gender, culture and deprivation on health and medical care, professionalism, population health and evidence based medicine.

### **400862.1 Foundations of Medicine 2**

**Credit Points** 80 **Level** 2

#### **Prerequisite**

**400861.1** Foundations of Medicine 1

#### **Equivalent Units**

400739 - Scientific Basis of Medicine 2, 400740 - Health Practice 2

#### **Special Requirements**

Prior to enrolling in this unit students must have: 1) submitted a Criminal Record Check form prior to 1 June 2010 or a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate; 2) submitted a Prohibited Employment Declaration prior to 1 June 2010 or a Working with Children Check Student Declaration after 1 June 2010; 3) signed a declaration that they understand and comply with: - Infectious Diseases Policy - Health Records and Information Privacy Act (HRIPA), 2002 - UWS' submitting their details to the NSW Medical Board; 4) successfully completed a WorkCover accredited Senior First Aid Certificate and have an up to date Adult Vaccination Record.

.....

Students must be enrolled in 4641 Bachelor of Medicine, Bachelor of Surgery. The major objectives are to gain an integrated understanding of the structure and function of the human body. This will be addressed at the levels of organ systems, tissues, cells and molecules. The scientific basis of the following topics will be discussed: renal system, musculoskeletal system, neuroscience, reproduction and development, endocrinology, infectious disease and cancer. The students will continue their exploration of the complexity of medical practice and areas from doctor/patient interaction to an examination of the health care system. A particular focus will be the communities that make up Greater Western Sydney. Topics covered include: communication skills, patient history and examination, ethics, psychosocial aspects of medicine, impacts of gender, culture and deprivation on health and medical care, professionalism, population health and evidence based medicine.

### **100868.2 Foundations of Modern Australia**

**Credit Points** 10 **Level** 1

#### **Equivalent Units**

100246 - Australian Colonial History

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This unit introduces students to the history of the 18th and 19th century foundations of modern Australia, and to the social, economic, political and cultural events that shaped Australian social and political institutions. Students will be encouraged to consider the process of historical change within an historiographical framework and will use primary sources to explore some of these debates.

### **100869.2 Foundations of Modern Europe 1500-1800**

**Credit Points** 10 **Level** 2

#### **Equivalent Units**

63311 - Emergence of Modern Societies 1650-1850.

#### **Special Requirements**

Successful completion of 60 credit points at Level 1.

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This unit surveys the history of European society, politics and culture in the period between the Reformations and the transformation of revolutions of the late eighteenth century. It focuses upon the religious conflicts of the early modern period and their resolution, both at the level of individuals and states. It studies popular experiences of and responses to social, religious and political change over the period. And it surveys the political, scientific and cultural transformations of this tumultuous time.

### **400863.2 Foundations of Research and Evidence-Based Practice**

**Credit Points** 10 **Level** 1

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This unit will consider the reasons and roles of evidence-based practice and research, and introduce students to their language and core concepts. Skills will be developed for asking clinical or professional healthcare questions and to translate these into search strategies for finding evidence. To make sense of that evidence, students will be introduced to quantitative and qualitative research methods, types of data, how data is described and how biostatistics is used to provide meaning to research data.

### **700064.1 Foundations of Research and Evidence-Based Practice (UWSC)**

**Credit Points** 10 **Level** 1

#### **Equivalent Units**

400863 - Foundations of Research and Evidence-Based Practice

#### **Special Requirements**

Students must be enrolled at UWSCollege

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This unit will consider the reasons and roles of evidence-based practice and research, and introduce students to their language and core concepts. Skills will be developed for asking clinical or professional healthcare questions and to translate these into search strategies for finding evidence. To make sense of that evidence, students will be introduced to quantitative and qualitative research methods, types of data, how data is described and how biostatistics is used to provide meaning to research data.

### 300606.2 Foundations of Statistical Modelling and Decision Making

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

200192 - Statistics for Science, or 200032 - Statistics for Business or 200263 - Biometry

#### Equivalent Units

J2781 - Statistical Theory, 200034 - Statistical Theory

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This Level 2 unit completes an introduction to the basic principles and concepts of statistics. There are two strands to the subject: distribution theory and statistical inference. The aim of the unit is to present a solid foundation in statistical theory and to provide an understanding of the relevance and importance of the theory in solving practical problems in the real world. The theoretical basis of the dual arms of classical statistical inference (estimation and hypothesis testing) is discussed relating the probabilistic half of the course to the final objective - inference.

### 400962.2 Foundations of Wellbeing

**Credit Points** 10 **Level** 1

#### Equivalent Units

100663 - Foundations of Wellbeing

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Whereas health is commonly understood in terms of objective signs and symptoms (or their absence), wellbeing emphasizes subjective experience in the context of social and environmental factors that may support or impede a personal sense of wellbeing. This unit approaches wellbeing through a self-investigatory and reflective model that seeks to integrate systemic analysis of the individual, social, emotional, environmental and spiritual aspects of health and wellbeing in a personally meaningful way. Consideration of how issues of social justice and equity have differential impacts on both individuals and communities, and develop frameworks for taking personal and social action to enhance wellbeing.

### 101754.2 From Corroborees to Curtain Raisers (Day Mode)

**Credit Points** 10 **Level** 2

#### Prerequisite

**101751.2** Contextualising Indigenous Australia (Day Mode)

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This unit will provide students with an understanding of the historical framing and cultural re-framing of Indigenous Australians in the live arts. Students will be provided with a theoretical understanding of the politics of representation through examining and reflecting on the transitional shifts that Indigenous artists' have made from: cultural performance to theatre productions; 'traditional' storytelling to telling of stories through poetry and writing; ceremonial sounds to music and spoken word performance; documentary film to screen based drama to exploring new technologies and moving image performance. Students will

be introduced to a variety of Indigenous artists and their creative works.

### 101755.1 From Ochre to Acrylics to New Technologies

**Credit Points** 10 **Level** 2

#### Prerequisite

**101751.2** Contextualising Indigenous Australia (Day Mode)

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This unit is available to all Undergraduate students who have open electives. This unit examines the emergence of the Indigenous Australian visual arts movement. It will provide students with a body of knowledge which explores the transition of art-making as it emerged from an historical cultural practice: from ochre to acrylics to new technologies. In examining the Indigenous visual arts movement beginning with the Papunya Tula artists, students will gain an insight into the significant contribution urban and regional Indigenous artists make to the Australian economy and culture. Students will have the exciting opportunity to participate in site visits and engage with a number of Indigenous visual artists.

### 400734.1 Functional Analysis

**Credit Points** 10 **Level** 2

#### Special Requirements

This is a specialist professional unit for occupational therapy practice so is not suited to students from other programs. Students must be enrolled in 4520 - Bachelor of Applied Science (Occupational Therapy) and 4521 - Bachelor of Applied Science (Honours) Occupational Therapy.

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In 2011 this unit is being replaced by 400908 - People, Environment and Occupations. The ability to analyse human movement and occupations is essential for occupational therapy practice. In this unit, students will be introduced to the principles of biomechanics and kinesiology necessary for the understanding and analysis of human movement, functional activities and occupations. Students will demonstrate the ability to set goals, describe appropriate interventions and outcome measures to use with clients.

### 400881.3 Functional Anatomy

**Credit Points** 10 **Level** 1

#### Prerequisite

**400868.2** Human Anatomy and Physiology 1

#### Equivalent Units

400134 - Human Medical Sciences 3

#### Incompatible Units

300319 - Introduction to Human Anatomy and Histology, 300320 - Introduction to Human Physiology, 400256 - Human Medical Sciences 2, 300755 - The Appendicular Skeleton

### Special Requirements

Students must be enrolled in Sport and Exercise Science, Physiotherapy, Occupational Therapy or Podiatry course due to limited Wet Anatomy laboratory space.

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This unit covers in depth the functional anatomy of the musculoskeletal system. Special attention is given to the relationship between form and function, the terminology used to describe human movement and thorough knowledge of the bony landmarks, joints, muscle attachments, innervation, blood supply along with detailed actions of specific muscles and muscle groups. Emphasis is on a practical functional context with the relevance to clinical applications such as surface and imaging anatomy, and the anatomical basis of common injuries. Learning experience intends to stimulate proactive deep approach in learning anatomy motivated by the outcomes driven from specialist work within the Health professions.

### 300936.1 Functional Proteins and Genes

**Credit Points** 10 **Level** 2

#### Prerequisite

**300816.1** Cell Biology AND **300803.1** Essential Chemistry 2

#### Equivalent Units

300219 - Biochemistry 1, 300555 - Proteins and Genes

#### Special Requirements

Student must have closed in shoes, lab coat, safety glasses and laboratory note book.

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Biochemistry is the study of the chemistry of life. By understanding the structure and roles of biological macromolecules found in cells students will develop the concept of self assembly of these molecules to form life. Topics include the structure of carbohydrates, lipids, proteins, and nucleic acids and how they function in the lipid and aqueous environments of the cell. Basic metabolism is introduced with an overview of the major pathways in cells, mechanisms of regulation, and an introduction into important cofactors and intermediary molecules. These concepts will be reinforced through practical classes that teach critical skills in experimental design, analysis and interpretation.

### 700112.1 Fundamentals for Engineering Studies (UWSC Assoc Deg)

**Credit Points** 10 **Level** 1

#### Special Requirements

Students must be enrolled in 7022 Associate Degree in Engineering

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This unit serves as an introduction to the key Mathematics and Physics concepts required to study Engineering at a tertiary level.

### 400880.2 Fundamentals of Exercise Science

**Credit Points** 10 **Level** 1

#### Equivalent Units

400802 - Professional Practice of Sport Exercise Science

#### Special Requirements

Students must be enrolled in course 4658 - Bachelor of Health Science (Sport and Exercise Science) or 4659 - Bachelor of Health Science (Personal Development, Health and Physical Education).

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This unit is designed to provide fundamental basic science and sport and exercise science content, with the intent to prepare the students for the more advanced scientific applications to the study and research of the sport and exercise sciences. Students will be exposed to computer software applications to aid data processing used in the sport and exercise sciences, with special applications to fields such as biomechanics, exercise physiology, motor learning, skill acquisition and sport psychology. In addition, students will be exposed at the introductory level to principles of cycle ergometry, treadmill exercise, and resistance training.

### 700073.1 Fundamentals of Exercise Science (UWSC)

**Credit Points** 10 **Level** 1

#### Equivalent Units

400880 - Fundamentals of Exercise Science

#### Special Requirements

Students must be enrolled in the UWS College Diploma of Health Science (PDHPE stream) unless specific permission has been granted by the School of Biomedical and Health Sciences.

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This unit is designed to provide fundamental basic science and sport and exercise science content, with the intent to prepare the students for the more advanced scientific applications to the study and research of the sport and exercise sciences. Students will be exposed to computer software applications to aid data processing used in the sport and exercise sciences, with special applications to fields such as biomechanics, exercise physiology, motor learning, skill acquisition and sport psychology. In addition, students will be exposed at the introductory level to principles of cycle ergometry, treadmill exercise, and resistance training.

### 200191.4 Fundamentals of Mathematics

**Credit Points** 10 **Level** 1

#### Incompatible Units

200195 - Mathematical Methods A; 200196 - Mathematical Methods B; 14505 Engineering Mathematics 1; 200031 - Mathematics for Business; 200237 - Mathematics for Engineers 1; 200189 - Concepts of Mathematics; 300672 - Mathematics 1A; Mathematics 1B



**Special Requirements**

Permission required for students enrolled in course code 3562 Bachelor of Science (Advanced).

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This unit is designed to assist in the transition from secondary school mathematics to university first year level mathematics, and gradually bring students to the required standard. It provides a sound foundation in basic mathematical tools in the areas of algebra, trigonometry, probability and calculus, which are particularly relevant to first year mathematics and statistics core subjects. The algebra section revises basic arithmetic manipulation before introducing functions, polynomial, logarithmic and exponential functions, solving equations, matrix manipulation and applications. The probability section covers basic concepts of probability, including permutations, combinations and probability calculations. The trigonometry section introduces the concept of angles, trigonometric functions and their fundamental identities. The calculus section includes limits, differentiation, maximum and minimum values, graphing and integration. These mathematical methods and simple concepts are illustrated using practical examples derived from many different subject areas. Students entering without assumed knowledge of HSC Mathematics are advised to take this unit as an elective.

**300463.2 Fundamentals of Mechanics**

**Credit Points** 10 **Level** 1

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This unit deals with the action and interaction of forces, moments and couples in two and three dimensions. It examines the equilibrium of single bodies, and of trusses and mechanisms. It then looks at the friction between bodies. It covers the dynamics of a non-rotating body, and a body rotating about a fixed axis. Finally, internal loadings are investigated, particularly within a transversely loaded beam. The unit makes extensive use of vector algebra.

**700113.1 Fundamentals of Mechanics (UWSC Assoc Deg)**

**Credit Points** 10 **Level** 1

**Equivalent Units**

700023 - Fundamentals of Mechanics (UWSC), 300463 - Fundamentals of Mechanics

**Special Requirements**

Students must be enrolled in 7022 Associate Degree in Engineering

.....

This unit deals with the action and interaction of forces, moments and couples in two and three dimensions. It examines the equilibrium of single bodies, and of trusses and mechanisms. It then looks at the friction between bodies. It covers the dynamics of a non-rotating body, and a body rotating about a fixed axis. Finally, internal loadings are investigated – particularly within a transversely loaded beam. The unit makes extensive use of vector algebra.

**700023.1 Fundamentals of Mechanics (UWSC)**

**Credit Points** 10 **Level** 1

**Equivalent Units**

300463 - Fundamentals of Mechanics.

**Special Requirements**

Students must be enrolled at UWS College.

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This unit deals with the action and interaction of forces, moments and couples in two and three dimensions, on machine elements and simple structures. It examines the equilibrium of single bodies, of multi-body structures and of mechanisms. It then covers the dynamics of a particle. A systematic approach to solving practical engineering design problems is provided. The unit makes extensive use of vector algebra.

**300491.2 Games Technology**

**Credit Points** 10 **Level** 2

**Assumed Knowledge**

A basic understanding of the principles of programming equivalent to Programming Principles 1.

**Incompatible Units**

300162 - Client Server Applications

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This unit provides an introduction to the game industry as well as introducing students to the techniques of game design and construction. Students will be exposed to the history of game development and the key aspects of different genres of computer games.

**300492.2 Games Theory and Design**

**Credit Points** 10 **Level** 3

**Assumed Knowledge**

Understanding of programming concepts and details of programming in C++, knowledge of systems analysis methods including object orientated analysis and design.

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This unit is replaced by 300862 - Video Game Development from Spring 2012. This unit provides students with an in-depth understanding of the development and structure of games engines. It provides students with a unifying overview of the many modules that are incorporated in a games engines well as a detailed examination of game-play and engine programming.

**300844.1 General Microbiology**

**Credit Points** 10 **Level** 2

**Assumed Knowledge**

Knowledge of introductory biology, especially an understanding of the diversity of living organisms and basic concepts of cell structure and function is essential for students undertaking this unit.

**Prerequisite**

**300816.1** Cell Biology OR **300802.1** Biodiversity

**Equivalent Units**

300331 - General Microbiology

**Incompatible Units**

MI104A - Microbiology 1.1; 300300 - Microbiology 1;  
300833 - Microbiology 1

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Microorganisms play a crucial role in soil and water ecosystems, in health and disease of plants and animals, including humans, as well as in industries such as the food and brewing industries. The unit builds on students existing knowledge of cell biology and biodiversity, and explores the characteristics of micro-organisms, the conditions required for their growth and survival, methods of control and their significance in the environment, health and industry. The theory and practice of microbiology are integrated in the laboratory component in which students learn techniques of handling, observing, growing and counting microorganisms.

**300820.1 Genes, Genomics and Human Health**

**Credit Points** 10 **Level** 3

**Prerequisite**

**300845.1** Genetics OR **300817.1** Molecular Biology OR **300936.1** Functional Proteins and Genes OR **300848.1** Metabolism

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Genomics is the application of our knowledge of the structure and expression of genomes to understanding gene function and the genetic basis of human disease. The Unit will begin with an introduction to the human genome and its relationship to the genomes of other organisms. It will also teach how genome-wide analysis of genetic variation in individuals and populations is improving our understanding of diseases such as asthma, heart disease, obesity, dementia and cancer. Practical application of genomics in the areas of pharmacogenomics, gene therapy/ genetic medicine, genetic discrimination and ethics will also be covered.

**300845.1 Genetics**

**Credit Points** 10 **Level** 2

**Prerequisite**

**300816.1** Cell Biology OR **300802.1** Biodiversity OR **300813.1** Wildlife Studies

**Equivalent Units**

BI201A - Genetics 2.2; 300547 - Human Genetics; 300623 - Genetics

.....

Genetics has a lot to do with sex and how genes are passed from one generation to the next. This unit introduces the student to the important conceptual issues in genetics from Mendel to DNA, from chromosomes to population genetics and from peas and fruit flies to genomics. While there is an emphasis on Mendelian and

population genetics the unit also covers important concepts in molecular genetics demonstrating the link between genotype and phenotype. As the semester proceeds students are encouraged to make links between concepts and problem solving through a series of exercises that enhance an analytical view of genetics.

**300846.1 Geochemical Systems**

**Credit Points** 10 **Level** 2

**Prerequisite**

**300800.1** Essential Chemistry 1

**Equivalent Units**

300612 - Geochemical Systems

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This unit covers the structures of minerals and determination of their structure and composition, interpretation of structural data in the literature, aspects of solid solutions, and the forces that stabilise mineral lattices. The unit explores the limits of chemical conditions in the natural environment (redox conditions, pH, speciation); mobilisation and transport of selected elements in primary and secondary environments; aqueous and supercritical fluids; complexing and ion-pairing phenomena. Exploration, extraction and ore processing will be illustrated with hands-on examples using advanced analytical instrumentation. A three day field trip to western NSW will be undertaken during the mid-session break.

**101674.2 Global Histories of Food**

**Credit Points** 10 **Level** 3

**Incompatible Units**

100886 - Special Topics in Cultural and Social Analysis

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Are you what you eat? This unit explores the relationship between food, globalisation and human experience in an historical and cross-cultural context. Food is central to the formation of cultural identity, the emergence of social taboo and the expression of religious belief. While food has become associated with national identity, foodstuffs have also become symbols of cross-cultural interaction through the imperial experience or the effect of migration. The relationship between food, culture and identity is an important one, but the current world food price crises; the persistence of famine in the developing world; and the emergence of 'fast food' as a marker of globalisation remind us of the critical relationship between nutrition and political economies.

**300917.1 Global Nutrition, Food and Community**

**Credit Points** 10 **Level** 3

**Assumed Knowledge**

Basic Human nutrition

**Equivalent Units**

300651 - Nutrition and Community Health, 300786 - Global Nutrition Food and Community

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This unit aims to develop an understanding of the inter relationship between nutrition and health in Australian and Global contexts. The aim is to provide the student with a sound foundation in nutritional anthropology, public health nutrition and health promotion in order that they can systematically analyse nutritional problems associated with world food issues; including those affecting minority and culturally and linguistically diverse groups within Australia; diseases of affluence and current health and nutrition issues in the community. An important objective of the unit is that students learn the principles of health promotion and how to apply effective nutrition promotion strategies in community and population settings in order to reduce the burdens of various nutritional and lifestyle related disorders and diseases like: obesity, some cancers, diabetes and cardiovascular disease and malnourishment.

**200588.2 Global Operations and Logistics Management**

**Credit Points 10 Level 3**

**Assumed Knowledge**

Students must have an introductory level of knowledge in operations and supply chain management.

Global Operations and Logistics Management is an expansive unit designed for students interested in the organisational processes undertaken in providing products and services to customers. A range of tactical and strategic considerations are investigated to help students understand the role of global operations and logistics within an organisational context. The unit covers internal activities of manufacturing and service organisations. A range of quantitative tools and techniques that support managerial decision making involving trade-offs, priorities and choices are introduced. While the latest trends in logistics and operations management are also reviewed.

**101735.2 Global Politics**

**Credit Points 10 Level 3**

**Special Requirements**

Successful completion of 60 credit points.

The experiences of globalization are explored from a variety of levels across time and space, from the individual to the local, the national to the international. The focus in this course will be on issues of politics, both domestic and international, but we will keep in mind that globalization is a phenomenon that is explored and assessed by a wide range of disciplines, including history, sociology, politics, law, economics, anthropology, gender studies, human geography, economics, regional and area studies, science and technology, health and epidemiology.

**200541.2 Globalisation and Trade**

**Credit Points 10 Level 2**

**Assumed Knowledge**

200525 - Principles of Economics

**Equivalent Units**

200071 - International Trade Theory and Policy

This unit introduces students to the history and analytical methods of international trade theories and their applications. The theories are applied to contemporary issues in their institutional settings, in particular to: growth and development; economic integration and trading blocs; and the transformation of formerly planned economies as participants in global market structures.

**101736.2 Governing the Globe**

**Credit Points 10 Level 3**

**Special Requirements**

Successful completion of 60 credit points

Global governance is an increasingly important regulatory tool in an age of hyper-globalisation. Issues for study include: the roles of non-state actors and influences in global politics, from the United Nations to the broader global economy, from NGOs to terrorist regimes. Globalization implies a loss of control, particularly state control, or loss of sovereignty over issues such as security, environment, migration, finance/money/ investment, intellectual property, trade, manufactures, health, and infectious disease control. As such, it reveals new spheres of common interests that transcend states' interests. This development opens the way for a more prominent role in the system for international law, formal regimes, and multilateral intergovernmental organisations. This system of formal and informal institutions and rules has come to be known as a system of global governance.

**300729.2 Graphic Communication and Design**

**Credit Points 10 Level 1**

**Equivalent Units**

BG105A - Graphic Design and Communication

This unit is designed to provide students with the knowledge and skills necessary to develop graphic communication, basic CAD skills and elementary design skills suitable for application within the building industry. Content: This unit provides students with an introduction to elements of graphic communication skills necessary to comprehend various building types in plan, section, elevation, isometric and perspective views. The unit also introduces students to basic CAD (Computer Aided Design and Drafting) concepts and skills. Students will also be required to develop appropriate analytical and problem solving skills in dealing with a realistic building project.

**101464.3 Great Texts of Islam: Qur'an and Hadith**

**Credit Points 10 Level 2**

**Special Requirements**

Successful completion of 40 credit points at level 1.

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An introduction, in English translation, to the two most important texts of Islam, the Qur'an and Prophetic Tradition (Hadith), which Muslims regard as the primary sources of Islam. Students will study: the origins of the Qur'an and Hadith; their overall structure and content; major themes; approaches to their interpretation; and their functions in Muslim religious, social and political life. The themes and topics covered should assist students in understanding contemporary debates on the relevance of Islam today. Students will also explore the relationship between text and traditions in various Muslim societies in the present day.

### **400896.1 Gymnastics and Dance**

**Credit Points** 10 **Level** 3

#### **Incompatible Units**

100671 - Human Movement 5, 100672 - Introduction to Dance

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Students will actively engage in a variety of dance styles and gymnastics movement experiences to develop their own composition and skill competencies and examine the elements of movement and composition that underpin these forms of physical activity. Development of student ability to plan and implement quality-learning experiences that will enhance enjoyment of these forms of physical activities will be an integral component of this subject.

### **101716.3 Healing and Culture**

**Credit Points** 10 **Level** 3

#### **Incompatible Units**

100886 - Special Topics in Cultural and Social Analysis

#### **Special Requirements**

Successful completion of 60 credit points

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This unit takes as its starting point the idea that disease has social and cultural as well as biological origins. What people define as good health and illness, and how they treat the latter are profoundly shaped by cultural frameworks. Healing practices, including biomedicine, are underpinned by cultural understandings and larger configurations of power. We will examine notions of disease causality across cultures and explore the argument that good and ill health are about more than just the body. Popular understandings of illness and its origins, and techniques for responding to and seeking to remedy illness can be a reflection of how different societies imagine their place in the world.

### **400275.2 Health Planning Project**

**Credit Points** 10 **Level** 3

#### **Prerequisite**

**400273.1** Health Politics, Policy and Planning

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This unit extends the theoretical concepts introduced in the unit, Health Politics, Policy and Planning with an emphasis on practical application. It concentrates on the development

of analytical skills required for comprehensive assessment, planning, implementation and evaluation of health programs or projects. The subject is designed so that students, functioning as a working party, undertake a real life health planning project on a current issue. Students thus develop knowledge of and skills in negotiation, group work, committee structure and functioning, the consultation and research processes, the planning process and report writing.

### **400966.2 Health Politics, Policy and Planning**

**Credit Points** 10 **Level** 2

#### **Equivalent Units**

400273 - Health Politics, Policy and Planning

#### **Special Requirements**

Prior to enrolling in this unit students must have submitted a Criminal Record Check form prior to 1 June 2010 or a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate. Students must also complete NSW Health Immunisations.

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The Australian health care system is highly complex, consisting of inter-related sub-systems and is influenced by the broader socio-political environment. It is essential that health professionals understand and consider the economic, political and social context within which health policy and planning occur, so that strategies and policies are developed which are economically and politically viable, as well as socially acceptable and responsive to the actual needs of the community. This unit aims to develop an understanding of the policy making and planning processes within this broad context and to introduce the theory and skills related to such activities.

### **400784.2 Health Promotion Practice 1**

**Credit Points** 10 **Level** 3

#### **Prerequisite**

**400867.1** Approaches to Health Promotion

#### **Special Requirements**

Prior to enrolling in this unit students must have submitted a Criminal Record Check form prior to 1 June 2010 OR a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate. Students must also complete NSW Health Immunisations.

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This unit builds on the knowledge gained in Approaches to Health Promotion. It provides the opportunity to apply health promotion theory to practical projects in the field related to current population health priorities, through 120 hours service learning experience. It is concerned with developing knowledge and skills related to needs analysis, prioritising, and awareness of core values and principles associated with health promotion practice.

## 400785.2 Health Promotion Practice 2

**Credit Points** 10 **Level** 3

### Prerequisite

**400867.1** Approaches to Health Promotion AND **400784.2** Health Promotion Practice 1

### Equivalent Units

400276 - Community Development and Health

### Special Requirements

Prior to enrolling in this unit students must have submitted a Criminal Record Check form prior to 1 June 2010 OR a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate. Students must also complete NSW Health Immunisations.

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This unit builds on the knowledge gained in Health Promotion Practice 1 through continuing with phases necessary for project design and management health promotion. It provides the opportunity to apply health promotion theory to practical projects in the field related to current population health priorities, through 120 hours service learning experience. It is concerned with developing knowledge and skills related to implementation and evaluation of health promotion projects, showing awareness of core values and principles necessary for effective health promotion practice.

## 400279.3 Health Services Financial Management

**Credit Points** 10 **Level** 3

### Prerequisite

**400277.3** Health Services Management

### Special Requirements

Students must be enrolled in 4545 and 4656 - Bachelor of Health Science. Prior to enrolling in this unit students must have submitted a Criminal Record Check form prior to 1 June 2010 or a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate. Students must also complete NSW Health Immunisations.

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The Australian health care system must account for use of resources, and ensure their equitable and efficient use. Increasingly devolution of management function to cost centre level in health care organisations is occurring. Managers must consider the financial implications of clinical decisions, understand and act on accounting information. They are held responsible for the financial outcomes of their activities. This unit develops a basic knowledge of accounting principles, health services funding arrangements, government reforms, financial reporting, preparation of budgets, business cases and economic appraisals. There are 140 hours of placement in the field working with health managers on financial issues.

## 400277.3 Health Services Management

**Credit Points** 10 **Level** 2

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The health workplace is a complex and sophisticated environment that can be understood in many different ways and mean different things to different members of an organisation. Assumptions about organisational structure and action are based on ones conceptualisations and beliefs about the nature and goals of an organisation. This unit aims to develop an understanding of organisational theory and its application to management practice and organizational analysis in the health arena.

## 400787.2 Health Services Management Practice

**Credit Points** 10 **Level** 3

### Prerequisite

**400277.3** Health Services Management

### Equivalent Units

400278 - Health Services Management 2

### Special Requirements

Students must be enrolled in 4545 and 4656 - Bachelor of Health Science. Prior to enrolling in this unit students must have submitted a Criminal Record Check form prior to 1 June 2010 or a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate. Students must also complete NSW Health Immunisations.

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The unit begins with an overview of the complexity and variability of health services and provides an understanding of component organisations, federal and state policy issues and environmental factors including the role of the private sector and non-government organisations. The changing role of the health services manager and competencies required for effective managing are examined. Influences on organisations are reviewed, including structures, culture, power and politics. Various management functions are explored through 140 hours of placement e.g. strategic planning, performance management, people management including workplace relations, conflict resolution, resource management (financial and asset), risk management, OH&S and quality assurance.

## 400788.2 Health Services Workforce Management

**Credit Points** 10 **Level** 3

### Prerequisite

**400277.3** Health Services Management

### Special Requirements

Prior to enrolling in this unit students must have submitted a Criminal Record Check form prior to 1 June 2010 or a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate. Students must also complete NSW Health Immunisations.

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This is a flexible learning unit looking at HRM as a strategic activity of health organisations especially as workforce shortages pose significant challenges to the health and aged care sectors. The workforce, with appropriate knowledge and expertise, is essential to the efficient and effective delivery of quality health services. Successful

organisations shape their workforce to anticipate current and future business directions and goals. Workforce planning is a crucial element of this approach and its success.

### **10157.2 History and Theory of the Avant-Garde**

**Credit Points** 10 **Level** 2

#### **Special Requirements**

Successful completion of 60 credit points at Level 1.

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This unit views the avant-garde as a changing set of conditions and concerns. This is illustrated through an examination of major European and North American art movements from Cubism to Abstract Expressionism. Although the unit is organised chronologically, emphasis is placed on the critical analysis of key premises. In particular, the discourse of originality has been central to avant-garde theories, policies and practices. Originality has appeared in diverse forms: as violent rupture, transgressions, or through related organicist metaphors referring not so much to purely formal invention as to sources of life.

### **100507.4 History of Modern China to 1949**

**Credit Points** 10 **Level** 3

#### **Equivalent Units**

63177 - History of Modern China 1850-1949: Reform and Revolution.

#### **Special Requirements**

Successful completion of 60 credit points

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This Asian history unit is concerned with the transformation of China in a social, political and intellectual context since the middle of the nineteenth century. The unit focuses on China's modern transformation in the first half of the twentieth century and its contemporary relevance. The scope is broad, encompassing changes from the last decades of the Qing Dynasty to the Republican era and the rise to power of the Communists in 1949. The approach is issue-oriented, thematic and, where appropriate, chronological.

### **101452.2 History of the English Language**

**Credit Points** 10 **Level** 2

#### **Equivalent Units**

A2911 - History of the English Language

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The aim of this unit is to familiarise students with the historical development of English from Old English through to the modern varieties of English around the world today. It explores the linguistic and historical influences on English from early times to the present and examines these influences as they reveal themselves in the grammar, phonology and vocabulary of older and modern varieties of English

### **400945.1 Honours Research 1**

**Credit Points** 20 **Level** 5

#### **Prerequisite**

**400944.1** Evidence-Based Practice (Advanced)

#### **Special Requirements**

This unit is relevant to honours students in health science courses studying their honours as part of an embedded program of study. This unit is specifically tailored to accommodate the course and progression requirements of such students and therefore is not relevant as a general elective.

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This unit commences the significant research component of the student's honours degree. Students will work on their specific research project in conjunction with their supervisor, engaging in the early stages of the research process related to critical review of the literature, designing their project, considering ethical dimensions of their study, and collecting data. The emphasis of this unit is on the application of research knowledge gained in other units to the practical conduct of the individual honours project.

### **400946.1 Honours Research 2**

**Credit Points** 20 **Level** 5

#### **Prerequisite**

**400945.1** Honours Research 1

#### **Special Requirements**

This unit would only be relevant to honours students in health science courses studying their honours as part of an embedded program of study. This unit will be specifically tailored to accommodate the course and progression requirements of such students and therefore would not be relevant as a general elective.

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In this unit students will complete the significant research component of their honours study. They will build upon the skills and knowledge of research, evidence-based practice and scholarly enquiry gained in units completed earlier in the program. The emphasis of this unit is the completion of a supervised honours research project. Each student will work individually with their supervisor to complete the stages of data collection and data analysis and will write their results into a format suitable for submission for examination. Students will also present their final at a student conference that is at professional conference level.

### **400872.2 Honours Research Design and Methodology**

**Credit Points** 20 **Level** 4

#### **Assumed Knowledge**

Students need to have completed at least one unit in research methodology in an undergraduate degree program.

#### **Equivalent Units**

400471 - Exercise & Health Science Research & Practice, 400472 - Exercise & Health Science Honours Seminar

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Students will build upon the skills and knowledge of research, evaluation and scholarly enquiry gained in units completed in the undergraduate program. The unit aims to explore: the nature of research and experience of researching in health related areas, as well as technical skills of data collection, management, analysis and interpretation in health practice. A major outcome of the unit is the development of a formal project proposal for conducting the student's thesis inquiry. Ethical issues and aspects such as human rights and ethics clearances, confidentiality and respect for participants in research projects and the obligations placed on researchers will be covered. This unit will also provide students with a professional forum in which to discuss and present major aspects of their research project.

### 400959.1 Honours Research Project 1

**Credit Points** 0 **Level** 5

**Prerequisite**

**400810.2** Integrated Clinical Rotations 1

**Corequisite**

**400811.1** Integrated Clinical Rotations 2

**Special Requirements**

Students must be enrolled in 4641 - Bachelor of Medicine, Bachelor of Surgery.

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Students studying 4641, Bachelor of Medicine Bachelor of Surgery are offered an embedded Honours program. The program runs over Years 4 & 5 and this Unit is undertaken in conjunction with Integrated Clinical Rotations 2 (400811) in 2H Session 2010. The Honours Research Project 1 consists of approximately 100 hours work. The main objectives are to give students a heightened awareness and knowledge of the principles and methodology of medical research, and an enhanced ability to critically evaluate scientific literature. The research component will be assessed by an Honours dissertation to be submitted by the end of the following year. The award of MBBS Honours will require satisfactory completion of this unit plus Honours Research Project 2 and the appropriate GPA across the MBBS course.

### 400960.1 Honours Research Project 2

**Credit Points** 0 **Level** 5

**Prerequisite**

**400811.1** Integrated Clinical Rotations 2 AND **400959.1** Honours Research Project 1

**Corequisite**

**400977.1** Integrated Clinical Rotations 3

**Special Requirements**

Students must be enrolled in 4641 - Bachelor of Medicine, Bachelor of Surgery.

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Students studying 4641, Bachelor of Medicine Bachelor of Surgery are offered an embedded Honours program. The

program runs over Years 4 & 5 and this Unit is undertaken in conjunction with Integrated Clinical Rotations 3 (400977) from 2011. The Honours Research Project 2 consists of approximately 100 hours work. The main objectives are to give students a heightened awareness and knowledge of the principles and methodology of medical research, and an enhanced ability to critically evaluate scientific literature. The research component will be assessed by an Honours dissertation to be submitted by the end of this year. The award of MBBS Honours will require satisfactory completion of this unit plus Honours Research Project 1 and the appropriate GPA across the MBBS course. (see UWS Policy).

### 300675.2 Honours Thesis

**Credit Points** 40 **Level** 5

**Prerequisite**

**300053.3** Professional Practice

**Corequisite**

**81999.1** Industrial Experience (Engineering) OR **300741.2** Industrial Experience (Engineering)

**Equivalent Units**

300484 - Engineering Thesis, 300036 - Major Investigation and Report 1, 300037 - Major Investigation and Report 2

**Incompatible Units**

300483 - Engineering Project, 300668 - Advanced Engineering Thesis

**Special Requirements**

This unit will be only offered to Bachelor of Engineering and Bachelor of Construction Management Honours level students. 3621 - Bachelor of Engineering students must be enrolled in a Key Program. Students should have achieved at least 240 credit points and must have a course Grade Point Average greater than or equal to 5.0.

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This unit provides honours level students with the opportunity to undertake research on a specialist topic within their Key Program of undergraduate study.

### 400898.2 Honours Thesis in Health Science A

**Credit Points** 20 **Level** 4

**Incompatible Units**

400558/400559/400560 - Honours Thesis in Health Science/F-T/P-T year 1/P-T year 2; 400477/400478/400479/400480 - Sport & Exercise Science Thesis A/B/C/D

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This unit is the culmination of studies for students who have completed an undergraduate degree in Health Science and provides substantial training in research. Under staff supervision, students choose the particular topic for their research, design their own programme of research, perform the research and analyse the results. The culmination of this process is the production of a thesis in which students describe the rationale for their topic, their research programme, ethical issues, results, and their conclusions.

### **400899.2 Honours Thesis in Health Science B**

**Credit Points** 40 **Level** 4

#### **Incompatible Units**

400558/400559/400560 - Honours Thesis in Health Science/F-T/P-T year 1/P-T year 2;  
400477/400478/400479/400480 - Sport & Exercise Science Thesis A/B/C/D

.....

This unit is the culmination of studies for students who have completed an undergraduate degree in Health Science and provides substantial training in research. Under staff supervision, students choose the particular topic for their research, design their own programme of research, perform the research and analyse the results. The culmination of this process is the production of a thesis in which students describe the rationale for their topic, their research programme, ethical issues, results, and their conclusions.

### **400900.2 Honours Thesis in Health Science C**

**Credit Points** 20 **Level** 4

#### **Incompatible Units**

400558/400559/400560 - Honours Thesis in Health Science/F-T/P-T year 1/P-T year 2;  
400477/400478/400479/400480 - Sport & Exercise Science Thesis A/B/C/D

.....

This unit is the culmination of studies for students who have completed an undergraduate degree in Health Science and provides substantial training in research. Under staff supervision, students choose the particular topic for their research, design their own programme of research, perform the research and analyse the results. The culmination of this process is the production of a thesis in which students describe the rationale for their topic, their research programme, ethical issues, results, and their conclusions.

### **400901.2 Honours Thesis in Health Science D**

**Credit Points** 20 **Level** 4

#### **Incompatible Units**

400558/400559/400560 - Honours Thesis in Health Science/F-T/P-T year 1/P-T year 2;  
400477/400478/400479/400480 - Sport & Exercise Science Thesis A/B/C/D

.....

This unit is the culmination of studies for students who have completed an undergraduate degree in Health Science and provides substantial training in research. Under staff supervision, students choose the particular topic for their research, design their own programme of research, perform the research and analyse the results. The culmination of this process is the production of a thesis in which students describe the rationale for their topic, their research programme, ethical issues, results, and their conclusions.

### **200708.2 Hospitality Industry**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

Basic knowledge of hospitality is assumed for this unit

#### **Equivalent Units**

200562 - Hospitality Markets, MK301A - Hospitality Marketing

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With focus on the experiential nature of hospitality products, the unit canvasses a contemporary selection of specialised food services, lodging and other hospitality businesses, including resorts, cruise ships and registered clubs. The unit develops students understanding of the micro and macro environments of such businesses, with concentration on the factors influencing business development. There is also consideration of the design, development and commercial viability of such products, especially in the context of consumer expectations.

### **200561.3 Hospitality Management Applied Project**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

This is an advanced unit. Students are expected to have gained an introductory level of knowledge in hospitality management.

#### **Prerequisite**

**200707.2** Service Industry Studies

#### **Equivalent Units**

200140 - Tourism and Hospitality Research Project

#### **Incompatible Units**

200580 - Sport Management Applied Project

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Students studying Hospitality Management Applied Project may have the opportunity to undertake an international field trip to experience the hospitality industry from an international perspective. This unit provides students a unique opportunity to integrate knowledge gained from operational and theoretical perspectives of hospitality studies into application in an engaged research project in hospitality management. Students will engage in comprehensive projects which bring together real world industry problems and hospitality theory.

### **200584.3 Hospitality Management Operations**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

This is an advanced unit. Students are expected to have gained an introductory level of knowledge in hospitality management.

#### **Equivalent Units**

HS206A - Hospitality Management Operations

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Hospitality Management Operations emphasises the role of operations management in the hospitality sector, especially as an element of corporate strategy. The unit demonstrates how operations management is related to, and aligned with, the other functional areas of a hospitality organisation. The field of study includes revenue management in the hospitality industry, as well as a variety of qualitative and quantitative techniques to enable students to analyse problems in hospitality operations.

**400868.1 Human Anatomy and Physiology 1**

**Credit Points** 10 **Level** 1

**Incompatible Units**

300361 - Introduction to Human Biology, 300319 - Introduction to Human Anatomy and Histology, 300320 - Introduction to Human Physiology, 400130 - Human Medical Sciences 1, 400256 - Human Medical Sciences 2

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This is the first of two units covering systematic anatomy and physiology at an introductory level. This unit is designed to provide students especially those in applied health science programs with an overview of body systems and their functions to ensure a suitable basis for their future studies. The unit studies the basic concepts of biochemistry and histology, general anatomy and physiology of the major body systems such as central and peripheral nervous systems, integumentary system, musculoskeletal system (bones, muscles and joints), special senses and endocrine system. Emphasis will be placed on the interconnection and relationship between structure and function at every level of organisation.

**400868.2 Human Anatomy and Physiology 1**

**Credit Points** 10 **Level** 1

**Incompatible Units**

300361 - Introduction to Human Biology, 300319 - Introduction to Human Anatomy and Histology, 300320 - Introduction to Human Physiology, 400130 - Human Medical Sciences 1, 400256 - Human Medical Sciences 2

.....

This is the first of two units covering systematic anatomy and physiology at an introductory level. This unit is designed to provide students especially those in applied health science programs with an overview of body systems and their functions to ensure a suitable basis for their future studies. The unit studies the basic concepts of biochemistry and histology, general anatomy and physiology of the major body systems such as central and peripheral nervous systems, integumentary system, musculoskeletal system (bones, muscles and joints), special senses and endocrine system. Emphasis will be placed on the interconnection and relationship between structure and function at every level of organisation.

**400869.2 Human Anatomy and Physiology 2**

**Credit Points** 10 **Level** 1

**Assumed Knowledge**

400868 - Human Anatomy and Physiology 1

**Prerequisite**

**400868.2** Human Anatomy and Physiology 1

**Incompatible Units**

14466 - Human Biology 2, 300319 - Introduction to Human Anatomy and Histology, 300320 - Introduction to Human Physiology, 400256 - Human Medical Sciences 2, 400130 - Human Medical Sciences 1

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This is the second of two units covering systematic anatomy and physiology at an introductory level. This unit is designed to provide students especially those in applied health science programs with an overview of body systems and their functions to ensure a suitable basis for their future studies. The unit studies the general anatomy and physiology of the major body systems such as cardiovascular, respiratory, digestive, urinary, reproductive and lymphatic system/immunity, body fluids & acid-base balance and metabolism. Emphasis will be placed on the interconnection and relationship between structure and function at every level of organisation.

**300807.1 Human Animal Interactions**

**Credit Points** 10 **Level** 1

**Incompatible Units**

300426 - Introduction to Animal Science, 300560 - Human Animal Interactions

**Special Requirements**

Students require lab coats, closed in work boots, long pants and long -sleeved shirt for this unit.

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This unit introduces students to the varying relationships between humans and animals including domestication, the role of animals for companionship, as workers, the traditional role of animals in agriculture, wildlife and zoo animals and their increasingly recognised aesthetic and therapeutic roles. Students will work with a variety of domesticated animals, captive native mammals, and reptiles on-campus, and in a variety of animal industries off campus, including wildlife parks and zoos. The unit includes a balance of theoretical and practical work in the areas of behaviour and handling, basic husbandry, health care, and ethical management.

**101676.2 Human Learning**

**Credit Points** 10 **Level** 2

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Human Learning is concerned with the experimental analysis of human and animal behaviour and focuses upon associative learning, including classical conditioning, operant conditioning, and social learning approaches. Definitions, assumptions, and basic phenomena associated with the study of learning are described and evaluated in terms of their ability to account for various aspects of human behaviour and experience. The practical work highlights important concepts introduced in the lecture program and focuses upon practical techniques of use in everyday situations.

### 400130.1 Human Medical Sciences 1

**Credit Points** 10 **Level** 1

#### Equivalent Units

E1231 - Human Biology

#### Incompatible Units

E1241 - Human Medical Sciences I

#### Special Requirements

Students who have successfully completed both Human Medical Sciences 1 and Human Medical Sciences 2 are eligible for advanced standing in only 400868 - Human Anatomy and Physiology 1. Students who have completed either Human Medical Sciences 1 or Human Medical Sciences 2 must apply for a rule waiver to enrol in 400868 - Human Anatomy and Physiology 1 to complete course requirements.

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The unit studies the basic concepts of biochemistry and histology, general anatomy, and physiology of the major body systems. This unit is designed to provide students especially applied health science students with an overview of body systems and their functions to ensure a suitable basis for their future studies of regional anatomy, clinical neurosciences, microbiology, pharmacology, pathology and other clinical sciences.

### 400134.1 Human Medical Sciences 3

**Credit Points** 10 **Level** 1

#### Prerequisite

[400130.1](#) Human Medical Sciences 1

#### Equivalent Units

E1237 - Human Biology 2, 400881 - Functional Anatomy

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In 2010 this unit will be replaced by 400881 - Functional Anatomy. This unit is intended to provide students with an in depth and clinical study of those human medical sciences which underpin specific intervention principles and procedures to be taught in the professional units. Primary contact health care providers have professional requirements that cover a broad spectrum of diagnostic, medical and physical practices. In order to ensure a suitable basis for later practice of osteopathy, podiatry, and occupational therapy, students require a detailed knowledge and understanding of anatomy and physiology with emphasis on musculoskeletal system, innervation and blood supply of relevant body structures.

### 200740.2 Human Resource and Industrial Relations Strategy

**Credit Points** 10 **Level** 3

#### Prerequisite

[200300.2](#) Managing People at Work

#### Incompatible Units

200618 - Human Resource Strategy, 200615 - Industrial Relations Strategy

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This unit analyses the human resource and industrial relations strategies of the major employment relations stakeholders. While the principal focus is on the organisational level of analysis and on the strategic interventions introduced by management, the unit also analyses the strategic roles of government, trade unions, and employer associations. It covers the development of human resource management and industrial relations as a professional field, the relationship between business strategies and HR/IR strategies, stakeholders and strategic choice, ethics and professional standards, strategic HR/IR interventions; evaluation of strategy.

### 300570.3 Human-Computer Interaction

**Credit Points** 10 **Level** 3

#### Equivalent Units

300160 - Software Interface Design

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A key component to the discipline of Information Systems is the understanding and the advocacy of the user in the development of IT applications and systems. IT graduates must develop a mind-set that recognizes the importance of users and organizational contexts. They must employ user-centered methodologies in the development, evaluation, and deployment of IT applications and systems. This unit examines human-computer interaction in order to develop and evaluate software, websites and information systems that not only look professional but are usable, functional and accessible.

### 300901.1 Human-Computer Interaction (Advanced)

**Credit Points** 10 **Level** 3

#### Incompatible Units

300570 - Human-Computer Interaction, 300160 - Software Interface Design

#### Special Requirements

Students must be enrolled in course 3684 - Bachelor of Information and Communications Technology (Advanced) or Bachelor of Computing (Information Systems) Advanced

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IT graduates must be able to develop and evaluate software, websites and mobile apps that not only look professional but are usable, functional and accessible. However, the study of HCI is often restricted to its use as a tool in the software development process. This advanced unit also examines HCI as a field of research and how to conduct research into human user factors. Students in this advanced unit will be required to complete a research project and produce a final research report, which is of a standard capable of being considered for publication in a HCI conference or journal.

### 100961.4 Humanities Internship

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Successful completion of at least 40 credit points of level two and three units in the Humanities major area in which the internship project is focused

#### Equivalent Units

10360 - Art History Internship, VP301A - Communications Practicum, 63149 - History Internship, 100486 - Asian and International Studies Internship, 100857 - Cultural and Social Analysis Practicum

#### Special Requirements

Successful completion of 60 credit points. Students will require at least 40 credit points worth of Level 2 and 3 units in one Humanities major area. The Internship unit demands that students have an in-depth understanding of the field in which the placement or project work is to be executed. This level of expertise can only be achieved by consistent study in the discipline area. Students will only be permitted to undertake the unit if a staff member has agreed to supervise them and has evaluated their proposal for a project.

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This unit aims to provide third year humanities students with first-hand knowledge of workplaces or research processes related to their chosen field of study (major), such as art galleries, museums, libraries, local and state government, tourism and administration or in academic contexts. The unit will introduce students to various fields in which the skills developed over two years of study in humanities can be applied. It will augment their study and provide much needed work experience. The internship placement and/or project will be chosen by the student in consultation with the staff member responsible for the major area and the placement will be overseen and the academic work assessed by the member of staff responsible for the major area of study relevant to the internship.

### 300765.2 Hydraulics

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

200238 – Mathematics for Engineers 2

#### Prerequisite

**300762.2** Fluid Mechanics

#### Equivalent Units

300740 - Water Engineering, 85009 - Water Engineering

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The unit covers the principles of open channel hydraulics, pipe hydraulics and culvert hydraulics. Specific topics in open channel hydraulics include uniform flow, resistance equations, specific energy principle, flow types, gradually varied flow and rapidly varied flow. The purpose is to enable design of efficient open channels to meet engineering requirements. In addition, principles of pipe and culvert hydraulics are introduced, enabling analysis and design of pipe networks and culverts.

### 300766.2 Hydrology

**Credit Points** 10 **Level** 4

#### Assumed Knowledge

Assumed knowledge: a) solution to elliptical, parabolic and hyperbolic partial differential equations b) finding roots of an equation c) application of descriptive statistics to analyse a given set of data d) ability to apply distribution theory to fit a given set of data

#### Prerequisite

**300740.1** Water Engineering OR **300765.2** Hydraulics

#### Equivalent Units

300479 - Drainage Engineering

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The unit covers the principles of surface water hydrology. It will focus on catchment analysis, specifically focussing on rainfall-runoff relationships. Successful completion of this unit will enable hydrologic analysis of catchments to satisfy various regulatory requirements.

### 100870.2 Hypertext Fictions

**Credit Points** 10 **Level** 2

#### Equivalent Units

63216 - Hypertext Fictions

#### Special Requirements

Successful completion of 60 credit points at Level 1.

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In this unit students create their own hypertext (electronically linked) fiction. They are introduced to an e-learning environment using the network platform WebCT and the creative writing program Storyspace. The unit explores and experiments with aspects of fiction, such as plot, narrative, genre and character in the context of the electronic medium of hypertext. It also considers the history and theory of hypertext writing, including postmodern and poststructuralist theories of text and of the subject, and the new rhetoric and stylistics of hypertext. Students also critically evaluate existing on-line hypertext fiction.

### 300136.4 I.T. Support Practicum

**Credit Points** 10 **Level** 3

#### Prerequisite

**300150.3** PC Workshop AND **300138.3** LAN Workshop OR **300576.2** Networking Workshop

#### Special Requirements

Students can only enrol in this unit in their final session of study. The unit is restricted to students undertaking the Bachelor of Technology (IT Support), the Bachelor of Computing, the Bachelor of Computer Science, the Bachelor of Information Technology, the Bachelor of Mathematics and Information Technology or the Bachelor of Information and Communications Technology.

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This unit provides students real-world experience in the area of Information Technology (IT) support. Students are

located with industry partners in the Greater Western Sydney region in IT support positions for 10 hours per week over a 12 week period. In addition, students receive instruction and tuition in aspects of professional practice such as code of ethics.

### **300864.1 Imaging Science & Photographic Evidence**

**Credit Points** 10 **Level** 2

#### **Prerequisite**

**300874.1** Digital Forensic Photography

#### **Equivalent Units**

300376 - Digital Forensic Photography 2

#### **Special Requirements**

Must be enrolled in 3589 - Bachelor of Science (Forensic Science).

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Forensic photography is a critical area within the forensic sciences and an important skill for forensic practitioners. This unit explores the application of imaging science and forensic photography to preserve and enhance forensic evidence. The units focus is mostly on optical and digital enhancement methods that provide essential and non-destructive methods of enhancing physical evidence. It further provides the learner with the necessary theoretical concepts of imaging science that underpins the conceptual aspects of evidence enhancement. Topics include; optical enhancement of forensic evidence, digital enhancement of evidence, the detection of photographic forgeries, invisible radiation photography, polarising photomicroscopy, brightfield and darkfield illumination, optical filters, specialised lighting methods, photomacrography, polarisation photography, photographic science.

### **300847.1 Immunology**

**Credit Points** 10 **Level** 2

#### **Prerequisite**

**300936.1** Functional Proteins and Genes

#### **Equivalent Units**

300229 - Immunology

#### **Incompatible Units**

300223 - Cell Signalling and Molecular Immunology

#### **Special Requirements**

Successful completion of 60 credit points at Level 1 and 20 credit points at Level 2.

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This unit aims to provide students with an understanding of structure and function of immune system and particularly highlights common and unique systems that exist across kingdoms and phyla. There is a focus on the organs and cells of the human immune system and peculiarities associated with the immune systems of marsupials due to their early developmental stage at birth will be examined. The students will also develop laboratory skills that involve some immunological principles, investigative skills leading to understanding the knowledge base, and self learning at

a sophisticated level and enhance their science communication skills.

### **101543.2 India: Global Contexts**

**Credit Points** 10 **Level** 3

#### **Equivalent Units**

100262 - India: History in the Making of a Nation

#### **Special Requirements**

Successful completion of 60 credit points at Level 1.

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This unit looks at the role of south Asia in global processes from historical, cultural and economic perspectives. It traces three broad themes: the significance of early south Asian contacts with other cultures; the impact of colonial interactions with Europeans; and the development of postcolonial identities in the Indian diaspora. In particular, we consider how new hybrid formations emerged as products of cross-cultural exchange. The unit contrasts India's role as an agent of cultural globalisation from the past with its place as a recipient of economic globalisation in the present. We also look at the ways in which issues of caste, religion, social class, gender and unequal access to resources have remained significant factors in thinking through the experience of India's relationship with the wider world.

### **101878.1 Indigenous Landscapes**

**Credit Points** 10 **Level** 1

#### **Prerequisite**

**101751.2** Contextualising Indigenous Australia (Day Mode)

#### **Equivalent Units**

300631 - Indigenous Landscape

#### **Special Requirements**

The prerequisite will not apply to students enrolled in courses 3671 - Bachelor of Natural Science (Environmental Management) and 3637 - Bachelor of Natural Science or to students enrolled in the major M3050 - Environmental Management.

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Indigenous Landscapes aims to explore traditional Indigenous Australian ways of knowing landscape. Specifically, the unit incorporates UWS generic Indigenous core curriculum content that acknowledges and values pre-colonial Australian history and land-use practices. Content includes traditional land management practices; protected area management, joint management /co-management; Native Title; Land Rights; Indigenous versus statute law; sustainable land use; cultural heritage and heritage landscapes. This unit also aims to equip students with cultural competency in order to address issues of dispossession and disadvantage brought about by the historical destruction and disruption of ecological integrity.

### 300773.2 Industrial Design Project (Commencement)

**Credit Points** 30 **Level** 5

#### Assumed Knowledge

Knowledge related to the successful completion of year 3 Industrial Design or equivalent (e.g. Design & Technology) is assumed. Ability to use: E-mail, Internet Web Browser, WebCT or equivalent, Word processing program, CAD software, Workshop machinery (e.g. mill, lathe, sander, rapid prototyping machine). Knowledge and/or experience in: Referencing, Lab/Workshop O&HS, Report writing, Essay writing, Process Diary, Group work, Research Methods for Industrial Designers, Project Management, Ethical Research Approval Process.

#### Prerequisite

**300313.3** Design Studio 4: Simulate to Innovate AND **300314.2** Designed Inquiry

#### Corequisite

**10915.2** Industrial Experience

#### Equivalent Units

85032 - Industrial Design Project (Commencement)

#### Special Requirements

Successful completion of 240 credit points.

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The Industrial Design Honours Program provides students with an opportunity to apply their industrial design skills to an in-depth year long design research project. In Industrial Design Major Project (Commencement), Honours candidates develop a research plan and methodology that yield design opportunities for conceptual development and resolution (to be carried out in Industrial Design Major Project Completion). In Commencement, candidates produce a comprehensive research design (and seek ethics approval as needed), literature review, preliminary concept explorations and a detailed industrial design brief.

### 300774.2 Industrial Design Project (Completion)

**Credit Points** 40 **Level** 5

#### Assumed Knowledge

Knowledge related to the successful completion of year 3 Industrial Design is assumed and successful completion of Industrial Design Project Commencement and Industrial Design Project Commencement's co-requisite units.

#### Prerequisite

**300773.2** Industrial Design Project (Commencement)

#### Equivalent Units

85033 - Industrial Design Project (Completion)

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The Industrial Design Honours Program provides students with an opportunity to apply their industrial design skills to an in-depth year long design research project. In Industrial Design Major Project (Completion), Honours candidates respond to the research findings and design brief that they produced in Autumn semester. They undertake detailed

design development to resolve and communicate a final design solution, which is publicly exhibited at the end of the year. Their design and research communications present a strong argument for the final design and demonstrate the honours candidates capacity to undertake postgraduate design research and to join professional design practice.

### 300775.2 Industrial Experience

**Credit Points** 0 **Level** 3

#### Assumed Knowledge

Successful completion of 160 credit points in either course 3502 - Bachelor of Design and Technology or 3503 - Bachelor of Industrial Design or 3504 - Bachelor of Industrial Design Engineering.

#### Equivalent Units

10915 - Industrial Experience

#### Special Requirements

Students must be enrolled in 3502 Bachelor of Design and Technology or 3503 Bachelor of Industrial Design.

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Students will gain real-life experience in developing new products or services within a company or organisation and be exposed to some of the decision-making processes that affect the development process of consumer products or services. This is whilst experiencing the multidisciplinary nature of the interaction of all those involved in the product development process from the conception of the idea to the introduction of a new product or service to market. Students use this opportunity to test the validity of the concepts studied in various course units to date in a real life situation and develop a sense of a company's "culture".

### 300741.2 Industrial Experience (Engineering)

**Credit Points** 0 **Level** 3

#### Assumed Knowledge

A broad background knowledge in the relevant Engineering discipline (ie., equivalent to that obtained after completing 3 years of the Engineering program)

#### Equivalent Units

81999 - Industrial Experience (Engineering)

#### Special Requirements

Successful completion of 240 credit points.

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Students will undertake 12 weeks full-time (37.5 hours per week) employment (or equivalent) to obtain relevant workplace experience in Engineering under the supervision of professional engineers in one company or more.

### 300302.2 Industrial Graphics 1: Presentation

**Credit Points** 10 **Level** 1

#### Equivalent Units

J3764 - Industrial Graphics (Presentation)

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The presentation and promotion of designs in the form of 2D graphics is a necessary component of the overall design

process. The ability to apply a wide range of both manual and computer based processes in the production of these graphical images and presentations is essential. The objective of this subject is to introduce students to the industry standard software and hardware employed to generate this type of material, and more importantly this unit exposes students to the techniques used by professionals who currently work in this area of the design community. Industrial Graphics 1 Presentation is part of a sequence of five units that constitute the sub-major in Industrial Graphics and eight units that constitute the major in Interactive Industrial Graphics.

### 300282.2 Industrial Graphics 2: Transition

**Credit Points** 10 **Level** 2

#### Equivalent Units

J1756 - Industrial Graphics (2D Drawing), J1759 - Industrial Graphics (Transition), 10940 - Technical Presentation 2

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Engineering drawing is the formal graphical communication language used by professionals engaged in design, manufacture and management of manufactured items. This language provides the facility to describe and document three dimensional objects or concepts in two dimensions using linework, characters and symbols. This language is based on guidelines provided by Standards Australia and is compatible with a range of international drawing standards. The aim of this unit is to examine in detail the language and tools used to generate engineering drawings and to provide students with practical skills that will allow them to communicate with other professionals using this language.

### 300310.3 Industrial Graphics 3: 3D Solids

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

300282 Industrial Graphics 2 - Transition. Students from within the ID and Design & Technology degree courses should have completed this core unit before attempting Industrial Graphics 3. Students taking this as an elective from outside of the ID and Design & Technology courses should note that knowledge from this unit will be assumed.

#### Equivalent Units

10962 - Industrial Design Communication 2: 3D Kinetic, J2814 - Industrial Graphics (3D Modelling)

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The documentation of design concepts in the form of three dimensional (3D) computer models provides data that can be applied in a wide variety of ways to facilitate the understanding and production of parts and assemblies. The objective of this unit is to introduce students to the industry standard software and hardware employed to generate these models, via a 'hands on' approach to creating 3D data. Issues such as data transfer, rapid prototyping, computer numerical control (CNC) machining and visualisation will also be discussed.

### 300312.3 Industrial Graphics 4: Surface

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

It is assumed that students attempting IG4: Surface will be familiar with and capable at 3D solids modelling as delivered in 300310 (IG3: 3D Solids) and graphic design/ illustration and page layout as delivered in 300302 (IG1: Presentation). Students from within the ID and Design & Technology degree courses should have completed these core units before attempting IG4: Surface. Students taking this as an elective from outside of the ID and Design & Technology degree courses should note that these skills will be assumed.

#### Equivalent Units

10963 - Industrial Design Communication 3: Materials and Properties, J2868 - Industrial Graphics (Surface)

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Starting with a sketch, drawing, physical model, or only an idea, having the ability to accurately model your designs ready for rendering, animation, drafting, engineering, analysis and manufacturing is an essential skill set for designers in all disciplines. The ability to generate 3 dimensional data and in particular, free-form 3D data within a computer and display that data in a range of formats provides a powerful design, visualisation and analysis tool. This unit introduces students to the fundamentals of 3D Wireframe, NURBS Surface and Boundary Representation (Brep) Solids Modelling and then focuses on the tools and processes available for producing a range of image types from these 3D models.

### 300315.3 Industrial Graphics 5: Integrated

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

It is assumed students have computer and hand rendering capabilities along with graphic computer presentation skills. Knowledge of consumer markets and Manufacturing is also essential.

#### Prerequisite

**300310.3** Industrial Graphics 3: 3D Solids AND **300312.3** Industrial Graphics 4: Surface

#### Equivalent Units

J3824 - Industrial Graphics (Integration)

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The ability to draw on a broad range of industrial graphics skills and techniques and to apply them appropriately to design projects is a cornerstone of the modern design process. It is the aim of this unit to synthesise the components of the industrial graphics strand and provide a single project with a range of components to which these skills can be applied and evaluated.

### 300724.2 Industry Based Learning

**Credit Points** 0 **Level** 5

#### Equivalent Units

BG311A - Industry Based Learning

**Special Requirements**

Students must be enrolled in 2607 - Bachelor of Construction Management.

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Students are required to undertake 1200 hours industry based experience as required by course and professional accreditation bodies.

**300128.3 Information Security**

**Credit Points** 10 **Level** 3

**Assumed Knowledge**

Basic understanding of data structures, number theory and probability theory. Basic programming skills in C or java, etc.

**Prerequisite**

**200025.2** Discrete Mathematics OR **200031.2** Mathematics for Business OR **200190.1** Finite Mathematics AND **300103.2** Data Structures and Algorithms OR **300125.2** Fundamentals of Computer Science OR **300156.1** Programming Principles 2

**Special Requirements**

Students need to undertake one pre-requisite unit from the following three units: 200025 - Discrete Mathematics, 200031 - Mathematics for Business, 200190 - Finite Mathematics AND one pre-requisite from the following three units: 300103 - Data Structures and Algorithms, 300156 - Programming Principles 2, 300125 - Fundamentals of Computer Science

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This unit is concerned with the protection and privacy of information in computer systems. The focus of the unit is primarily on introducing basic concepts in computer and information security and then using this knowledge as the vehicle to study the design and implementation of secure computer and network systems. This unit also provides students with practical experience with security programming. In more specific terms, the unit is intended to provide the following: basic concepts of conventional and public key encryption; number theory and its application in public key encryption and signatures; protocols used in secure computer systems.

**300572.2 Information Systems Deployment and Management**

**Credit Points** 10 **Level** 3

**Assumed Knowledge**

A general understanding of various Information Systems in the eBusiness environment - familiarity with information system development processes

**Prerequisite**

**300580.2** Programming Fundamentals AND **300585.2** Systems Analysis and Design

**Equivalent Units**

300272 - Enterprise Information Management

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This unit provides a detailed overview of system implementation stages taking into the consideration steps

necessary to place the newly developed system into production, educate consumers and system users, confirm accuracy of data needed for the system's accurate functionality and assure that all business functions that interact with the system are performing properly. In addition, this unit aims to portray how project management skills are crucial in timely production and delivery of the final product. At the completion of the successful deployment system is usually transitioned to system support and maintenance therefore the overview of the transition process is also portrayed.

**CP308A.2 Information Systems Ethics and Law**

**Credit Points** 10 **Level** 3

**Special Requirements**

Students enrolled in course 2502 - Bachelor of Laws (Non graduate entry) must obtain permission to enrol in this unit.

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In 2013 this unit replaced by 200809 - Information Systems and the Law. This unit aims to provide students with an appreciation of the ethical and legal issues surrounding the use of information systems, particularly the internet. It examines the regulatory framework to facilitate an understanding of the legal boundaries within which e-commerce may operate. Matters including the abuse of computers, the privacy of computerised data and electronic communications are critically analysed to reveal a variety of issues which are legally significant.

**300573.2 Information Systems in Context**

**Credit Points** 10 **Level** 1

**Assumed Knowledge**

2 Unit Mathematics and 2 Unit English (General)

**Incompatible Units**

200128 - Introduction to Information Systems

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This unit aims to give students the ability to recognise and expound about business information systems with regard to type, function, and purpose, and the frameworks within which these systems are used. Topics in this unit include computing fundamentals; computer hardware and software; computers and society; use of business application packages – spreadsheets, word processing, database, graphics; organisational information systems; information systems development and acquisition; data and knowledge management; electronic commerce, internets, extranets; networking; enterprise-wide information systems; the internet and information systems security; privacy, ethics and computer crime.

**700000.2 Information Systems in Context (UWSC)**

**Credit Points** 10 **Level** 1

**Equivalent Units**

300573 - Information Systems in Context

**Incompatible Units**

200128 - Introduction to Information Systems

### Special Requirements

Students must be enrolled at UWS College.

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This unit aims to give students the ability to recognise and expound about business information systems with regard to type, function, and purpose, and the frameworks within which these systems are used. Topics in this unit include computing fundamentals; computer hardware and software; computers and society; use of business application packages – spreadsheets, word processing, database, graphics; organisational information systems; information systems development and acquisition; data and knowledge management; electronic commerce, internets, extranets; networking; enterprise-wide information systems; the internet and information systems security; privacy, ethics and computer crime. A major theme of this unit is in developing an understanding of the importance of the use of information for decision making in organisations.

### 300486.2 Infrastructure Engineering

**Credit Points** 10 **Level** 2

#### Prerequisite

**300738.2** Surveying for Engineers

#### Equivalent Units

85007 - Civil & Environmental Engineering Construction, 85008 - Engineering Urban Environments, 300296 - Road & Traffic Engineering

#### Special Requirements

Student must be enrolled in Bachelor of Engineering or Master of Engineering courses.

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This unit will provide students with material to assist them with Civil Engineering Construction and Urban Development / Town Planning projects. The unit mainly focuses on the subdivision design including the design of various components of a subdivision.

### 400286.3 Injury Prevention

**Credit Points** 10 **Level** 3

#### Prerequisite

**400867.2** Approaches to Health Promotion

#### Special Requirements

Prior to enrolling in this unit students must have submitted a Criminal Record Check form prior to 1 June 2010 or a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate. Students must also complete NSW Health Immunisations.

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Injury Prevention is a National Health Priority. Injury is the preferred term rather than accident with its connotations of inevitability and lack of apparent cause, to allow development of inter-disciplinary prevention initiatives. A systematic scientific approach to injury research and prevention is in evidence for road and occupational safety, backed by well resourced implementation structures. Other settings/sectors include sport, recreation, falls, firearms, farm, product and water safety, which are also seeing the

benefits of injury prevention principles, which include health promotion issue analysis and strategic hierarchical implementation strategies using the 4Es of education, enforcement, engineering and environment.

### 200163.1 Innovation and Product Development

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Assumed understanding of business management fundamentals in the context of an enterprise's competitive activities in the marketplace.

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Innovation is an imperative for the competitiveness of enterprises. This unit gives students an understanding of innovation and product development as management processes within an enterprise that provide impetus for their continuing competitiveness. Studies have shown that the development of new products has a greater leverage on a company's profits than any other growth strategy, including acquisition. This unit also gives students insight into how the process of innovation can be enhanced within enterprises. It also examines various processes adopted by enterprises for undertaking new product development, and how product development can be a means of achieving growth for a firm.

### 300899.1 Inorganic Chemistry

**Credit Points** 10 **Level** 2

#### Prerequisite

**300800.1** Essential Chemistry 1

#### Incompatible Units

300230 - Inorganic Chemistry 2, 300545 - Coordination Chemistry

#### Special Requirements

Students will require Laboratory coat, appropriate shoes and eye protection in this unit.

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This unit introduces students to a thorough study of coordination chemistry (discussing complexes, ligands, structure, isomerism, stability, reaction mechanisms, oxidation states, elements in the first transition series, coordination chemistry in biological systems). The unit then moves on to areas of fundamental inorganic chemistry, including bonding, and solid state chemistry. Advanced Modules cover the following topics: comparative inorganic chemistry, inorganic speciation in solution, X-ray methods for characterising inorganic materials, spectroscopy in coordination complexes, physiology and inorganic chemistry, and medicinal inorganic chemistry. This unit also introduces many of the laboratory techniques and equipment that are used in synthetic procedures in coordination chemistry.

### 300075.4 Instrumentation and Measurement

**Credit Points** 10 **Level** 3

#### Prerequisite

**300005.2** Circuit Theory



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This unit covers all topics associated with the measurement of physical quantities and the instrumentation required to accurately present this information to a controller. Transducers used to measure common physical quantities are presented in detail, while instrumentation includes a detailed analysis of zero-span circuits, Wheatstone bridges, Instrumentation amplifiers, isolation amplifiers, voltage-to-current and voltage-to-frequency modules used for faithful signal transmission, digital-to-analog and analog-to-digital circuits. The application of these modules in modern measurement equipment-multimeters, digital CROs and PLC/PC interfacing modules is discussed.

### 400979.1 Integrated Clinical Rotations (General)

**Credit Points** 120 **Level** 4

#### Prerequisite

**400810.1** Integrated Clinical Rotations 1

#### Incompatible Units

400811 - Integrated Clinical Rotations 2 and 400977 - Integrated Clinical Rotations 3

#### Special Requirements

Students must be enrolled in 4641 Bachelor of Medicine, Bachelor of Surgery. Students will have achieved all following special requirements in the preceding years of the course. 1. Criminal record check 2. Immunisations required by Health Service 3. Registration with Medical Board NSW 4. Child protection check. Immunisation status will be reviewed prior to the start of Year 3.

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Integrated Clinical Rotations (General) is a specific unit for students who have deficiencies in performance at the end of Integrated Clinical Rotations 3. The content will be tailored to each student to enable them to achieve competence in medicine. The unit will run from the middle of one year to the middle of the following year and the assessment will be held in conjunction with Integrated Clinical Rotations 3.

### 400810.2 Integrated Clinical Rotations 1

**Credit Points** 80 **Level** 3

#### Prerequisite

**400862.1** Foundations of Medicine 2

#### Special Requirements

Prior to enrolling in this unit students must have: 1) submitted a Criminal Record Check form prior to 1 June 2010 or a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate; 2) submitted a Prohibited Employment Declaration prior to 1 June 2010 or a Working with Children Check Student Declaration after 1 June 2010; 3) signed a declaration that they understand and comply with: - Infectious Diseases Policy - Health Records and Information Privacy Act (HRIPA), 2002 - UWS' submitting their details to the NSW Medical Board; 4) successfully completed a WorkCover accredited Senior First Aid Certificate and have an up to date Adult Vaccination Record.

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ICR1 is the first major clinical year of the MB BS program. It consists of 10 weeks in each of Surgery, Medicine and Community based health care, and 5 weeks in Emergency Medicine/Anaesthetics. There will also be 3 Conference weeks where all students will be based on campus. Surgery, Medicine and Emergency rotations will be at Campbelltown, Blacktown, Mt Druitt, Bankstown and Fairfield hospitals. In each rotation students will spend 5 weeks in each of two sub-specialities. The Community rotations will involve general practice, aboriginal medical services and other community based aspects of the health care system. Students will also undertake 3 online learning modules. Students will additionally undertake an assignment in Evidence-based Practice, and a program of tutorials in development of clinical communication skills.

### 400811.1 Integrated Clinical Rotations 2

**Credit Points** 80 **Level** 4

#### Prerequisite

**400810.1** Integrated Clinical Rotations 1

#### Special Requirements

Students must be enrolled in 4641 Bachelor of Medicine, Bachelor of Surgery. Prior to enrolling in this unit students must have: 1) successfully completed an approved Child Protection Workshop; 2) submitted a Criminal Record Check form prior to 1 June 2010 or a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate; have an up to date Adult Vaccination Record and Registration with Medical Board NSW. Immunisation status will be reviewed prior to the start of Year 3.

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ICR2 is the second major clinical year of the MB BS program. It consists of ten weeks in each of Paediatrics, Obstetrics & Gynaecology and Psychiatry and four weeks in each of Oncology and Palliative Care and Community based Research project. There will also be three Conference weeks where all students will be based on the Campbelltown campus. Students will be based at a number of appropriate hospitals throughout Sydney. Students will also undertake three online learning modules (Scientific Streams). Students will also undertake a reflective portfolio.

### 400977.1 Integrated Clinical Rotations 3

**Credit Points** 40 **Level** 4

#### Prerequisite

**400811.1** Integrated Clinical Rotations 2

#### Special Requirements

Students must be enrolled in 4641 Bachelor of Medicine, Bachelor of Surgery. Students will have achieved all following special requirements in the preceding years of the course. 1. Criminal record check 2. Immunisations required by Health Service 3. Registration with Medical Board NSW 4. Child protection check. Immunisation status will be reviewed prior to the start of Year 3

Integrated Clinical Rotations 3 is the first session of the third major clinical year of the MB BS program. It consists of five weeks in each of Medicine, Surgery, General Practice or Indigenous Health or ICU, ED & Anaesthetics. There will also be two Conference weeks where all students will be based on the Campbelltown campus. Students will be based at a number of appropriate hospitals throughout Sydney. Students will also undertake two online learning modules (Scientific Streams).

### 400978.1 Integrated Clinical Rotations 4

**Credit Points** 40 **Level** 4

#### Prerequisite

400977.1 Integrated Clinical Rotations 3 OR 400979.1 Integrated Clinical Rotations (General)

#### Special Requirements

Students must be enrolled in 4641 Bachelor of Medicine, Bachelor of Surgery. Students will have achieved all following special requirements in the preceding years of the course. 1. Criminal record check 2. Immunisations required by Health Service 3. Registration with Medical Board NSW 4. Child protection check. Immunisation status will be reviewed prior to the start of Year 3.

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Integrated Clinical Rotations 4 is the final Unit in the MBBS course and consists of clinical rotations in Medicine, Surgery and two of General Practice, Indigenous Health and ICU/Emergency/Anaesthetics. Students also undertake two Scientific Streams and two Conference weeks.

### 300931.1 Integrated Science

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Oral and written communication skills

#### Equivalent Units

300661 - Integrated Science, 300664 - Science in Society, 700096 - Integrated Science (UWSC)

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Science and the scientific process of discovery have been successful in offering explanations for the world we live in. Due to scientific advances, we have eradicated some disease, explored the moon and the deepest parts of our oceans and created communication across distances on the planet previously unimaginable. We now face the major challenge of creating a future world which is sustainable for life on Earth. Solving our contemporary complex human and environmental issues to create a sustainable future, however, requires integrative and multidisciplinary research frameworks, an understanding of the relationship between science and society including cultural, social, economic and political and ethical factors. Students will critically examine such perspectives in a series of contemporary 'real-life' case studies such as climate change, indigenous health, medical breakthroughs, biodiversity loss, environmental sustainability and human-animal interactions. They will undertake research into the relationship of science integrated with society, and the uncertainty and bias of evidence in decision making. They will demonstrate their

understanding by analysis of a contemporary issue by producing an eco-science advisory column.

### 700096.1 Integrated Science (UWSC)

**Credit Points** 10 **Level** 1

#### Assumed Knowledge

Oral and written communication skills

#### Equivalent Units

300661 - Integrated Science 1, 300664 - Science in Society, 300931 - Integrated Science

#### Special Requirements

Students must be enrolled at UWSCollege in 7003 Diploma in Science or 7009 Diploma in Science Fast Track.

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Science and the scientific process of discovery have been successful in offering explanations for the world we live in. Due to scientific advances, we have eradicated some disease, explored the moon and the deepest parts of our oceans and created communication across distances on the planet previously unimaginable. We now face the major challenge of creating a future world which is sustainable for life on Earth. Solving our contemporary complex human and environmental issues to create a sustainable future, however, requires integrative and multidisciplinary research frameworks, an understanding of the relationship between science and society including cultural, social, economic and political and ethical factors. Students will critically examine such perspectives in a series of contemporary 'real-life' case studies such as climate change, indigenous health, medical breakthroughs, biodiversity loss, environmental sustainability and human-animal interactions. They will undertake research into the relationship of science integrated with society, and the uncertainty and bias of evidence in decision making. They will demonstrate their understanding by analysis of a contemporary issue by producing an eco-science advisory column.

### 400154.2 Integrating Evidence into Practice

**Credit Points** 10 **Level** 5

#### Equivalent Units

400865 - Evidence Based Practice

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In 2012 this unit will be replaced by 400865 - Evidence Based Practice. Research should be an important component of all health professionals' practice. This unit prepares students to graduate as evidence-based professionals and competent research consumers, by advancing skills learned in earlier research units. The early stages of the unit will build on students' previous study of research methods. Searching for, appraising, and summarising research in a relevant clinical area will be used to illustrate the process of evidence-based practice, and will provide a context for the further study of the technical principles of research. Barriers to the implementation of research in practice, policy-making, and health care planning will be explored.

### 300368.2 Intelligent Systems

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Basic understanding of data structures and algorithms and basic programming skills in Pascal C/C++ or Java etc.

#### Prerequisite

**200025.2** Discrete Mathematics

#### Equivalent Units

300087 - Artificial Intelligence, 300137 - Knowledge Based Systems

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This unit provides basic studies in the major areas of artificial intelligence: search, knowledge representation, logic programming, machine learning and knowledge based systems, agent planning and learning. The first part of this unit will focus on the foundation of artificial intelligence: search algorithms and their implementations, game playing, logics and knowledge representation, and inference in reasoning systems. The second part will cover the principles of knowledge based systems (intelligent systems), planning, and machine learning.

### 100789.3 Interactive Design I

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Computer literacy including working in a networked environment on a Macintosh computer; management, transportation and storage of digital information and digital production processes such as scanning, pdf production and cd creation. Skills in design principles: layout, colour and typography. Literacy with Image manipulation software - e.g. Photoshop or Fireworks

#### Prerequisite

**300302.2** Industrial Graphics 1: Presentation

#### Equivalent Units

100778 - Designing Multimedia

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This unit focuses on design methodology for the development and delivery of contemporary interactive media applications. Particular concepts addressed will also include conceptual integration and convergence of various media forms, screen design, navigational hierarchy and structures, and designing engaging interactive interfaces. General principles of interface, interaction design and information architecture will be introduced, alongside basic principles of digital media production.

### 100949.3 Interactive Design II

**Credit Points** 10 **Level** 2

#### Prerequisite

**100789.3** Interactive Design I

#### Equivalent Units

100799 - Online Design

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This unit focuses on interactive design from an experience design perspective. Approaches utilising current digital technologies for advanced interactive design are explored. Students will design and produce interactive products and examine and critique current content and trends within these technologies. The focus of the unit is communication and experience design, rather than technical implementation. Interactive design examples are examined from the context of shifting production languages, convergent technologies and the design professional contexts.

### 101454.2 Intercultural Pragmatics

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

In addition to appropriate competence in English, students are expected to have equivalent Level 2 knowledge of one of the following languages: Arabic, Japanese, Chinese, Spanish, Italian.

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This is an optional level 3 core unit for the major in Arabic, Japanese, Chinese, Spanish, and Italian, within the BA Languages Key Program. It also constitutes part of the linguistics major and sub-major. It can also be taken as an elective. This is a language-specific unit intended to develop the students' awareness of language usage issues which may have an impact on intercultural communication and, therefore, on cultural stereotyping as well as other real life interests, such as business relationships and professional performance. It covers issues such as the relationship between culture and language use, ingroup-outgroup relationships, speech acts across cultures, politeness in text and discourse, miscommunication and stereotyping.

### 200536.2 Intermediate Financial Accounting

**Credit Points** 10 **Level** 2

#### Prerequisite

**200111.2** Financial Accounting Applications

#### Equivalent Units

200112 - Financial Accounting Issues, 61112 - The Anatomy of Financial Accounting

#### Incompatible Units

AC304A - Advanced Financial Accounting, H3327 - Financial Accounting 3

.....

This unit extends the knowledge and understanding of financial accounting through the application of problem solving to selected entities drawing upon accounting theory and critical analysis.

### 200595.3 International Business Finance

**Credit Points** 10 **Level** 3

#### Equivalent Units

61124 - International Business Finance

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The unit is designed to provide students with an overview of the economic, political and institutional environment in which international business is conducted. Particular attention is given to the historical development of the international monetary system, the transnational corporation and the impact of globalization upon international financial transactions and international business practices.

### **200590.2 International Business Project**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

This is a capstone International Business unit. It is assumed that students have basic international business knowledge and research skills.

#### **Prerequisite**

**200591.2** Introduction to International Business

#### **Equivalent Units**

61125 - International Business Project 1

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This is a capstone unit in International Business. The aim of the unit is to give students a real-life action learning project in which they undertake an international business strategic planning and analysis exercise for a client organisation. This project usually involves students working in small teams for a client organisation under the direct supervision of the lecturer.

### **200626.2 International Business Strategy**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

An understanding of the basic principles of marketing and international business.

#### **Prerequisite**

**200083.2** Marketing Principles OR **200591.2** Introduction to International Business

#### **Equivalent Units**

61119 - International Business Strategy

.....

In an environment where operating internationally is becoming the norm rather than the exception, firms are faced with ever increasing complexity when formulating their business strategy. This requires an understanding of how firms become and remain international, the basic modes of international involvement, the practice of multinational management and how firms can establish a balance between the sometimes conflicting demands of headquarters, the subsidiary and the governments of all the countries where the multinational enterprise operates. This unit will cover these issues and will deal with both large and small companies that must be global to survive.

### **200055.4 International Finance**

**Credit Points** 10 **Level** 3

#### **Prerequisite**

**200488.3** Corporate Financial Management AND **200525.2** Principles of Economics

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The study of international finance from the vantage point of a multinational enterprise provides students with a global insight into international trade for both manufactured and financial products. The unit recognises the increasing importance of global integration of money and capital markets - a trend that is creating expanded opportunities for both investors and organisations that need to raise capital. The recognition and management of risks associated with international operations are explored including cost of capital and financial structure, international financial markets crisis, international financial management, international monetary system, international diversification, foreign exchange risk management including the use of futures and options, foreign investment analysis, determination of exchange rates, balance of payments analysis, international debt crisis and country risk analysis.

### **200621.3 International Human Resource Management**

**Credit Points** 10 **Level** 3

#### **Prerequisite**

**200300.2** Managing People at Work

#### **Equivalent Units**

61472 - International Human Resource Management

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This unit covers concepts of international human resource management (HRM). It examines the internationalisation of firms, a range of comparative systems and structures of employment relations internationally, global stakeholders, human rights, and strategic management of global organisations. It includes analysis of issues including recruitment, training, management of expatriates, pay, and the impact of society, politics, economics and culture of host countries on human resource strategies.

### **200623.3 International Management**

**Credit Points** 10 **Level** 3

#### **Equivalent Units**

61671 - International Management

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International Management provides an overview of issues confronting managers working in a complex globalised environment. Areas such as global and regional integration, the role of ethics and social responsibility, as well as the changing political, legal and technological environment require consideration by management in multinational organisations. The role of culture and human resource management is another significant area of failure by global managers. Finally global strategic issues such as managing political risk and government relations will be analysed to

allow a deeper level of understanding of the complexities of managing in an internationally competitive marketplace.

### 61671.1 International Management

**Credit Points** 10 **Level** 3

**Prerequisite**

**200571.1** Management Dynamics OR **MG102A.2** Management Foundations OR **61611.1** Management Studies OR **H1727.1** Business Management

**Equivalent Units**

200623 - International Management

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In 2008 this unit replaced by 200623 - International Management. In an era of ever increasing globalisation, it is essential that students of management are aware of salient global factors and issues that determine the process of applying management concepts and techniques in a multinational environment. This unit provides this knowledge through an examination of topics such as: the nature of international management and emergence of the global economy; determinants of the international competitiveness of nations, agencies and firms (with a focus on the Australian Situation); the cultural/political/economic/financial dimensions of the international management environment; international law; dimensions of international business strategy; the internationalisation of the firm, and organisation and control of international operations.

### 200094.2 International Marketing

**Credit Points** 10 **Level** 3

**Assumed Knowledge**

Marketing principles including consumer/buyer behavioural concepts, business market dynamics, marketing research methods, marketing communications, channel management and distribution, brand and product management, competitive strategy and quantitative methods in marketing. The basics of economics, finance and accounting, statistics and general communications are also assumed.

**Prerequisite**

**200083.2** Marketing Principles

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Marketing internationally has become a necessity for many firms that wish to survive and grow in today's dynamic and increasingly linked world economy. Globalisation in its many forms is a powerful driver of change. 'International Marketing' is concerned with understanding and successfully managing the different international economic, cultural, political and legal environments as they affect the marketing activities of companies. This unit will examine the role of marketing research, international finance, overseas market entry and expansion strategies and the marketing mix in international markets. This unit provides students with a sound theoretical basis and, particularly, a practical understanding of how companies operate in international markets.

### 200374.3 International Marketing Research

**Credit Points** 10 **Level** 2

**Assumed Knowledge**

An understanding of the basic principles of marketing, international business and statistics

**Prerequisite**

**200032.5** Statistics for Business AND **200083.2** Marketing Principles AND **200591.2** Introduction to International Business

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This unit aims to provide students with tools to undertake and critically evaluate simple international marketing research projects. It covers basic marketing research concepts and statistical techniques with emphasis on the impact of the international environment in conducting both primary and secondary data research.

### 100872.2 International Politics of North Asia

**Credit Points** 10 **Level** 2

**Equivalent Units**

100264 - International Relations of Northeast Asia

**Special Requirements**

Successful completion of 40 credit points at Level 1.

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This unit examines contemporary foreign policy issues in North Asia from the perspective of China and Japan. Core issues include a critical evaluation of contemporary Sino-Japanese relations, the role both countries play in regional affairs and why North Asia (in particular the Korean Peninsular) is an intersection point for geo-politics.

### 100962.2 International Politics of the Southeast Asian Region

**Credit Points** 10 **Level** 3

**Special Requirements**

Successful completion of 60 credit points at Level 1.

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The unit provides an overview of the main political features and issues of the Southeast Asian region. This region is adjacent to Australia and thus events there have great strategic and economic significance for us. The countries of Southeast Asia: Vietnam, Indonesia, Cambodia, Laos, Thailand, Burma, Malaysia, Singapore, Brunei and the Philippines, are organised into the Association of Southeast Asian Nations (ASEAN). The unit focuses on the political relationships between these countries, both bilateral and regional, within the ASEAN and other nearby states, including Japan, China and Australia. Some of the issues covered include sensitive border disputes, piracy, illegal immigration, Insurgencies, Islamist terror networks, as well as issues related to aid, development and economic cooperation and competition.

Units

### 100871.3 International Texts and Contexts

**Credit Points** 10 **Level** 2

#### Equivalent Units

B2702 - International Texts and Contexts

#### Special Requirements

Successful completion of 40 credit points of study at level 1

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This unit investigates social and political discourses of a selection of literary (the novel, poetry, memoir) and cultural texts that highlight aspiration, ideals and tragedies of national and global significance. It will explore concepts and manifestations of self, nation, community, empire, culture and art through a study of textual constructions of the individual's negotiation of interacting and often competing ideologies. A range of written and visual texts will be use.

### 300130.2 Internet Programming

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Basic knowledge on internet browsing and any object-oriented programming language.

#### Prerequisite

**300027.2** Engineering Computing OR **300147.2** Object Oriented Programming OR **300156.1** Programming Principles 2 OR **300581.2** Programming Techniques

#### Equivalent Units

300246 - Internet Computing, 14020 - Object Oriented/ Internet Programming

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This unit offers students basic concepts and latest technologies of internet programming and web-based application development. Utilising one of the popular internet programming languages, such as Java, it aims to develop the programming skills and methodologies required for both client-side and server-side programming as well as general purpose programming. The range of topics covered by the unit includes HTML, XML, Java applets, desktop application in Java, servlets, JavaServer Pages and JDBC.

### 300574.2 Internet Structures and Web Servers

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Fundamentals of computer networking and basic knowledge of web technology

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This unit seeks to develop an understanding of the structures of the Internet and the organization of the World Wide Web, and the basic skills in setting-up and maintaining Web servers, proxy servers, email servers, and Internet firewalls.

### 100963.3 Interpreting Australia: Australian Historians and Historiography

**Credit Points** 10 **Level** 3

#### Special Requirements

Successful completion of 60 credit points

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The unit critically reflects on the practices and debates in the writing of Australian history. It examines the approaches of major Australian historians including Manning Clark, Geoffrey Blainey and Humphrey McQueen, as well as themes such as empiricism versus postmodernism, the 'new social history' and Marxism and Australian historiography.

### 101801.2 Interpreting Fascism

**Credit Points** 10 **Level** 3

#### Special Requirements

Successful completion of 60 credit points

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Fascism was the only major new political movement and ideology to emerge in twentieth century Europe. After 1922 it changed the world in profound ways and with disastrous consequences. In this unit we will examine the historiography of fascism and the key events in fascist history in Germany, Italy, Britain and other places in Europe. Questions to be considered include: What factors promoted the growth of fascism? Which factors caused fascism to establish itself and prosper in some places but not in others?

### 300825.1 Introduction to Anatomy

**Credit Points** 10 **Level** 1

#### Assumed Knowledge

HSC Biology

#### Equivalent Units

300319 - Introduction to Anatomy and Histology, 300752 - Introduction to Anatomy and Histology, 300778 - Introduction to Anatomy

#### Incompatible Units

300361 - Introduction to Human Biology, 400130 - Human Medical Sciences 1, 400256 - Human Medical Sciences 2, 400134 - Human Medical Sciences 3

#### Special Requirements

Due to space and resource limitations, this unit will be restricted to students enrolled in 3673 Bachelor of Medical Science and 3682 Bachelor of Medical Science (Advanced)

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This unit provides a basic understanding of human anatomy. It undertakes this by utilising a systems approach (in contrast to a regional approach), emphasising the special relationship between form and function.

### 700097.1 Introduction to Anatomy (UWSC)

**Credit Points** 10 **Level** 1

#### Assumed Knowledge

HSC Biology

#### Equivalent Units

300778 - Introduction to Anatomy, 300825 - Introduction to Anatomy

#### Special Requirements

Students must be enrolled at UWSCollege

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This unit provides a basic understanding of human anatomy. It undertakes this by utilising a systems approach (in contrast to a regional approach), emphasising the special relationship between form and function.

### 400882.2 Introduction to Biomechanics

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

It is assumed that students have knowledge of structural and functional anatomy of the human body. Students also need to be able to apply basic concepts in maths and physics.

#### Equivalent Units

400139 - Biomechanics & Kinesiology

#### Special Requirements

Students must be enrolled in courses 4658 - Bachelor of Health Science (Sport and Exercise Science), 4661 - Bachelor of Health Science/Master of Podiatric Medicine and 4662 - Bachelor of Health Science/Master of Physiotherapy.

.....

The study of biomechanics, the science that examines the forces acting upon a structure and the effects of these forces, is essential for understanding how the human body moves during daily activities, exercise and sport. It is also important when considering where problems may arise with human movement, such as with disease processes, over exercising and injury and postural pathology. This unit is designed to introduce the student to biomechanics by studying: the mechanical principles of human movement: balance and equilibrium: mechanical factors involved in tissue type and motion; and the analysis of human movement.

### 200184.3 Introduction to Business Law

**Credit Points** 10 **Level** 1

#### Corequisite

**200336.3** Business Academic Skills

#### Equivalent Units

LW110A - Business Law, F1011 - The Australian Legal System, F1012 - Introduction to Business Law, 61511 - Introduction to Legal Principles, 700004 - Introduction to Business Law (UWSC)

#### Special Requirements

External offerings for this unit are only available to students who are enrolled in a Property course, Key Program or Major. Students in courses 2739 Bachelor of Business and Commerce and 2741 Bachelor of Business and Commerce (Advanced Business Leadership) must complete the co-requisite unit 200336 - Business Academic Skills.

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This is an introductory law unit designed to introduce the fundamentals of law in a commercial context. The unit introduces students to the basic principles of law and the legal system as well as examining some of the major areas of law that impact on commercial dealings. This unit examines the structure of the legal system, the way law is made and the main areas of law relevant to starting and running a business including contracts, torts and consumer protection.

### 700004.1 Introduction to Business Law (UWSC)

**Credit Points** 10 **Level** 1

#### Equivalent Units

200184 - Introduction to Business Law

#### Special Requirements

Students must be enrolled at UWS College.

.....

This is an introductory law unit designed to introduce the fundamentals of law in a commercial context. The unit introduces students to the basic principles of law and the legal system as well as examining some of the major areas of law that impact on commercial dealings. This unit examines the structure of the legal system, the way law is made, and the main areas of law relevant to starting and running a business including contracts, torts and consumer protection.

### 300822.1 Introduction to Earth Science

**Credit Points** 10 **Level** 1

#### Equivalent Units

300232 - Introduction to Earth Science

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The unit covers the nature of the Earth's surface and its physical properties; properties and behaviour of the crust and interior of the Earth; mineral products, especially energy, water and mineral products; maps and geological structures; minerals, rocks and fossils. This Unit will give you a broad appreciation of the Earth, and the Earths' changing and dynamic properties and evidence spanning a geological time scale of billions of years. We will examine the way the Earth works, and our place in the system.

### 700114.1 Introduction to Engineering Business Management (UWSC Assoc Deg)

**Credit Points** 10 **Level** 1

#### Special Requirements

Students must be enrolled in 7022 Associate Degree in Engineering

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This unit will cover aspects of modern engineering business management. This unit of study will provide students an opportunity to look at small, medium and large Engineering businesses and the role of the Engineering Associates in those organisations.

### **100964.2 Introduction to Film Studies**

**Credit Points** 10 **Level** 2

#### **Equivalent Units**

VP212A - Introduction to Film Studies.

#### **Special Requirements**

Successful completion of 40 credit points at Level 1.

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The unit will introduce students to the key theoretical strands of film studies and key concepts in the analysis of film. The unit will explore techniques of narrative, performance, genre, realism and spectatorship, as well as introducing methods to analyse the use of editing, cinematography and sound. A case study of several key historical film movements or genres will introduce students to the study of cinema in its cultural contexts. The unit will also address the transformations in screen cultures as a result of digital technologies and new media.

### **400750.2 Introduction to Health Breakdown**

**Credit Points** 10 **Level** 1

#### **Assumed Knowledge**

Content equivalent to 400746 - Understanding Good Health

#### **Equivalent Units**

400051 - Nursing Science 4

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This unit introduces students to the concepts and mechanisms of health breakdown and their application to professional nursing practice.

### **300566.2 Introduction to Health Informatics**

**Credit Points** 10 **Level** 2

#### **Assumed Knowledge**

Familiarity with use of common business software eg word processing, spreadsheets, database.

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This unit introduces key concepts and skills required in the emerging Health Informatics domain including: Australian and International healthcare data representation and interchange standards; health care data modelling including patient journey modelling; overview of health information systems with a focus on decision support and clinical systems; telehealth and communication technologies; and electronic health records.

### **300361.3 Introduction to Human Biology**

**Credit Points** 10 **Level** 1

#### **Equivalent Units**

400130 - Human Medical Sciences 1, 25009 - Physical and Biological Sciences 1, E1231 - Human Biology 1

#### **Special Requirements**

Closed footwear is required in the workshops.

.....  
This unit gives a basic understanding of the human body and introduces the scientific and medical terminology used for anatomy, physiology and biochemistry. It deals with gross structure and microscopic structure of the human body. It also examines microbial organisms, their classification, how they differ from eukaryotic cells and how our body defends against them. Where appropriate, examples of functional diseases will be discussed.

### **700061.1 Introduction to Human Biology (UWSC)**

**Credit Points** 10 **Level** 1

#### **Equivalent Units**

300361 - Introduction to Human Biology

#### **Special Requirements**

Students must be enrolled at UWS College

.....  
This unit gives a basic understanding of the human body and introduces the scientific and medical terminology used for anatomy, physiology and biochemistry. It deals with gross structure and microscopic structure of the human body. It also examines microbial organisms, their classification, how they differ from eukaryotic cells and how our body defends against them. Where appropriate, examples of functional diseases will be discussed.

### **300134.2 Introduction to Information Technology**

**Credit Points** 10 **Level** 1

#### **Equivalent Units**

B1582 - Introduction to Computers, J1742 - Computer Fundamentals, 61211 - Information Technology

#### **Special Requirements**

Permission required for students enrolled in 3562 Bachelor of Science (Advanced).

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This introductory unit gives students an insight into the history, structure, operations and uses of computers, and their impact on society. This will be complemented by hands-on use of computers and popular application software packages in a graphical user interface environment. Students gain a basic understanding of the uses of computers, and the skills necessary to use popular applications software, including word processing, spreadsheet and database packages, and Internet tools and services.



### **200591.2 Introduction to International Business**

**Credit Points** 10 **Level** 1

#### **Equivalent Units**

61128 - International Business and Asian Environment

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This unit introduces students to the nature of international business operations in the world economy. The first part focuses on the basic concepts and theories of international trade, investment, and foreign exchange which form the foundation of a firm's international business activities. The second part is devoted to the economic, cultural, political and ethical environments and their effects on a firm's international business operations. The third and last part provides an overview of how the functional areas of business i.e. Marketing, production, human resource and finance are conducted in and affected by the multifaceted environment of an internationally oriented firm.

### **100194.2 Introduction to Interpreting**

**Credit Points** 10 **Level** 1

#### **Equivalent Units**

A1335 - Interpreting 1, A1336 - Interpreting 2, A3395 - Introduction to Interpreting

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This is a core unit for students in the Bachelor of Arts (Interpreting and Translation) course and an elective foundation unit for language key field of study in the BA. It introduces students to the theory and practice of Interpreting. Lectures are held in English for students of all the languages available. The tutorials are language specific in Arabic, Japanese, Mandarin or Spanish. This unit requires native or near-native proficiency in English and one of the languages offered in the unit.

### **400244.2 Introduction to Leisure and Recreation Theory**

**Credit Points** 10 **Level** 1

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This unit uses a multidisciplinary approach to explore the different meanings of leisure and recreation. It explores the social psychology of leisure and recreation in addition to the principles and processes of leisure education and leisure counselling. This unit provides the knowledge base that underpins the practical skills of leisure and recreation assessment, program planning and evaluation for a variety of client groups.

### **400776.2 Introduction to Nursing Practice**

**Credit Points** 20 **Level** 1

#### **Assumed Knowledge**

Knowledge gained from a biological or arts/ behavioural science degree or a three year post secondary school, overseas registered nurse qualification.

#### **Incompatible Units**

400640 - Foundations of Nursing Practice, 400462 - Medical-Surgical Nursing Therapeutics

#### **Special Requirements**

Space restriction in relation to CPU's safety dealing with the public.

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This unit introduces the student to nursing concepts, principles and skills that identify, promote, maintain and support health and well being across the lifespan. Students will also acquire knowledge of nursing concepts and practices that support people who are affected by health breakdown. This introductory unit prepares students for entry into the second year of the Bachelor of Nursing.

### **400160.3 Introduction to Occupational Therapy**

**Credit Points** 10 **Level** 1

#### **Special Requirements**

This is a specialty unit offered as a compulsory core unit of the occupational therapy program. It is profession specific, preparing students to practice as an occupational therapist and not relevant as an elective for non-occupational therapy students. If students are visiting a NSW Health facility they will need to comply with the NSW Health Occupational Screening and Vaccination Against Infectious Diseases Policy.

.....

This unit introduces students to the profession of occupational therapy, conceptual foundations underpinning the profession, and areas of clinical practice. Students will learn about the important and unique contribution made by occupational therapists in peoples lives to promote health and well-being. The important role of occupation in daily life will be discussed. In particular, this unit presents an overview of how occupational therapy reduces activity limitations people may have, and in doing so enhances the social participation for people of all ages and abilities. The problem solving process used by occupational therapists to assist clients will be introduced.

### **200042.3 Introduction to Operations Research**

**Credit Points** 10 **Level** 2

#### **Assumed Knowledge**

HSC Mathematics or equivalent.

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This unit introduces the ideas of systems and their mathematical modelling, with special reference to the allocation, inventory, scheduling, queuing and other processes taking place within social systems. It introduces modelling and heuristic problem solving techniques and goes on to introduce the standard techniques of linear programming, network analysis, critical path analysis, inventory control and simulation. Throughout, an emphasis is placed upon the mathematical development of algorithms and their computerisation.

### **300818.1 Introduction to Physiology**

**Credit Points** 10 **Level** 1

#### **Equivalent Units**

300753 - Introduction to Human Physiology, 300620 - Physiology 1

#### **Incompatible Units**

300361 - Introduction to Human Biology

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This unit introduces the concept of homeostasis and critically examines examples of how the body systems are regulated and homeostatically controlled. The unit uses a body-systems approach to examine the physiology of tissues, organs and systems in order to develop an integrated view of the regulated functioning of the human body.

### **700098.1 Introduction to Physiology (UWSC)**

**Credit Points** 10 **Level** 1

#### **Equivalent Units**

300753 - Introduction to Human Physiology, 300620 - Physiology 1, 300818 - Introduction to Physiology

#### **Incompatible Units**

300361 - Introduction to Human Biology, 700061 - Introduction to Human Biology (UWSC)

#### **Special Requirements**

Students must be enrolled at UWSCollege in either 7003 Diploma in Science or 7009 Diploma in Science Fast Track.

.....

This unit introduces the concept of homeostasis and critically examines examples of how the body systems are regulated and homeostatically controlled. The unit uses a body-systems approach to examine the physiology of tissues, organs and systems in order to develop an integrated view of the regulated functioning of the human body.

### **400906.2 Introduction to Physiotherapy Practice**

**Credit Points** 10 **Level** 1

#### **Special Requirements**

Students must be enrolled in course 4662 - Bachelor of Health Science/Master of Physiotherapy.

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This unit introduces students to the concept of physiotherapy as a profession and its scope of practice in Australia. It includes exploration of the roles and responsibilities of physiotherapists in the context of the changing health environment. Ethical issues and relevant legal and regulatory requirements will be discussed. In addition, students will be introduced to complexity of normal development, and its relation to human movement. Finally students will learn therapeutic techniques of soft tissue mobilisation. Unit material is presented to students in three blocks.

### **400905.2 Introduction to Podiatry**

**Credit Points** 10 **Level** 1

#### **Special Requirements**

Podiatry specific - students will be participating in podiatry related knowledge and skills that apply to podiatric practice units and designed to be an integrated part of the suite of units where one unit builds upon the competencies that complement units in Year 2, 3 and 4.

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The broad aim of this unit is to introduce the work of podiatrists in health care and explain the important role of podiatric services in the community. Students will develop basic skills in dealing with professional and health issues. The focus will primarily be on areas designed to prepare students for incorporating the correct clinical protocols for infection control and to identify relevant clinical skills involving dermatology, functional anatomy, gait, cursory examinations and communication.

### **101251.2 Introduction to Psychoanalysis**

**Credit Points** 10 **Level** 2

#### **Equivalent Units**

SS245A - Introduction to Psychoanalysis

#### **Special Requirements**

Successful completion of 60 credit points at Level 1.

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This unit provides an introduction to the work of Sigmund Freud by examining central concept and methodologies within Freudian theory. The unit is intended to provide a broad overview of psychoanalysis. In this unit particular attention is paid to key terms such as the unconscious and repression, as well as to the early case histories and Freud's later 'structural' models of the mind. Attention is paid also to critical assessments of psychoanalysis and to its status as a science.

### **400137.1 Introduction to Research for Health Sciences**

**Credit Points** 10 **Level** 1

#### **Equivalent Units**

E1235 - Research Methods in Health Care

#### **Incompatible Units**

63235 - Introduction to Social Research

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In 2010 this unit replaced by 400863 - Foundations of Research and Evidence-Based Practice. This unit lays down broad foundations of research as used in various disciplines of health sciences, including health and well-being, physical fitness, physical activity, and nutrition. The aim is to create an overall understanding of the significance of research in the students' fields of endeavour. It is designed to introduce the student to foundational concepts and principles in quantitative and qualitative research methods and to explore the complementary role of research paradigms as they underpin the quest for knowledge in the health sciences. It will also address

essential research themes such as epidemiology research, validity, reliability, and research ethics.

### 400164.2 Introduction to Sociology of Health

**Credit Points** 10 **Level** 2

#### Equivalent Units

E2231 - Social Dimensions of Health & Illness, 25006 - Introduction to Sociology of Health, 101336 - Introduction to Sociology

#### Incompatible Units

400781 - Dynamics of Health

The aim of this unit is to offer students new understandings of people in their relations with each other in complex social and cultural contexts. The unit uses health and illness as the prism through which such understandings can be gleaned. The unit introduces students to sociological perspectives and it applies sociological ways of thinking to questions of health, illness and disability. Students will study the influence of culture and social institutions, and of social determinants such as class (socio-economic status), gender, race/ethnicity in shaping social relations and in the production of differing patterns of health and illness. The 'body' as a social and cultural construct, as well as a physical entity, will be explored, as will models of health and health care.

### 300733.2 Introduction to Structural Engineering

**Credit Points** 10 **Level** 2

#### Prerequisite

**300040.2** Mechanics of Materials

#### Equivalent Units

85006 - Introduction to Structural Engineering

This unit covers the basic concepts in analysing and designing simple structural members. It consists of the fundamentals of structural analysis, concrete structures and steel structures

### 700115.1 Introduction to Structural Engineering (UWSC Assoc Deg)

**Credit Points** 10 **Level** 2

#### Prerequisite

**700116.1** Mechanics of Materials (UWSC Assoc Deg)

#### Equivalent Units

300733 - Introduction to Structural Engineering

#### Special Requirements

Students must be enrolled in 7022 Associate Degree in Engineering

This unit covers the basic concepts in analysing and designing simple structural members. It consists of the fundamentals of structural analysis, concrete structures and steel structures.

### 400136.1 Introduction to the Psychology of Health

**Credit Points** 10 **Level** 1

#### Equivalent Units

E2238 - Health & Human Behaviour

This unit introduces some of the core concepts, models, theories and methods of inquiry in psychology as they apply to health. Assumptions of human behaviour are examined, showing how these assumptions form the four foundational models of psychology. Those models being psychobiological, learning, cognitive and social. The application of these models to issues of development, personality, motivation and clinical applications allows students to address health topics such as stress, resilience and coping, smoking, eating disorders, disability and health practices.

### 100195.2 Introduction to Translation

**Credit Points** 10 **Level** 1

#### Equivalent Units

A1345 - Translation 1, A1346 - Translation 2, A3394 - Introduction to Translation

This is a core unit for students in the Bachelor of Arts (Interpreting and Translation) course and an elective foundation unit for language key field of study in the BA. It introduces students to translation theory and practice. Lectures are held in English for students of all languages. The tutorials are language specific in Arabic, Japanese, Mandarin and Spanish. The unit is only available to students with a high level of proficiency (native or near-native level) in one of the languages offered. The languages offered, subject to demand, are: Arabic, Chinese, Japanese, and Spanish.

### 300469.2 Introductory Chemistry

**Credit Points** 10 **Level** 1

#### Incompatible Units

300224 - Chemistry 1, 300554 - Principles of Chemistry, 300469 - Introductory Chemistry, CH101A - Introductory Chemistry 1.1D, 80800 - Introductory Chemistry 1

This unit is an introduction to the fundamental chemistry principles and skills required for students studying courses in food, nutrition, and the environment. The emphasis is on the structure and reactivity of substances and mixtures in different chemical environments, and exposed to different forms of electromagnetic radiation. The focus is on chemistry in aqueous environments and the atmosphere, and studied using a systems approach.

### 300808.1 Introductory Chemistry

**Credit Points** 10 **Level** 1

#### Assumed Knowledge

General Mathematics or equivalent.

### Equivalent Units

300469 - Introductory Chemistry

### Special Requirements

Students require safety goggles, laboratory coat and laboratory book.

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This unit is an introduction to the fundamental chemistry principles and skills required for students studying courses in food, nutrition, and the environment. The emphasis is on the structure and reactivity of substances and mixtures in different chemical environments, and exposed to different forms of electromagnetic radiation. The focus is on chemistry in aqueous environments and the atmosphere, and studied using a systems approach.

### 300809.1 Introductory Geochemistry

**Credit Points** 10 **Level** 1

### Prerequisite

**300822.1** Introduction to Earth Science

### Equivalent Units

300613 - Introductory Geochemistry: Earth, Resources and Environments

### Special Requirements

Students are required to wear enclosed footwear, safety goggles and lab coat in this unit.

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The exploration for resources requires knowledge of rocks and minerals as chemical systems. This unit investigates the chemical aspects of ore genesis, minerals and phase equilibria, and biogeochemistry of the elements. The chemical principles for the formation of Earth are detailed and applied to real-world examples. Field and laboratory work will include the acquisition, presentation, and use of geochemical data. A three day field trip to Burruga will be undertaken during the mid-session break.

### 100873.3 Inventing Modernity

**Credit Points** 10 **Level** 1

### Equivalent Units

63048 - Philosophy of the Enlightenment, B1892 - Political Thought

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A historical survey of the development of modern European society and politics. A central focus will be the relationship of early modern and contemporary understandings of politics, society, nature and the individual.

### 300918.1 Invertebrate Biology

**Credit Points** 10 **Level** 3

### Prerequisite

**300802.1** Biodiversity OR **300816.1** Cell Biology

### Equivalent Units

300334 - Invertebrate Biology

### Special Requirements

Students must have covered footwear for practical classes and field excursions; laboratory coat and safety glasses.

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This unit is an introduction to the exiting biology of invertebrate animals and their extensive interactions with the environment. Invertebrates are the most diverse and specious organisms within aquatic and terrestrial ecosystems as well as agricultural and urban environments. Many invertebrates are useful to humans, and some are harmful. The unit highlights their diversity, characteristics, relationships and research exploring their key ecological and economic importance. It also includes hands-on laboratory and field studies. This unit is designed for students with future career pathways in science (e.g. animal science, forensic science, environmental science, medical science), agriculture, horticulture, environmental management and education.

### 200057.3 Investment Management

**Credit Points** 10 **Level** 3

### Assumed Knowledge

200488 - Corporate Financial Management

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This unit describes the theory and practice of investment decision making. The general objective of the unit is to introduce students to the tools of financial decision making by providing a conceptual framework within which the key financial decision of investment can be analysed. The objectives of this unit are as follows: To provide an overview of the theory of investing in Australian Financial Markets: Equity Markets in Australia, Stock Exchange Trading, Taxation, Australian Debt Markets: Money and Bond Markets. International Investment Environment Foreign Exchange, Equity Debt and Property Market; To apply theoretical concepts of investing to practical applications; Evaluate Asset Allocation, Security selection and Security analysis in Australian Derivatives Markets, International Derivatives Market; Describe Equity Valuation Models, Macro and Industry Analysis of Share Markets; Futures and Forward Contracts. Characteristics of futures/ forwards; Analyse Qualitative and Quantitative Stock Selection; Be knowledgeable about Investor Preferences and Passive and Active Portfolio Management; Describe the risk-return trade-off and know the meaning of efficient markets.

### 101467.2 Islam in Southeast Asia

**Credit Points** 10 **Level** 3

### Equivalent Units

63213 - Islam in Asian and World Politics

### Special Requirements

Successful completion of 60 credit points

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Islam is a significant feature of Southeast Asia's past and present. Employing methodologies and insights drawn primarily from history, political science, and anthropology, this unit explores Islam's place in and contribution to

contemporary Southeast societies and politics, as well as its history in the region. Major themes to be explored include: the debates about Islam's spread to Southeast Asia and its interaction with the region's established socio-religious features, the colonial experience, Islam's often contested place in the national life of Southeast Asian nations, its past and ongoing links with the rest of the Muslim world, as well as contemporary issues associated with the War on Terror and conflicts in Muslim societies.

#### **101463.4 Islam in the Modern World**

**Credit Points** 10 **Level** 3

##### **Special Requirements**

Successful completion of 60 credit points

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This unit introduces students to Islam and its adherents within contemporary global context. It looks at key Muslim intellectuals from the 19th Century till the present and examines their attempts to come to terms with modernity as a Western project while addressing critical issues facing Islam. Areas for consideration include: renewal and reform; the impact of colonialism and globalisation on Muslim discourse; independent judgment (ijtihad) versus emulation (taqlid); and issues associated with civil society. Students will also explore the challenge of shaping a Muslim identity in the modern world in the context of key Muslim institutions and social movements.

#### **101822.2 Islam in the West**

**Credit Points** 10 **Level** 3

##### **Equivalent Units**

101463 - Islam in the Modern World

##### **Special Requirements**

Successful completion of 60 credit points

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The unit focuses on the question of Muslim presence in the West with reference to the dynamics of inclusion and exclusion. Its aim is to enable students to look at the question of Muslim presence in terms of an action-reaction phenomenon in which different outlooks, ideas, institutions and nodes of information and authenticity interact to create an environment in which identities are developed. These identities then go on to shape the cooperative and conflictual relationships between different subsections of Muslim minorities and the majority non-Muslim Western states and societies. While focusing on the contemporariness of the question, the unit would locate the study of Muslim presence in the West in an historical context by providing an understanding of how Muslim-Western contacts shaped the nature of their relationship in the past. Then, the unit would move on to contrasting the changes before and after 9/11 with reference to a set of ideas, institutions and contexts.

#### **101468.2 Islam, Media and Conflict**

**Credit Points** 10 **Level** 3

##### **Special Requirements**

Successful completion of 60 credit points.

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Provides students with an understanding of global, regional and local news media production and representations of Islam and Muslim societies. It discusses new, emerging and alternative forms of media discourses of conflict in the Muslim world, and analyses selected news reports as forms of case studies. Taking the notion of 'Orientalism' as its starting point, the subject/unit critically examines the extent to which the mediatisation of conflict impacts relations between Islam and the West vis-a-vis debates on Orientalism, 'Asian values' and Islamic world views.

#### **101465.2 Islamic Law in a Changing World**

**Credit Points** 10 **Level** 3

##### **Special Requirements**

Successful completion of 60 credit points including either 101462 - Understanding Islam and Muslim Societies or 101464 - Great Texts of Islam: Quran and Hadith or equivalent.

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This unit introduces students to Islamic legal theory, its sources and principles, and its application by different schools and scholars to derive religious verdicts. Students will study efforts to 'streamline' Islamic law through a number of Sunni and Shiite schools, various conceptions of shari'ah, and modern attempts at law reform through dynamic scholarship and ijtihad (independent judgment). Upon completion, students should be able to explain developments in Islamic legal thought within their socio-historical contexts, and identify key debates among Muslim scholars. Using current case studies, students will also study Islamic law issues affecting Muslims today, especially Muslim minorities.

#### **100130.2 Italian 101**

**Credit Points** 10 **Level** 1

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This is a beginners level unit in Italian intended for those with little or no knowledge of the language. It aims to introduce students to the four skills of listening, speaking, reading and writing in elementary Italian. The unit includes a socio-cultural component which will examine aspects of contemporary Italy and its culture with a particular emphasis on the Italian community in Australia.

#### **100131.2 Italian 102**

**Credit Points** 10 **Level** 1

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This is a post-beginners level unit in Italian intended for students with prior knowledge of the language. It aims to advance the development of the skills of aural comprehension, speaking, reading and writing acquired in Italian 1. The unit will provide students with the opportunity to extend their communication skills in Italian and provide them with additional lifelong language-learning strategies. It includes a continuation of the study of elements of contemporary Italy and its culture with a particular emphasis on the Italian community in Australia.

### **100138.2 Italian 303: Contemporary Italy in European and International Contexts**

**Credit Points** 10 **Level** 3

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This unit provides an overview of contemporary Italian culture and society and Italy's role within the European Community, as well as its cultural and trade relations with other areas of the world, specifically including Australia. These will be examined particularly through a critical appraisal of current print, radio and audio-visual media.

### **100140.1 Italian 305: Modern Literature**

**Credit Points** 10 **Level** 3

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This unit provides simultaneously an introduction to the social and cultural history of Italy from the Napoleonic era to the present day, and to the principal literary movements of the modern period. The unit is based on the joint study of a selection of representative narrative and poetic texts and appropriate background readings.

### **100141.2 Italian 306: Classical Literature**

**Credit Points** 10 **Level** 3

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This unit is an option within the Italian major program which provides an introduction to the social and cultural history of Italy from Roman times to the eighteenth century, and to the principal literary movements of this period. The study of classical Italian literature, beginning from the Middle Ages, is placed clearly in its historical context. The unit is based on the joint study of a selection of representative texts and appropriate background readings.

### **100143.2 Italian 308: Italian Cinema**

**Credit Points** 10 **Level** 3

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This is an elective unit for students with advanced language skills in Italian. Film is one of the most subtle and powerful means of communication in the twentieth and current centuries, and the moving image dominates popular consciousness on a global scale. This unit is designed to enable students to explore the different genres that are characteristic of Italian cinema, and to understand how these reflect the social, political and cultural changes in Italy in this and the last century.

### **100085.2 Japanese 101**

**Credit Points** 10 **Level** 1

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Note: The unit offerings for the 1H Teaching Period at Bankstown and Penrith campuses listed above are available only for students enrolled in course 1670 - Bachelor of Education (Birth - 5 years). Please note that enrolments will be monitored and students who are not enrolled in course 1670 will be required to withdraw from 1H and enrol in one of the alternative Teaching Periods

listed above. This unit introduces students to the four skills (listening, speaking, reading and writing) in basic Japanese. Students acquire the skill to carry out basic communicative transactions in speech, with the necessary grammatical structures and vocabulary. Students learn to read and write hiragana and katakana (the syllable characters used to spell words) characters.

### **100086.2 Japanese 102**

**Credit Points** 10 **Level** 1

#### **Assumed Knowledge**

100085 Japanese 101 or equivalent knowledge

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This unit builds on the skills developed in Japanese 101. It aims to have students increase the range of communicative transactions in the four skills and to acquire more complex grammatical structures and vocabulary. A further 110 kanji characters are taught in this subject.

### **100092.2 Japanese 302**

**Credit Points** 10 **Level** 3

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This unit is designed to continue to extend students' competence in Japanese, to a higher level than in Japanese 301. It enhances students' knowledge and comprehension of Japanese grammar, and develops their ability to apply this knowledge and comprehension in written and spoken Japanese. In addition to the language skills, this unit covers further aspects of Japanese culture through the texts and class discussions.

### **100093.2 Japanese 303: Contemporary Culture and Society**

**Credit Points** 10 **Level** 3

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This unit aims at providing students with a valuable insight into modern Japanese society and culture through print and audiovisual media. In addition, the unit aims to enhance students' skills in the language at an advanced level, especially speaking and listening.

### **100094.1 Japanese 304: Discourse in Japanese**

**Credit Points** 10 **Level** 3

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This unit is designed to enable post-intermediate students of Japanese to learn and practice advanced level discourse in Japanese in a range of situations, registers and levels of formality.

### **100096.2 Japanese 306: Japanese for Business**

**Credit Points** 10 **Level** 3

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This unit prepares students to function effectively in business and commercial contacts with Japanese people. It

will encompass the study of various types of business documents and spoken language appropriate to a range of business-related situations. It will also cover aspects of business culture and conventions.

### 100098.1 Japanese 308: Japanese Textual Studies

**Credit Points** 10 **Level** 3

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Nihonjinron (the theory of uniqueness of the Japanese) has been discussed for many decades. Some scholars advocate the need for re-examining the concept, while others still hold the view that the Japanese have different sensitivities and values from people with other ethnic backgrounds. This unit aims to develop students' awareness of some of the arguments on this topic by reading relevant texts written by sociologists, anthropologists and novelists. Students will have opportunities to examine, analyse, discuss and evaluate texts from a range of authors. Texts are all written in contemporary Japanese.

### 100001.3 Keeping the Past

**Credit Points** 10 **Level** 2

#### Equivalent Units

53403 - Keeping the Past

#### Special Requirements

Successful completion of 40 credit points at Level 1

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Legislation requires the preservation of natural, built and movable heritage, but choices about what to keep often produce controversy and reveal starkly varying opinions. Physical deterioration can mean that some things can not be kept. The historian's investigation of places and objects is an important part of the assessment process and the evaluation of what might be kept and why. Parramatta has a rich selection of heritage places. How does heritage fit in a modern CBD? Site visits around the city will identify archaeological and architectural heritage to promote discussions, visits to nearby museums will put these places in context and historical research will unravel their meanings.

### 300035.3 Kinematics and Kinetics of Machines

**Credit Points** 10 **Level** 2

#### Prerequisite

[200237.3](#) Mathematics for Engineers 1 AND [300463.2](#) Fundamentals of Mechanics

#### Equivalent Units

86222 - Engineering Mechanics 2

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In this unit rigid body kinematics is analysed from the freedom-and-constraints point of view and graphical approaches to velocity and acceleration analyses are covered. The unit looks at how one or more particles move in one, two or three dimensions and how forces cause

these movements. It also looks at how forces and couples cause the movement of a single rigid body in two and three dimensions. The movement of multi-body mechanisms and gear trains, and the geometry of gear teeth and cams are studied.

### 400752.2 Knowing Nursing

**Credit Points** 10 **Level** 1

#### Assumed Knowledge

400748 - Becoming a Nurse

#### Equivalent Units

400049 - Nursing Context 2

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This unit introduces students to further constructs that inform professional nursing and nursing practice related to health breakdown.

### 300883.1 Laboratory Quality Management

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

A demonstrated understanding of and competence with laboratory techniques in analytical chemistry or microbiology, corresponding to successful completion of a Level 2 Microbiology or Analytical Chemistry unit.

#### Equivalent Units

300656 - Laboratory Quality Management

#### Special Requirements

Successful completion of 60 credit points at level 1 and 40 credit points at level 2 in Bachelor of Science or Bachelor of Medical Science or Bachelor of Natural Science.

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This capstone unit is directed towards the accreditation of a laboratory for chemical, microbiological or forensic testing, using the standards that are applicable in industry. The unit focuses upon the importance and coordination of good laboratory management, teamwork, calibration, record keeping and laboratory manuals. Groups of students are required to develop, establish and operate a comprehensive Laboratory Quality Management system designed for a specific class of chemical, microbiological or forensic test. The students' technical competence and quality system are then assessed using the guidelines laid down by the National Association of Testing Authorities (NATA).

### 300138.3 LAN Workshop

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Ability to list, discuss and compare the elements of information coding and signal transmission. List, describe and explain the elements and functional relationships of communications hardware and software. Identify, locate, distinguish and describe the individual hardware components of a personal computer (PC) and explain their purpose, functions and operations. Install PC components, devices and peripherals in accordance with installation procedures and operational standards.

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This unit provides students with the knowledge and skills necessary to install, test, tune, customise, repair and maintain networking hardware and software necessary to create a Local Area Network (LAN). Students also learn how to administer a LAN by setting up user accounts, access privileges, security procedures and back-up/recovery procedures.

### **300875.1 Landuse and the Environment**

**Credit Points** 10 **Level** 2

#### **Equivalent Units**

300624 - Landuse and the Environment

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This unit will assist students develop a sound framework for the analysis of land use and its interactions with the environment. The skills gained will assist in the evaluation of land use at various levels from household to international level. Particular emphasis will be placed on students gaining a sound conceptual framework from which to examine sustainability at the environmental, economic, social, and production levels. Emphasis will be placed on the use of ecological footprinting as a tool.

### **101699.2 Language and Communication Skills 2A: Arabic**

**Credit Points** 20 **Level** 2

#### **Assumed Knowledge**

Successful completion of 20 credit points of Arabic Language at Level 1.

#### **Incompatible Units**

100043 - Arabic 201, 101267 - Language Skills 203: Listening and Speaking

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This is a post-beginner unit for intermediate level study of Modern Standard Arabic suitable for Post HSC entry. It aims to develop all four core skills, listening, speaking, reading and writing, towards more sophisticated communicative transactions ranging from casual to formal styles of speech. However, the special focus of this unit is on developing, in particular, listening and speaking skills in the Arabic language. Cultural and social understanding is also fostered through research projects on specific cultural or social aspects that are of interest to students. A range of CALL (Computer Assisted Language Learning) activities are utilised for this unit.

### **101700.2 Language and Communication Skills 2A: Chinese**

**Credit Points** 20 **Level** 2

#### **Assumed Knowledge**

Successful completion of 20 credit points of Chinese Language at Level 1.

#### **Incompatible Units**

100058 - Chinese 201, 101267 - Language Skills 203: Listening and Speaking

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This is post-beginner unit for intermediate level study of modern Chinese (Mandarin) language and its culture suitable for Post HSC entry. It aims to develop all four core skills, listening, speaking, reading and writing, towards more sophisticated communicative transactions ranging from casual to formal styles of speech. However, the special focus of this unit is on developing, in particular, listening and speaking skills in the Chinese language in relation to oral aspects of contemporary culture and society of China. Cultural and social understanding is also fostered through research projects on specific cultural or social aspects that are of interest to students. A range of CALL (Computer Assisted Language Learning) activities are utilised for this unit. The knowledge of Chinese characters is increased to 300 characters for reading and 200 for writing.

### **101701.2 Language and Communication Skills 2A: Italian**

**Credit Points** 20 **Level** 2

#### **Assumed Knowledge**

Successful completion of 20 credit points of Italian Language at Level 1.

#### **Incompatible Units**

100132 - Italian 201, 101267 - Language Skills 203: Listening and Speaking

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This is post-beginner unit for intermediate level study of modern Italian language suitable for Post HSC entry. It aims to develop all four core skills, listening, speaking, reading and writing, towards more sophisticated communicative transactions ranging from casual to formal styles of speech. However, the special focus of this unit is on developing, in particular, listening and speaking skills in the Italian language in relation to oral aspects of contemporary culture and society of Italian-speaking countries. Cultural and social understanding is also fostered through research projects on specific cultural or social aspects that are of interest to students. A range of CALL (Computer Assisted Language Learning) activities are utilised for this unit.

### **101702.2 Language and Communication Skills 2A: Japanese**

**Credit Points** 20 **Level** 2

#### **Assumed Knowledge**

Successful completion of 20 credit points of Japanese Language at Level 1.

#### **Incompatible Units**

100087 - Japanese 201, 101267 - Language Skills 203: Listening and Speaking

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This is post-beginner unit for intermediate level study of modern Japanese language and its culture suitable for Post HSC entry. It aims to develop all four core skills, listening, speaking, reading and writing, towards more sophisticated communicative transactions ranging from casual to formal



styles of speech. However, the special focus of this unit is on developing, in particular, listening and speaking skills in the Japanese language in relation to oral aspects of contemporary culture and society of Japan. Cultural and social understanding is also fostered through research projects on specific cultural or social aspects that are of interest to students. A range of CALL (Computer Assisted Language Learning) activities are utilised for this unit. The knowledge of kanji is increased to 260 characters.

### 101703.2 Language and Communication Skills 2A: Spanish

**Credit Points** 20 **Level** 2

#### Assumed Knowledge

Successful completion of 20 credit points of Spanish Language at Level 1.

#### Incompatible Units

100147 - Spanish 201, 101267 - Language Skills 203: Listening and Speaking

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This is post-beginner unit for intermediate level study of modern Spanish language suitable for Post Beginners HSC entry. It aims to develop all four core skills, listening, speaking, reading and writing, towards more sophisticated communicative transactions ranging from casual to formal styles of speech. However, the special focus of this unit is on developing, in particular, listening and speaking skills in the Spanish language in relation to oral aspects of contemporary culture and society of Spanish-speaking countries. Cultural and social understanding is also fostered through research projects on specific cultural or social aspects that are of interest to students. A range of CALL (Computer Assisted Language Learning) activities are utilised for this unit.

### 101704.2 Language and Communication Skills 2B: Arabic

**Credit Points** 20 **Level** 2

#### Assumed Knowledge

Successful completion of 20 credit points of Arabic Language at Level 1.

#### Incompatible Units

100044 - Arabic 202, 101268 - Language Skills 204: Reading and Writing

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This is post-beginner unit for intermediate level students learning Modern Standard Arabic and culture. This unit is suitable for Post HSC entry. It aims to further develop all four core skills, listening, speaking, reading and writing, towards more sophisticated communicative transactions ranging from casual to formal styles of oral and written skills. However, the special focus of this unit is on developing, in particular, reading comprehension, and writing skills over a range of written registers. The content for reading and writing activities is selected from contemporary materials e.g. daily exchanges in writing, book/film reviews, mini dramas, magazines as well as websites in relation to textual aspects of contemporary culture and society of the Arabic speaking world. This unit

also fosters cultural and social understanding by presenting aspects of contemporary cultures and societies that use the language as well as through research work on specific socio-cultural aspects that are of interest to the student.

### 101705.2 Language and Communication Skills 2B: Chinese

**Credit Points** 20 **Level** 2

#### Assumed Knowledge

Successful completion of 20 credit points of Chinese Language at Level 1.

#### Incompatible Units

100059 - Chinese 202, 101268 - Language Skills 204: Reading and Writing

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This is post-beginner unit for intermediate level students of modern Chinese (Mandarin) language and its culture. This unit is suitable for Post HSC entry. It aims to further develop all four core skills, listening, speaking, reading and writing, towards more sophisticated communicative transactions ranging from casual to formal styles of speech. However, the special focus of this unit is on developing, in particular, reading comprehension, and writing skills over a range of written registers. The content for reading and writing activities is selected from contemporary materials e. g. daily exchanges in writing, book/film reviews, mini dramas, magazines as well as websites in relation to textual aspects of contemporary culture and society of China. A range of CALL (Computer Assisted Language Learning) activities are utilised for this unit. The knowledge of Chinese simplified characters will increase to 400 for reading and 260 for writing.

### 101706.2 Language and Communication Skills 2B: Italian

**Credit Points** 20 **Level** 2

#### Assumed Knowledge

Successful completion of 20 credit points of Italian Language at Level 1 or equivalent knowledge.

#### Incompatible Units

100133 - Italian 202, 101268 - Language Skills 204: Reading and Writing

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This is a Level 2 unit in the Italian major within the Languages Key Program of the Bachelor of Arts. This unit is suitable for Post HSC entry. It aims to further develop all four core skills, listening, speaking, reading and writing, towards more sophisticated communicative transactions ranging from casual to formal styles of the language. However, the special focus of this unit is on developing, in particular, reading comprehension, and writing skills over a range of written registers. This unit also fosters cultural and social understanding by presenting aspects of contemporary cultures and societies that use the language as well as through research work on specific socio-cultural aspects that are of interest to the student. The content for reading and writing activities is selected from contemporary materials e.g., daily exchanges in writing, book/film reviews, mini dramas, magazines as well as websites in relation to

textual aspects of contemporary culture and society of Italy. A range of CALL (Computer Assisted Language Learning) activities are utilised for this unit. By the end of this unit, students can read and write approximately 3000 words.

### **101707.2 Language and Communication Skills 2B: Japanese**

**Credit Points** 20 **Level** 2

#### **Assumed Knowledge**

Successful completion of 20 credit points of Japanese Language at Level 1.

#### **Incompatible Units**

100088 - Japanese 202, 101268 - Language Skills 204: Reading and Writing

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This is a Level 2 unit in the Japanese major within the Languages Key Program of the Bachelor of Arts. This unit is suitable for Post HSC entry. It aims to further develop all four core skills, listening, speaking, reading and writing, towards more sophisticated communicative transactions ranging from casual to formal styles of speech. However, the special focus of this unit is on developing, in particular, reading comprehension, and writing skills over a range of written registers. This unit also fosters cultural and social understanding by presenting aspects of contemporary cultures and societies that use the language as well as through research work on specific socio-cultural aspects that are of interest to the student. The content for reading and writing activities is selected from contemporary materials e.g., daily exchanges in writing, book/film reviews, mini dramas, magazines as well as websites in relation to textual aspects of contemporary culture and society of Japan. A range of CALL (Computer Assisted Language Learning) activities are utilised for this unit. By the end of this unit, students can read and write approximately 380 kanji.

### **101708.2 Language and Communication Skills 2B: Spanish**

**Credit Points** 20 **Level** 2

#### **Assumed Knowledge**

Successful completion of 20 credit points of Spanish Language at Level 1.

#### **Incompatible Units**

100148 - Spanish 202, 101268 - Language Skills 204: Reading and Writing

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This is an intermediate unit for students of Spanish. This unit also fosters cultural and social understanding by presenting aspects of contemporary cultures and societies that use the language as well as through research work on specific socio-cultural aspects that are of interest to the student. This is post-beginner unit for intermediate level students of Spanish language and culture. This unit is suitable for Post HSC entry. It aims to further develop all four core skills, listening, speaking, reading and writing, towards more sophisticated communicative transactions ranging from casual to formal styles of speech. However, the special focus of this unit is on developing, in particular,

reading comprehension, and writing skills over a range of written registers. The content for reading and writing activities is selected from contemporary materials e.g. daily exchanges in writing, book/film reviews, mini dramas, magazines as well as websites in relation to textual aspects of contemporary culture and society of China. A range of CALL (Computer Assisted Language Learning) activities are utilised for this unit.

### **101709.2 Languages and Grammatical Concepts 3A: Arabic**

**Credit Points** 20 **Level** 3

#### **Assumed Knowledge**

Successful completion of 40 credit points of Arabic Language at Level 2.

#### **Incompatible Units**

100047 - Arabic 301, 101269 - Languages 303: Grammatical Concepts Across Languages

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This is an advanced Level 3 language and linguistics unit for students of modern Arabic. Lectures for the grammatical concepts component are held in English for students of all languages while other activities are language-specific. The aim of the unit is twofold. On the one hand it aims, to develop a practical and theoretical understanding of the ways in which major concepts used in everyday speech and writing are mapped and organized in the lexicon and the grammar of human languages, and how these forms develop in learners and users. On the other hand, it aims to develop advanced comprehension and production skills in Arabic language, including higher stages optional structures, through critical examination of contemporary and historical text and discourse samples from a variety of registers. An understanding of contemporary Arab culture and society is also fostered through comparative research projects on specific cultural, social and/or linguistic, aspects that are of interest to students. A range of CALL (Computer Assisted Language Learning) activities are utilised for this unit.

### **101710.2 Languages and Grammatical Concepts 3A: Chinese**

**Credit Points** 20 **Level** 3

#### **Assumed Knowledge**

Successful completion of 40 credit points of Chinese Language at Level 2.

#### **Incompatible Units**

100062 - Chinese 301, 101269 - Languages 303: Grammatical Concepts Across Languages

.....

This is an advanced Level 3 language and linguistics unit for students of modern Chinese. Lectures for the grammatical concepts component are held in English for students of all languages while other activities are language-specific. The aim of the unit is twofold. On the one hand it aims, to develop a practical and theoretical understanding of the ways in which major concepts used in everyday speech and writing are mapped and organized in the lexicon and the grammar of human languages, and how

these forms develop in learners and users. On the other hand, it aims to develop advanced comprehension and production skills in Chinese language, including higher stages optional structures, through critical examination of contemporary and historical text and discourse samples from a variety of registers. An understanding of traditional and contemporary Chinese culture and society is also fostered through comparative research projects on specific cultural, social and/or linguistic, aspects that are of interest to students. A range of CALL (Computer Assisted Language Learning) activities are utilised for this unit.

### **101711.2 Languages and Grammatical Concepts 3A: Italian**

**Credit Points** 20 **Level** 3

#### **Assumed Knowledge**

Successful completion of 40 credit points of Italian Language at Level 2.

#### **Incompatible Units**

100136 - Italian 301, 101269 - Languages 303: Grammatical Concepts Across Languages

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This is an advanced Level 3 language and linguistics unit for students of modern Italian. Lectures for the grammatical concepts component are held in English for students of all languages while other activities are language-specific. The aim of the unit is twofold. On the one hand it aims, to develop a practical and theoretical understanding of the ways in which major concepts used in everyday speech and writing are mapped and organized in the lexicon and the grammar of human languages, and how these forms develop in learners and users. On the other hand, it aims to develop advanced comprehension and production skills in Italian language, including higher stages optional structures, through critical examination of contemporary and historical text and discourse samples from a variety of registers. An understanding of contemporary Italian culture and society is also fostered through comparative research projects on specific cultural, social and/or linguistic, aspects that are of interest to students. A range of CALL (Computer Assisted Language Learning) activities are utilised for this unit.

### **101712.2 Languages and Grammatical Concepts 3A: Japanese**

**Credit Points** 20 **Level** 3

#### **Assumed Knowledge**

Successful completion of 40 credit points of Japanese Language at Level 2.

#### **Incompatible Units**

100091 - Japanese 301, 101269 - Languages 303: Grammatical Concepts Across Languages

.....

This is an advanced Level 3 language and linguistics unit for students of modern Japanese. Lectures for the grammatical concepts component are held in English for students of all languages while other activities are language-specific. The aim of the unit is twofold. On the one hand it aims, to develop a practical and theoretical understanding

of the ways in which major concepts used in everyday speech and writing are mapped and organized in the lexicon and the grammar of human languages, and how these forms develop in learners and users. On the other hand, it aims to develop advanced comprehension and production skills in Japanese language, including higher stages optional structures, through critical examination of contemporary and historical text and discourse samples from a variety of registers. An understanding of contemporary Japanese culture and society is also fostered through comparative research projects on specific cultural, social and/or linguistic, aspects that are of interest to students. A range of CALL (Computer Assisted Language Learning) activities are utilised for this unit.

### **101713.2 Languages and Grammatical Concepts 3A: Spanish**

**Credit Points** 20 **Level** 3

#### **Assumed Knowledge**

Successful completion of 40 credit points of Spanish Language at Level 2.

#### **Incompatible Units**

100151 - Spanish 301, 101269 - Languages 303: Grammatical Concepts Across Languages

.....

This is an advanced Level 3 language and linguistics unit for students of Spanish. Lectures for the grammatical concepts component are held in English for students of all languages while other activities are language-specific. The aim of the unit is twofold. On the one hand it aims, to develop a practical and theoretical understanding of the ways in which major concepts used in everyday speech and writing are mapped and organized in the lexicon and the grammar of human languages, and how these forms develop in learners and users. On the other hand, it aims to develop advanced comprehension and production skills in Spanish, including higher stages optional structures, through critical examination of contemporary and historical text and discourse samples from a variety of registers. An understanding of contemporary Spanish culture and society is also fostered through comparative research projects on specific cultural, social and/or linguistic, aspects that are of interest to students. A range of CALL (Computer Assisted Language Learning) activities are utilised for this unit.

### **200183.4 Law of Business Organisations**

**Credit Points** 10 **Level** 2

#### **Prerequisite**

**200184.3** Introduction to Business Law

#### **Equivalent Units**

LW208A - Law of Business Organisations, 61522 - Business Associations Law, F2066 - Business Associations Law

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This unit version replaces 200183 Law of Business Organisations from Autumn 2011. This unit deals with legal issues concerning the creation and control of companies and compares this structure with other forms of business organisations, such as partnership, trusts and sole traders.

This unit will provide students with an appreciation of the law of partnership, and companies and, for the sake of completeness and comparison, a brief examination of the law regarding unincorporated and incorporated non-profit associations.

### **101823.2 Lay Participation in Justice Processes**

**Credit Points** 10 **Level** 3

#### **Special Requirements**

Successful completion of 60 credit points.

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This unit examines the role lay people, or non-professionals, play in justice processes. This includes traditional forms of lay participation such as juries, and newer forms of community participation such as restorative justice and mediation. It encourages students to develop a deeper understanding of the legal institutions and practices of different traditions, improve their research skills and enhance their ability to work as part of a team.

### **400766.3 Leadership in Graduate Practice**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

In order to attain a satisfactory level of knowledge related to this unit, It is expected that the student will have a sound understanding of psychosocial concepts and theories and their relationship to: interpersonal communication and role of the nurse, and; the contextual influence upon nursing practice. Due to the latter, it is expected that the student will be in the 3rd year of the Bachelor of Nursing program (or accredited equivalent) and have undertaken recent clinical practicum experience.

#### **Equivalent Units**

400063 - Nursing Context 6

#### **Special Requirements**

Students must be enrolled in the Bachelor of Nursing or Bachelor of Nursing (Graduate Entry)

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This unit introduces the student to the role of the professional nurse as leader and manager.

### **400849.1 Leadership in Graduate Practice (Advanced)**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

Completion of all Year 1 and Year 2 Nursing units.  
Completion of all Year 2 Bachelor of Nursing (Advanced) units

#### **Incompatible Units**

400766 - Leadership in Graduate Practice

#### **Special Requirements**

Restrictions on clinical practicum placements students must be enrolled in the Bachelor of Nursing (Advanced) and meet special requirements for safety and professional issues when dealing with the public. Special Requirements

are those stipulated by the NSW Health and UWS. At present these include: • Prohibited Persons Employment Declaration (PPED) • Criminal Record Check (CRC) • Adult Health Immunisation • Workcover accredited Senior First Aid Certificate

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This unit introduces the student to the role of the professional nurse as leader and manager. The unit provides opportunities to explore the role of the nurse as leader and manager of a team alongside medical students. The student will be provided with an opportunity to participate in a mentored relationship with appropriate School and College staff.

### **101259.2 Learning and Creativity**

**Credit Points** 10 **Level** 2

#### **Equivalent Units**

SE111A - Learning and Creativity

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This unit examines the inter-related processes of learning and creativity and the application and practice of these in all aspects of life. Learning and creativity is contextual. This context is personal, social, cultural and environmental. Unit content is critically positioned within diverse theories, with an emphasis on experiential learning and ongoing critical reflection. The unit promotes understanding of feeling and experience as much as concepts and ideas. It emphasizes the tools and skills of learning, the everyday nature of creativity and enables students to develop and apply their creativity. It is designed for students interested in personal, community and cultural development, in the context of far reaching change.

### **101758.1 Learning through Indigenous Australian Community Service (Day Mode)**

**Credit Points** 10 **Level** 3

#### **Prerequisite**

**101751.2** Contextualising Indigenous Australia (Day Mode)

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This unit is available to all Undergraduate students who have open electives. Learning through Indigenous Australian Community Service will provide students with an exciting opportunity to apply their disciplinary knowledge and skills in an Indigenous Australian cultural context. Students will negotiate a project with an Indigenous community and undertake a ten day / fifty hour placement. Students will gain cross cultural awareness and insights as well as knowledge about Indigenous community affairs including cultural protocols, decision-making and leadership. This experience will provide students with a level of cultural understanding and competency that can lead to improved communication skills and effective partnering with Indigenous people, organisations and communities.

### 101568.3 Legislation, Courts and Policing

**Credit Points** 10 **Level** 2

#### **Incompatible Units**

400294 - Law, Evidence and Procedure

#### **Special Requirements**

Students must be enrolled in 4555 or 1662 - Bachelor of Policing

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This unit introduces students to the adversarial system, the legislative context of everyday policing, and the different forms of state and federal courts. It includes an emphasis on police powers (NSW and elsewhere), summary and indictable offences, and the role of enforcement and discretion. In particular alternative resolution, specialist courts and Australian Indigenous Law are described and their role and function analysed. This unit is of value to students in policing, criminology, law, and community welfare.

### 400789.3 Leisure Education Programming and Mental Health

**Credit Points** 10 **Level** 3

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In this unit students will explore leisure education that is used in a broad range of service industries that focus on the development and acquisition of a range of leisure, recreation and programming related skills, knowledge and attitudes. Students will develop a philosophical approach to leisure and recreation and skills in communication and facilitation strategies to enable them to use appropriate decision-making processes in developing recreation programs for a range of people across the lifespan. Students will utilise a variety of leisure, recreation and tourism resources to develop recreation programs that will assist in enhancing the lifestyle opportunities and leisure experiences for the client populations they serve.

### 200027.2 Linear Algebra

**Credit Points** 10 **Level** 2

#### **Assumed Knowledge**

Content of 200025 - Discrete Mathematics

#### **Equivalent Units**

J1730 - Mathematics 1.2, J2764 - Mathematics 2.1, 14501 - Mathematics 1, 14503 - Mathematics 3

.....

Objective of this unit is to present the main fundamentals of linear algebra and includes such topics as solving systems of linear equations, matrix algebra, determinants, eigenvalues and eigenvectors, Euclidean vector spaces, general vector spaces, inner product spaces and linear transformations.

### 100928.3 Linguistics

**Credit Points** 10 **Level** 2

#### **Equivalent Units**

A1082 - Linguistics

#### **Special Requirements**

Successful completion of 40 credit points at Level 1

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Language is an integral component of the human experience. Pervasive across the humanities and the world of communication and culture, language is multi-faceted and remarkably complex. This unit is designed to raise students' awareness of the nature of language. Students will gain the conceptual tools to understand language as both a social and a biological phenomenon. By providing a basic understanding and appreciation of language from different perspectives, the unit establishes points of contact between language, the humanities, and beyond.

### 101724.2 Literary Animals

**Credit Points** 10 **Level** 3

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This unit explores a selection of literary works that invite us to examine the tenuous border separating the "human" from the "non-human." Readings will allow students to learn how literary texts employ various formal techniques (allegory, anthropomorphism, etc.) that call into question the conventional opposition between human and animal. Particular attention will be given to the intersection of animality, race, gender, and sexuality. Readings may include one or more national literatures, such as American or Australian literature.

### 100875.4 Literature and Philosophy

**Credit Points** 10 **Level** 3

#### **Special Requirements**

Successful completion of 60 credit points

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This unit will examine ways in which literature and philosophy interact. It will consider the ways in which literature and philosophy offer important and different ways of thinking. And it will consider the differences between literature and philosophy. Literature will be understood to involve thinking through sensations, while philosophy will be understood to involve thinking through concepts. The unit will examine examples of interaction between literary texts and philosophical texts, considering how literary effects can inhabit philosophical texts and philosophical ideas can permeate literary texts. The unit will consider frequently occurring themes within both literature and philosophy, such as ethics (ways of living and acting).

### 101739.3 Literature and Trauma

**Credit Points** 10 **Level** 3

#### **Special Requirements**

Successful completion of 60 credit points

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This unit considers the relationship between narrative and trauma and writing and trauma. It looks at the discourses of trauma, including psychoanalytic and psychiatric, philosophical and that belonging to literary criticism. It considers the politics of testimony and trauma in history; the role of narrative in healing and the remaking of Self; the crises of the "witness" and the limits of narrative in recalling trauma in psychoanalysis, literature, and history. It considers the socially produced limits of narratives of trauma. It also considers the meeting point between trauma, its wound and writing. The unit canvasses a raft of life-writing and fictional writing whose subject is trauma and or traumatic experience.

### **100874.4 Literature, History and Culture**

**Credit Points** 10 **Level** 3

#### **Equivalent Units**

B3849 - Nineteenth Century English and European Literature

#### **Special Requirements**

Successful completion of 60 credit points

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This unit focuses on literary and cultural history up to the early twentieth century, and may encompass study of a range of texts from classical literature to modernism. Depending upon individual staff expertise, particular emphases will include early modern (sixteenth and seventeenth century), Augustan, Romantic and Victorian literature.

### **101733.2 Looking at Global Politics Through Film**

**Credit Points** 10 **Level** 3

#### **Special Requirements**

Successful completion of 60 credit points

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Popular representations of world politics shape our collective understanding of political history and international relations. This unit examines the ways in which film can communicate political messages to its audience, as well as the far more difficult issue of the effects that those messages might have on viewers. Although the discipline of International Relations (IR) has overwhelmingly ignored popular culture, it is the argument of this unit that popular culture actually provides us with a wealth of significant representations of world politics.

### **400768.3 Maintaining Clinical Currency**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

An understanding of the nature of health, principles and mechanisms involved in body function, principles of safe nursing practice including safe administration of medications and components of effective interpersonal communication.

#### **Prerequisite**

**400064.1** Nursing Context 7 OR **400764.1** Transition to Graduate Practice

#### **Equivalent Units**

400619 Nursing Therapeutics 12

#### **Special Requirements**

Students must be in final session of course 4642. Special Requirements are those stipulated by the NSW Health and UWS. At present these include: Prior to enrolling in this unit students must have: 1) submitted a Criminal Record Check form prior to 1 June 2010 or a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate 2) submitted a Prohibited Employment Declaration prior to 1 June 2010 or a Working with Children Check Student Declaration after 1 June 2010 3) Adult Health Immunisation 4) Workcover accredited Senior First Aid Certificate

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This unit provides students with the opportunity to review: the pathophysiological aspects of health breakdown in individuals; the knowledge of pharmacological processes within nursing practice; and to demonstrate competency in skills essential to the nursing management of individuals with various types of health breakdown. In addition, students will complete a four-week negotiated clinical practicum prior to graduate employment.

### **300459.2 Major Project Commencement**

**Credit Points** 20 **Level** 4

#### **Assumed Knowledge**

Knowledge related to the successful completion of year 3 Industrial Design is assumed.

#### **Prerequisite**

**300313.3** Design Studio 4: Simulate to Innovate AND **300314.2** Designed Inquiry

#### **Corequisite**

**10915.2** Industrial Experience

#### **Special Requirements**

Successful completion of 220 credit points.

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This unit prepares students to be flexible and innovative, with the emphasis placed on design, and its place in and effect on society and people. Students are challenged to respond to a real world design brief focusing on a specific user group and context-of-use. Students undertake desk, field and practical research in order to find design opportunities for detailed development in the second semester of the fourth year program. Peer learning is an important part of the learning experience, as is a user-centred design research approach and is facilitated by an intensive off-campus field trip in the project start-up phase.

### 300460.2 Major Project Completion

**Credit Points** 30 **Level** 4

#### Assumed Knowledge

Knowledge related to the successful completion of year 3 Industrial Design is assumed and successful completion of Major Project Commencement and Major Project Commencement's co-requisite units.

#### Prerequisite

**300459.2** Major Project Commencement

#### Corequisite

**300013.3** Design Management 2: Corporate Image and Identity OR **300015.3** Design Management 4: Design Process OR **300315.3** Industrial Graphics 5: Integrated

Major Project Completion is the project realisation component of the student's final year program. The unit offers the student the chance to consolidate the range of methodologies and processes developed and evaluated in Major Project Commencement, that contextualise the principles and practices that will lead to the realisation of their identified design solution. The final design outcome will form part of the final year graduate exhibition. The design solution which students will be developing and submitting for this unit responds to the design brief developed in Major Project Commencement.

### 300536.2 Major Project in Construction

**Credit Points** 10 **Level** 4

#### Prerequisite

**200485.2** Decision Making for Construction Professionals

#### Equivalent Units

BG402A - Major Project 1

This unit will enhance the ability of students to investigate a selected topic with a construction industry focus. The unit involves the preparation of a literature review, in consultation with an external supervisor from industry. Content: mechanics of a literature review, use of research (or strategic planning) in the construction industry, development of high-value competencies in terms of marketing, organisational structure and project management.

### 200116.4 Management Accounting Fundamentals

**Credit Points** 10 **Level** 1

#### Prerequisite

**200101.3** Accounting Information for Managers OR **200103.1** Accounting Reports and Decisions

#### Corequisite

**200111.2** Financial Accounting Applications

This unit provides an introduction to management accounting in an e-commerce environment. The

interrelations of management accounting to other functional areas, to suppliers, to customers, and to other sources of external information relevant to planning and control are examined. Topics include the development and logic of routine and non routine analysis performed to support management decision making.

### 200571.2 Management Dynamics

**Credit Points** 10 **Level** 1

#### Corequisite

**200336.3** Business Academic Skills

#### Special Requirements

External offerings for this unit are only available to students who are enrolled in a Property course, Key Program or Major.

This unit provides an opportunity for students to engage with the dynamics of the management of organisations. Students will be introduced to the connection between the way work and systems are organised and managed and their impact on individuals and societies. This is achieved by using case based opportunities to examine real life contexts. This is an essential unit for business students that can be taken by any student needing a broad initial understanding of management.

### 700003.2 Management Dynamics (UWSC)

**Credit Points** 10 **Level** 1

#### Equivalent Units

200571 - Management Dynamics

#### Special Requirements

Students must be enrolled at UWS College.

The unit provides an opportunity for students to engage with the dynamics of the management of organisations. Students will be introduced to the connection between the way work and systems are organised and managed and their impact on individuals and societies. This is achieved by using case based opportunities to examine the real life contexts. This is an essential unit for business students that can be taken by any student needing a broad initial understanding of management.

### MG102A.3 Management Foundations

**Credit Points** 10 **Level** 1

#### Special Requirements

Students must be enrolled in the Bachelor of Engineering, Bachelor of Construction Management, Bachelor of Technology, or Bachelor of Housing.

Management Foundations provides an opportunity for students to understand the linkage between organisational processes and managerial practices. The main aim of the unit is to identify the dynamic nature of managerial practice in changing social, economic, technological and global environments. This unit is for students in the School of Engineering only.

### **300633.1 Management of Aquatic Environments**

**Credit Points** 10 **Level** 1

#### **Equivalent Units**

EY104A - Management of Aquatic Environments

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In 2012 this unit is replaced with 300824 - Management of Aquatic Environments. This unit uses the setting of surface freshwater aquatic environments to develop an understanding of a range of professional skills and values necessary for the theory and practice of environmental management. Working in small groups students investigate the philosophy and practice of science through the design and implementation of field studies that investigate the nature of pollution, evaluate the current condition of aquatic systems and recommend strategies that will improve ecosystem integrity and mitigate the risk of adverse human health outcomes.

### **300824.1 Management of Aquatic Environments**

**Credit Points** 10 **Level** 1

#### **Equivalent Units**

300633 - Management of Aquatic Environments

#### **Special Requirements**

Students will need a lab coat and suitable protective clothing for fieldwork.

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This unit introduces students to the physical, chemical and biological nature of water systems and the linkages to human activity. These linkages include a development of an appreciation of the essential services and broad uses and values of water in modern human society, and the natural environment. Students are challenged to examine the causes and effects of water pollution and environmental degradation. Students are introduced to scientific water sampling, analysis and reporting of water quality and pollution.

### **200570.3 Management of Change**

**Credit Points** 10 **Level** 3

#### **Equivalent Units**

H3741 - Management of Change

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This unit introduces the concepts of organisational change, the need to manage change as a change agent and how to develop and optimise change models and schemes. In this unit we encourage you to consider the world from different perspectives. We wish you to challenge your own ways of learning and to try to include more reflection in the work that you do. The unit will be driven by theory as well as practice and will need you to read conflicting viewpoints in order to understand the complexity of the relationships we are discussing.

### **200150.2 Managing Diversity**

**Credit Points** 10 **Level** 3

#### **Prerequisite**

**200300.2** Managing People at Work

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This unit explores the complexities and challenges of managing diverse workforces in contemporary organisations. Using applied learning approaches, students are required to formulate corporate policies relating to diversity and then evaluate the implications for implementing these policies in a real world setting. As a key component of human resource management, students are expected to appreciate both the theoretical and practical elements of managing diversity and are required to reflect on their own learning process throughout the unit.

### **200300.2 Managing People at Work**

**Credit Points** 10 **Level** 1

#### **Equivalent Units**

200151 - Management of Employment Relations, 61428 - Introductory Employment Relations, 61411 - Australian Employment Relations

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Managing People at Work provides an introductory framework for the study of employment relations. The unit is approached from a stakeholder perspective, emphasising the way that management, labour and the state, along with other key stakeholders, act, both separately and together, to structure the employment relationship. In doing so, the unit integrates industrial relations and human resource management theory and practice, illustrating the links between the two disciplines. The content of the unit is structured so as to provide an initial introduction to the disciplines of industrial relations, human resource management, and employment relations, and to the key stakeholders in the employment relationship. Building on this framework, a theoretical and empirical analysis of employment relations processes is provided, with particular emphasis given to recent changes in the role and perspectives of stakeholders.

### **200273.4 Managing Service and Experience**

**Credit Points** 10 **Level** 2

#### **Equivalent Units**

200564 - Introduction to Sport Management, 400319 - Sport Management 1

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As service provision becomes increasingly important across a number of industries, some firms are moving beyond the idea of providing a service to providing a total customer experience. Managing Service and Experience introduces students to the exciting concepts of management in the service and experience economy. The unit examines the development of the experience economy and the specialist skills required to manage commercial organisations in the emerging experience economy. Key areas which are covered include: the experience economy, the



characteristics of service, service development, service evaluation & service improvement.

### 200709.2 Managing the Accommodation Experience

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Students are expected to have gained an introductory level of knowledge in hospitality management.

#### Equivalent Units

200144 - Lodging Management

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The accommodation sector is an integral part of the hospitality experience. It requires the combination of intangible service and experience with the tangibility of a product which is used by guests. The need to stay competitive in this growing and competitive market creates a need for organisations to look beyond the historical components such as affordability, suitability and luxury. This unit gives students the opportunity to develop an understanding of these accommodation issues as they relate to hospitality organisations.

### 200710.2 Managing the Food and Beverage Experience

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Students are expected to have gained an introductory level of knowledge in hospitality management.

#### Equivalent Units

200145 - Food Service Systems

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The provision of Food and Beverage is a key component of the hospitality industry and is a prominent feature of the experience economy. Future managers and decision-makers need a thorough knowledge of the nature and characteristics of modern food and beverage service to gain competitive advantage. This unit draws upon traditional gastronomy to examine the role of food & beverage in society. A systems approach to food and beverage service management is then utilized to understanding the delivery of a food and beverage experience.

### 200086.3 Marketing Communications

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Basic principles of marketing

#### Prerequisite

**200083.2** Marketing Principles

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Developing and managing an effective integrated marketing communications (IMC) program is a vital part of successful marketing. Moreover, IMC is a highly visible and demanding aspect of marketing communication effort at brand level. This unit, grounded in marketing principles,

provides students with an understanding of coordinating major elements of the communication mix - advertising, sales promotions, personal selling, sponsorship marketing, public relations, direct marketing, and point of purchase material.

### 200090.3 Marketing of Services

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

An advanced understanding of Marketing theory and practice

#### Prerequisite

**200083.2** Marketing Principles

#### Equivalent Units

MK319A - Services Marketing, 61726 - Services Marketing

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Given the service-based nature of modern economies, business graduates will either work for firms whose central offering is service or be employed by organisations that use service as an integral supporting element in what they do and what they offer. Therefore, increasingly, knowledge and skills in the field of marketing of services are required by personnel operating across various industries and in a range of roles. The unit aims to: expose students to relevant theory and practice in the field of services marketing; develop participants into more complete marketers capable of operating in service marketing environments.

### 200096.3 Marketing Planning Project

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

An understanding of marketing concepts including the elements of consumer behaviour, marketing research methods, marketing communications, channel management and distribution, brand and product management, competitive strategy and quantitative methods in marketing. The basics of economics, finance and accounting, mathematics and statistics and general communications are also assumed.

#### Prerequisite

**200083.2** Marketing Principles

#### Equivalent Units

61734 - Marketing Project, MK311A - Marketing Planning Project

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Marketing planning project (MPP) assimilates and builds on the wide range of marketing units that students have previously completed. MPP assimilates students' specialist knowledge developed in other units through the use of a 'real-life' case context in which students demonstrate their mastery of marketing in the development and presentation of a professional marketing plan.

### 200083.2 Marketing Principles

**Credit Points** 10 **Level** 1

#### Equivalent Units

61711 - Marketing Principles, H2808 - Principles of Marketing, MK104A - Marketing Fundamentals

#### Special Requirements

External offerings for this unit are only available to students who are enrolled in either a Property course, Key Program or Major.

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This unit is a survey of the marketing process, introducing students to the marketing concept, strategic and marketing planning, marketing research, consumer and customer behaviour, issues of market segmentation, targeting and positioning as well as all the elements of the marketing mix (product/service, pricing, distribution and marketing communication strategies).

### 200592.2 Marketing Research

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Basic principles of marketing, consumer behaviour and statistics.

#### Prerequisite

**200032.5** Statistics for Business AND **200083.2** Marketing Principles

#### Equivalent Units

200085 - Fundamentals of Marketing Research

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Marketing Research provides a comprehensive appreciation of the methods, uses and limitations of contemporary marketing research. The emphasis is on a conceptual understanding of research method rather than applied research application, which is the focus of a later unit. Students gain exposure to concepts such as research design, information collection, data processing and analysis and results communication. Students gain exposure to qualitative and quantitative techniques with an appreciation of the role of computer processing in marketing research.

### 200472.3 Material Science in Construction

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Contents covered in Building 1.

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This unit deals with the behaviour of building materials and products in the construction context, including concrete, timber, metal, composites and polymers. An introduction will be given first on how material behaviour and properties are affected by micro-structure, composition and environment. Materials will be discussed in detail according to their physical properties and how they degrade in context. We will also discuss how the materials are manufactured and used and what their environmental impacts are.

### 200022.3 Mathematical Modelling

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Matrix algebra and how to find eigenvalues and eigenvectors.

#### Prerequisite

**200030.2** Differential Equations

#### Equivalent Units

14336 - Mathematical Modelling 1, J3674 - Mathematical Modelling, 14407 - Differential Equations Modelling

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Mathematical Modelling is about solving real world problems. The real world is a complicated place which we often need or want to understand better. One way to do this is to set up a mathematical model which we hope can provide insights, predictions and a greater understanding of a complex system. Selected real-world problems are approximated by mathematical models that are amenable to being written in terms of linear and non-linear equations or differential equations. Once equations are solved emphasis is placed on interpreting solutions, modifying models as required and using models for prediction.

### 300691.2 Mathematical Reasoning

**Credit Points** 10 **Level** 1

#### Equivalent Units

300589 - Mathematics Toolbox

#### Special Requirements

Only students enrolled in a Science / Computing / Business degree course should enrol in this unit and this enrolment must take place in their first year of study. Students may not concurrently enrol in Mathematical Reasoning and any other mathematics / statistics unit. Due to the requirements above, permission is required to enrol in this unit. 300691 Mathematical Reasoning is incompatible with the following units: DN206A Planning Research Methods, 200022 Mathematical Modelling, 200023 Analysis, 200024 Mathematical Finance, 200025 Discrete Mathematics, 200026 Advanced Maths for Business, 200034 Statistical Theory, 200036 Data Mining & Visualisation, 200037 Regression Analysis & Experimental Design, 200038 Time Series & Forecasting, 200041 Applied Regression and Forecasting, 200042 Introduction to Operations Research, 200237 Mathematics for Engineers 1, 200238 Mathematics for Engineers 2, 200242 Mathematics for Engineers 3, 200424 Statistics for Accountants, 200027 Linear Algebra, 200028 Advanced Calculus, 200030 Differential Equations, 200031 Mathematics for Business, 200032 Statistics for Business, 200033 Applied Statistics, 200045 Quantitative Project, 200182 Quantitative Techniques, 200189 Concepts of Mathematics, 200192 Fundamentals of Mathematics, 200192 Statistics for Science, 200193 Abstract Algebra, 200263 Biometry.

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This unit will cover basic mathematical concepts, such as algebraic, graphical, trigonometric and arithmetic skills that are needed in a variety of contexts. In any one semester, six areas on content will be considered from the following -

Basic Numerical Operations, Basic Algebraic Operations, Functions and Graphs, Linear Equations, Quadratic Equations and Quadratic Functions, Basic Trigonometry, Financial Mathematics and Basic Statistics. In addition to the mathematical content, students will be exposed to strategies that will help them to learn to study mathematics effectively and also to lessen any mathematical anxiety problems that they may experience.

**300672.1 Mathematics 1A**

**Credit Points** 10 Level 1

**Assumed Knowledge**

HSC Mathematics achieved at band 4, 5 or 6 or equivalent, or 200191 Fundamentals of Mathematics

**Equivalent Units**

200189 - Concepts of Mathematics

**Special Requirements**

This unit is not available to students enrolled in 3621 Bachelor of Engineering.

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This level one hundred unit provides a solid foundation in the theory and applications of differential calculus, as well as some introductory work on complex numbers. It is the first of two units developing aspects of calculus.

**300672.2 Mathematics 1A**

**Credit Points** 10 Level 1

**Assumed Knowledge**

Mathematics achieved at bands 5-6, or 300830 Analysis of Change.

**Equivalent Units**

200189 - Concepts of Mathematics

**Special Requirements**

This unit is not available to students enrolled in 3621 Bachelor of Engineering and 3664 Bachelor of Engineering Science.

.....

This level one unit provides a solid foundation in the theory and applications of differential calculus, as well as some introductory work on complex numbers. It is the first of two units developing aspects of calculus.

**300673.2 Mathematics 1B**

**Credit Points** 10 Level 1

**Prerequisite**

**300672.2** Mathematics 1A

**Equivalent Units**

200189 Concepts of Mathematics

**Special Requirements**

This unit is not available to students enrolled in 3621 Bachelor of Engineering and 3664 Bachelor of Engineering Science.

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This Level 1 unit provides a solid foundation in the theory and applications of integral calculus, as well as some introductory work on linear algebra and infinite sequences and series. It is the second of two units developing aspects of calculus.

**700069.2 Mathematics B (UWSCFS)**

**Credit Points** 10 Level Z

**Assumed Knowledge**

Completion of Year 10 Mathematics or equivalent.

**Equivalent Units**

900033 - Mathematics B

**Special Requirements**

Students must be enrolled at UWS College in 7015 Diploma in Construction Management or 7003 Diploma in Science.

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This unit has been specifically designed for students who need to refresh or upgrade their understanding of basic mathematical concepts taught in high school mathematics. The topics include basic arithmetic and algebra, geometry, trigonometry, coordinate geometry, quadratic functions, indices, logarithms and an introduction to differential calculus.

**700025.1 Mathematics C (UWSCFS)**

**Credit Points** 10 Level Z

**Special Requirements**

Students must be enrolled at UWS College.

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The Mathematics C unit is designed and written to prepare students for mathematical study at first year university level, specifically in the area of Engineering. It provides a comprehensive introduction to the study of calculus and its applications in the real world.

**200237.3 Mathematics for Engineers 1**

**Credit Points** 10 Level 1

**Assumed Knowledge**

HSC Mathematics achieved at band 5 or 6. This is the minimum requirement.

**Equivalent Units**

14505 - Engineering Mathematics 1, 200195 - Mathematical Methods A, 200196 - Mathematical Methods B

**Incompatible Units**

200031 - Mathematics for Business, 200189 - Concepts of Mathematics, 300672 - Mathematics 1A, 300673 - Mathematics 1B

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This unit is the first of two mathematics units to be completed by all students enrolled in an engineering degree during their first year of study. The content covers a number of topics that underpin the later-stage engineering mathematics units. The subject matter includes: differential and integral calculus of a single variable, complex numbers,

aspects of matrix algebra, vectors, and some elementary statistics and probability theory. The aim of this unit is to introduce a number of key mathematical concepts needed in the study of Engineering, and to provide a solid foundation for the follow-on unit Mathematics for Engineers 2.

### **700101.1 Mathematics for Engineers 1 (UWSC Assoc Deg)**

**Credit Points** 10 **Level** 1

#### **Assumed Knowledge**

HSC Maths achieved at band 5 or 6. This is the minimum requirement.

#### **Prerequisite**

**700103.1** Mathematics for Engineers Preliminary (UWSC Assoc Deg)

#### **Equivalent Units**

200237 - Mathematics for Engineers 1, 700019 - Mathematics for Engineers 1 (UWSC)

#### **Special Requirements**

Students must be enrolled in 7022 Associate Degree in Engineering

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The content of this unit covers a number of topics that underpin the later-stage engineering mathematics units. The subject matter includes: differential and integral calculus of a single variable, complex numbers, aspects of matrix algebra, vectors, and some elementary statistics and probability theory. The aim of this unit is to introduce a number of key mathematical concepts needed in the study of Engineering, and to provide a solid foundation for the follow-on unit - Mathematics for Engineers 2.

### **700019.3 Mathematics for Engineers 1 (UWSC)**

**Credit Points** 10 **Level** 1

#### **Prerequisite**

**700025.1** Mathematics C (UWSCFS)

#### **Equivalent Units**

200237 - Mathematics For Engineers 1

#### **Incompatible Units**

300672 - Mathematics 1A, 300673 - Mathematics 1B, 200191 - Fundamentals of Mathematics, 300743 - Mathematics for Engineers Preliminary

#### **Special Requirements**

Students must be enrolled at UWSCollege, unless specific permission has been granted by the School of Engineering.

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This unit is the first of two mathematics units to be completed by students enrolled in an engineering degree during their first year of study. The content covers a number of topics that underpin the later-stage engineering mathematics units. The subject matter includes: differential and integral calculus of a single variable, complex numbers, aspects of matrix algebra, vectors and some elementary statistics and probability theory. The aim of this unit is to

introduce a number of key mathematical concepts needed in the study of Engineering and to provide a solid foundation for the follow-on unit – Mathematics for Engineers 2.

### **200238.2 Mathematics for Engineers 2**

**Credit Points** 10 **Level** 1

#### **Prerequisite**

**200237.3** Mathematics for Engineers 1

#### **Equivalent Units**

14506 - Engineering Mathematics 2

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This unit is the second of two mathematics units to be completed by students enrolled in an Engineering degree during their first year of study. The content covers a number of topics that build on the calculus knowledge from Mathematics for Engineers 1. The subject matter includes: ordinary differential equations, Laplace transforms and multi-variable calculus.

### **700102.1 Mathematics for Engineers 2 (UWSC Assoc Deg)**

**Credit Points** 10 **Level** 1

#### **Prerequisite**

**700101.1** Mathematics for Engineers 1 (UWSC Assoc Deg)

#### **Equivalent Units**

200238 - Mathematics for Engineers 2, 700022 - Mathematics for Engineers 2 (UWSC)

#### **Special Requirements**

Students must be enrolled in 7022 Associate Degree in Engineering

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The content of this unit covers a number of topics that build on the student's calculus knowledge from Mathematics for Engineers 1. The subject matter includes: ordinary differential equations, Laplace transforms and multi-variable calculus.

### **700022.1 Mathematics for Engineers 2 (UWSC)**

**Credit Points** 10 **Level** 1

#### **Prerequisite**

**700019.1** Mathematics for Engineers 1 (UWSC)

#### **Equivalent Units**

200238 - Mathematics for Engineers 2

#### **Special Requirements**

Students must be enrolled at UWS College.

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This is a Level 1 unit to be undertaken by students enrolled in an Engineering Diploma. It covers the following topics: Ordinary Differential Equations and Multivariable Calculus.

### 200242.3 Mathematics for Engineers 3

**Credit Points** 10 **Level** 2

**Prerequisite**

14506.1 Engineering Mathematics 2 OR 200238.2 Mathematics for Engineers 2

**Equivalent Units**

200194 - Engineering Mathematics 3

**Special Requirements**

This unit is designed to meet the requirements of students enrolled in an engineering degree. There are other mathematics units more suitable for students from other disciplines.

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This unit is a core unit in the Computer, Electrical, or Telecommunications key programmes of the Bachelor of Engineering course. It builds on the first two mathematics units in that course and provides mathematical tools and techniques needed for the above key programmes. The unit covers topics from advanced calculus including vector calculus, complex analysis, Fourier series, heat and wave equations, Fourier integrals and transforms; discrete mathematics including logic and set theory; random variables and random processes including mean, correlation and covariance functions, ergodicity, ensemble averages, and Gaussian processes.

### 300743.2 Mathematics for Engineers Preliminary

**Credit Points** 10 **Level** 1

**Incompatible Units**

200195 - Mathematical Methods A, 200191 - Fundamentals of Mathematics

**Special Requirements**

Only those students enrolled in the Bachelor of Engineering course, who do not have a mathematical background equivalent to NSW HSC Mathematics, achieved at band 4 or higher, should enrol in this unit. This unit is specifically designed to complement the existing unit 200237 Mathematics for Engineers 1.

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This unit is specifically designed for students enrolling in the Bachelor of Engineering degree course, who do not have a mathematical background in differential and integral calculus. The content of the unit consists of topics in arithmetic and algebra, trigonometry and trigonometric functions, logarithmic and exponential functions, differential and integral calculus.

### 700103.1 Mathematics for Engineers Preliminary (UWSC Assoc Deg)

**Credit Points** 10 **Level** 1

**Equivalent Units**

300743 - Mathematics for Engineers Preliminary

**Incompatible Units**

200191 - Fundamentals of Mathematics

**Special Requirements**

Students must be enrolled in 7022 Associate Degree in Engineering course.

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This unit consists of topics in arithmetic and algebra, trigonometry and trigonometric functions, logarithmic and exponential functions, differential and integral calculus.

### 200413.3 Mathematics Honours Thesis

**Credit Points** 40 **Level** 5

**Special Requirements**

Students must be enrolled in a Bachelors honours course. Understanding and knowledge equivalent an undergraduate BSc (Mathematics) degree or key program in Mathematics/Statistics is required. Normally the student will have a grade point average > 5 unless a case can be made.

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The aim of this unit is to further develop the student's research and problem solving skills. The student is required to implement the research plan, complete a substantive piece of research in the field of Mathematics/Statistics, and to communicate the results of that work to an interested and technically literate audience. All projects will therefore contain at least two broad areas of assessment: the substantive work itself, and the oral and written communication of the work to others. All assessment components submitted in both of these areas are expected to be of a high professional standard. Students will present their research in the thesis. The thesis topic and structure will vary according to the area of interest of the student and the expertise of the supervisor. Throughout this unit regular planned consultations between the student and supervisor will occur. Students are expected to work to a schedule devised in consultation with their supervisor. The schedule will include set dates for the presentation of draft chapters for review by the supervisor.

### 300764.1 Mechanical Design

**Credit Points** 10 **Level** 3

**Assumed Knowledge**

This subject assumes that the student has undertaken first and second year studies in UWS engineering courses or equivalent.

**Prerequisite**

300040.1 Mechanics of Materials AND 300035.2 Kinematics and Kinetics of Machines

**Equivalent Units**

300478 - Design of Servo-Systems

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This unit introduces students to the design of machine components. The unit covers the design of components to ensure their functionality, strength and durability. Components designed include drive components, gears, shafts, belt drives, and bearings and structural components, welds and treaded fasteners.

### 300040.2 Mechanics of Materials

**Credit Points** 10 **Level** 2

**Prerequisite**

**300463.2** Fundamentals of Mechanics

**Equivalent Units**

300039 - Mechanics and Materials

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Mechanics of Materials is the study of the stresses and deformation of a body made of any elastic solid material, and how these are related to the body's shape and the load applied to it. This unit looks at how and why structural components including bars and beams deform and break. It concentrates on how these are affected by the geometry of the body and loading. Types of loadings considered include normal loads, torsional loads and bending loads. The main objective of the unit is to introduce students to the aspects of stress, strain and internal force development in the components and the methods to determine the deformation and deflections of the components. Energy methods and impact loadings are also considered.

### 700116.1 Mechanics of Materials (UWSC Assoc Deg)

**Credit Points** 10 **Level** 2

**Prerequisite**

**700113.1** Fundamentals of Mechanics (UWSC Assoc Deg)

**Equivalent Units**

300040 - Mechanics of Materials

**Special Requirements**

Students must be enrolled in 7022 Associate Degree in Engineering

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Mechanics of Materials is the study of the stresses and deformation of a body made of any elastic solid material, and how these are related to the body's shape and the load applied to it. This unit looks at how and why structural components including bars and beams deform and break. It concentrates on how these are affected by the geometry of the body and loading. Types of loadings considered include normal loads, torsional loads and bending loads. The main objective of the unit is to introduce students to the aspects of stress, strain and internal force development in the components and the methods to determine the deformation and deflections of the components. Energy methods and impact loadings are also considered.

### 300487.2 Mechatronic Design

**Credit Points** 10 **Level** 3

**Assumed Knowledge**

Understanding of statics and mechanics of materials.

**Prerequisite**

**300040.2** Mechanics of Materials

### Equivalent Units

300041 - Mechatronic Design 1, 300042 - Mechatronic Design 2

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The aim of the unit is to integrate the basic skills of mechanics, mechanical systems and automation in the practice of engineering design as applied to mechatronic devices and systems. The ability to perform detailed design analysis of such machine elements as bearings, brakes, clutches, belt drives and shaft and motor systems is the intended outcome of undertaking this unit and project based tasks will form part of the learning process and team work experience.

### 101734.2 Media and Visual Cultures: Case Studies

**Credit Points** 10 **Level** 1

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Three modules focussing on different media and methods of analysing visual culture provide a multidisciplinary foundation unit for students' study in the major area of Media and Visual Cultures. The modules will vary from year to year based on the expertise of staff co-teaching the unit. Media to be studied will include, for example, film, television, digital media, "fine arts" such as paintings, engravings and sculpture, including commemorative sculpture and monuments.

### 101732.2 Media, The Everyday and Uneven Modernities

**Credit Points** 10 **Level** 3

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This unit examines critiques of power in relation to everyday media cultures and the uneven development of modernity. The history of concepts of power is considered in terms of the relationship between socio-cultural, technical, political, and economic conditions shaping media cultures in the context of the everyday. Working with the concept of 'uneven modernities', this unit provides students with an understanding of the shift from industrial production to flexible accumulation and the impacts of this on media cultures globally.

### 101800.2 Media, Violence, Protest, Terror

**Credit Points** 10 **Level** 3

**Special Requirements**

Successful completion of 60 credit points of study

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This unit investigates the relationship between the media and forms of political resistance constructed as 'violence' or 'terrorism'. Practices and representations of political violence have transformed in the shift to post-modernity and raised questions about the connections between the media, political agency, and processes of globalisation. We will consider traditional and current debates about the media's relationship to violence; the importance of spectacle in global cultures; the media's role in the reproduction of hegemony; the changing relationship

between the media and the public sphere; and the media's perceived role in counter-terrorism policy and practice.

### 300826.1 Medical Microbiology

**Credit Points** 10 **Level** 3

#### Prerequisite

**300833.1** Microbiology 1 AND **300896.1** Microbiology 2

#### Equivalent Units

300233 - Medical Microbiology, 300749 - Medical Microbiology

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Infectious diseases worldwide are the most common cause of illness. Medical microbiology is subdivided into four areas: virology, bacteriology, mycology (the study of fungi) and parasitology. The rapid evolution of microbes means that this is an area that does not remain static. This unit has a modern approach to the study of the balance between the host, humans, and the very large army of potential invaders. Students will embark on a journey into the world of pathogenic micro-organisms exploring the molecular mechanisms by which these override host defences leading to disease. Infectious diseases of the human body systems as well those of the immunocompromised and infections contracted in the healthcare setting (nosocomial) are discussed. The theory will be supported with laboratory experience representing diagnostic procedures for the identification of infectious agents.

### 400813.2 Medical Research Project

**Credit Points** 60 **Level** 3

#### Assumed Knowledge

Knowledge from successful completion of years 1 and 2 of MB BS

#### Prerequisite

**400861.1** Foundations of Medicine 1 AND **400862.1** Foundations of Medicine 2

#### Corequisite

**300768.1** Methods of Scientific Researching AND **400864.2** Research Methods (Quantitative and Qualitative) AND **400863.1** Foundations of Research and Evidence-Based Practice

#### Special Requirements

This program requires the background of at least two years of a medical degree before it can be successfully attempted. It will therefore be available only to currently enrolled UWS medical students as part of an intercalated year leading the Bachelor of Medical Research. If any clinical work is to be undertaken as part of the research project, the students will need to continue to meet the same requirements for immunisation and child protection as for all other students in the medical course.

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This unit is the principal component in the Bachelor of Medical Research. It aims to give students, enrolled in the UWS MBBS, the opportunity to develop their critical thinking and gain a more detailed experience in medical research than is provided in the medical course. It consists of a research project in any area of medical research for

which the School can provide suitable supervision. Students will study the relevant literature, develop and conduct the program of research with the assistance of their supervisor, take part in research seminars in their research group, and present the results as a dissertation.

### 300892.1 Medical Science Project

**Credit Points** 10 **Level** 3

#### Equivalent Units

300542 - Biomolecular Science Project

#### Special Requirements

Student must be enrolled in 3577 - Bachelor of Medical Science, 3673 - Bachelor of Medical Science, 3674 - Bachelor of Medical Science (Nanotechnology) or 3682 - Bachelor of Medical Science (Advanced). Must have a minimum of 80 credit points at Level 2 or 3.

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Students will undertake a short research project specific to the field of Medical Science. This will involve undertaking a review of the literature and generating appropriate hypotheses that will subsequently be tested and analysed. Findings will be presented orally and as a written manuscript.

### 400825.2 Medical Surgical Nursing 2 (Advanced)

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Completion of all Year 1 Bachelor of Nursing Units  
Completion of all Year 2 Bachelor of Nursing (Advanced) Units  
Completion of all Autumn Year 2 Bachelor of Nursing Units

#### Prerequisite

**400749.1** Nursing and Health Breakdown OR **400776.1** Introduction to Nursing Practice

#### Corequisite

**400758.1** Alterations in Breathing, Sexuality, Work/Leisure and Mobility

#### Incompatible Units

400757 - Medical-Surgical Nursing 2

#### Special Requirements

Students must be enrolled in course 4648 - Bachelor of Nursing (Advanced). To undertake this unit, students must comply with the following special requirements: Prior to enrolling in this unit students must have: 1) submitted a Criminal Record Check form prior to 1 June 2010 or a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate 2) submitted a Prohibited Employment Declaration prior to 1 June 2010 or a Working with Children Check Student Declaration after 1 June 2010 3) provide evidence of compliance with the occupational screening and immunisation policy of NSW Health 4) possess a current WorkCover Authority approved First Aid Certificate.

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This unit will elaborate on professional nursing concepts and practices that promote, maintain and support people

who are experiencing health breakdown affecting breathing, work/leisure and mobility.

### 400753.3 Medical-Surgical Nursing 1

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Content and achievement of learning outcomes derived from Year One nursing units.

#### Prerequisite

[400749.1](#) Nursing and Health Breakdown OR [400776.1](#) Introduction to Nursing Practice

#### Corequisite

[400814.1](#) Alterations in Nutrition, Elimination and Sexuality

#### Incompatible Units

400058 - Nursing Therapeutics 6, 400059 - Nursing Therapeutics 7, 400642 - Medical-Surgical Nursing Therapeutics

#### Special Requirements

Restrictions on clinical practicum placements (students must be enrolled in the Bachelor of Nursing and have met Special Requirements), safety and professional issues dealing with public. Special Requirements are those stipulated by the NSW Health and UWS. At present these include: Prior to enrolling in this unit students must have: 1) submitted a Criminal Record Check form prior to 1 June 2010 or a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate 2) submitted a Prohibited Employment Declaration prior to 1 June 2010 or a Working with Children Check Student Declaration after 1 June 2010 3) Adult Health Immunisation 4) Workcover accredited Senior First Aid Certificate.

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This unit will elaborate on professional nursing concepts and practices that promote, maintain and support people who are experiencing health breakdown affecting eating, drinking, nutrition and elimination.

### 400757.3 Medical-Surgical Nursing 2

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Achievement of learning outcomes related to Year One nursing units as well as Medical Surgical Nursing 1 and Alterations in Nutrition Elimination and Sexuality units offered in Autumn Year 2 of the Bachelor of Nursing.

#### Prerequisite

[400749.1](#) Nursing and Health Breakdown OR [400776.1](#) Introduction to Nursing Practice

#### Corequisite

[400815.1](#) Alterations in Breathing, Work/Leisure and Mobility

#### Incompatible Units

400055 Nursing Therapeutics 4

#### Special Requirements

Special Requirements are those stipulated by the NSW Health and UWS. At present these include: Prior to

enrolling in this unit students must have: 1) submitted a Criminal Record Check form prior to 1 June 2010 or a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate 2) submitted a Prohibited Employment Declaration prior to 1 June 2010 or a Working with Children Check Student Declaration after 1 June 2010 3) Adult Health Immunisation 4) Workcover accredited Senior First Aid Certificate

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This unit will elaborate on professional nursing concepts and practices that promote, maintain and support people who are experiencing health breakdown affecting breathing, work/leisure, sexuality and mobility.

### 400759.4 Mental Health Nursing 1

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Content and achievement of learning outcomes for year one Bachelor of Nursing units 4642, 4643, or 4648 Bachelor of Nursing courses

#### Prerequisite

[400749.2](#) Nursing and Health Breakdown OR [400776.2](#) Introduction to Nursing Practice OR [400640.2](#) Foundations of Nursing Therapeutics

#### Equivalent Units

400054 - Nursing Therapeutics 3

#### Special Requirements

There are considerable restrictions on the availability of clinical placements so students must be enrolled in one of the Bachelor of Nursing courses, 4642, 4643 or 4648 and must meet special requirements for these courses. This is a risk management strategy to ensure that enrolled students are able to satisfy safety and professional issues when dealing with the public. As per NSW Health and UWS: First Aid Certificate, Students will need to have completed the NSW Health Special Requirements for clinical practicum attendance. At present these include; 1. A National Police Certificate or a Criminal record clearance card (if issued before 1st June 2010) 2. A completed vaccination card with serology results attached 3. Four forms completed and taken to every placement (with a copy) a. Working with Children Student Declaration b. Code of Conduct, c. Form 2: TB Assessment Form d. Form 3: Student Undertaking/ Declaration form 4. International students need to take an additional form: A statutory declaration signed by a Justice of the Peace.

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This unit will extend the students understanding of the relationships between stress, adaptation, mental health and the person's capacity to function in everyday life and the implications for professional nursing practice

### 400762.2 Mental Health Nursing 2

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Content and achievement of learning outcomes for years two Bachelor of Nursing Units 4642 Bachelor of Nursing, 4643 - Bachelor of Nursing - Graduate Entry, or 4648 Bachelor of Nursing (Advanced)



**Prerequisite**

**400759.1** Mental Health Nursing 1

**Equivalent Units**

400066 - Nursing Therapeutics 11

**Special Requirements**

As per NSW Health and UWS: First Aid Certificate  
Students will need to have completed the NSW Health Special Requirements for clinical practicum attendance. At present these include; 1. A National Police Certificate or a Criminal record clearance card (if issued before 1st June 2010) 2. A completed vaccination card with serology results attached 3. Four forms completed and taken to every placement (with a copy) a. Working with Children Student Declaration b. Code of Conduct, c. Form 2: TB Assessment Form d. Form 3: Student Undertaking/Declaration form 4. International students need to take an additional form: A statutory declaration signed by a Justice of the Peace.

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This unit will elaborate the mechanisms of health breakdown and their application to professional nursing practice in supporting people who are affected by serious mental health breakdown.

**300848.1 Metabolism**

**Credit Points** 10 **Level** 2

**Prerequisite**

**300936.1** Functional Proteins and Genes

**Equivalent Units**

300220 - Biochemistry 2; 300548 - Human Metabolism & Disease

**Incompatible Units**

300227 - General Biochemistry

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Organisms degrade food molecules to generate energy and converts excess food molecules into internal fuel stores. This unit will cover topics including: bioenergetics; the structures of key molecules; glycolysis, gluconeogenesis, glycogen synthesis and breakdown; fatty acid oxidation and synthesis; amino acid catabolism; urea synthesis; citric acid cycle; electron transport and oxidative phosphorylation. Emphasis will be on the regulation and integration of these pathways, including their responses to hormonal regulation. The effects of altered dietary and hormonal status on metabolic pathways and their consequences for the organism will be discussed.

**300768.2 Methods of Scientific Researching**

**Credit Points** 10 **Level** 7

**Assumed Knowledge**

Appropriate background in a scientific discipline to conduct research in that area. No previous research experience is required.

**Equivalent Units**

SC809A - Research methodology and experimental design, 14429 - Science research project, proposal and seminar, 300411 - Research methodology and experimental design

**Incompatible Units**

300398 - Methods of Researching

**Special Requirements**

Students must be enrolled in a postgraduate degree.

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This unit introduces students to the principles and tools of scientific research. It is designed for students who are undertaking Master of Science and those who have not previously undertaken training in research. Students attend a series of classes covering topics such as critical thinking, problem definition, formulation and testing of hypotheses, analysis of quantitative and qualitative results, communication of research findings, bibliographic techniques and advanced information retrieval methods. Students are required to prepare an intention to research, an annotated bibliography, seminar, and a research poster.

**300833.1 Microbiology 1**

**Credit Points** 10 **Level** 2

**Prerequisite**

**300802.1** Biodiversity OR **300816.1** Cell Biology

**Equivalent Units**

300300 - Microbiology 1

**Incompatible Units**

300331 - General Microbiology

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In this unit students will use an inquiry-based approach to explore the origin and diversity of microorganisms and their significance in the environment, in foods and industry as well as in health and disease. Students will be introduced to the structure, reproduction, classification, cultivation and enumeration of bacteria, viruses, fungi and protists. The conditions required for growth and survival of microorganisms will be studied as well as physical and chemical methods of control. In laboratory classes students will develop skills in culturing and observing microorganisms and in designing experiments to test microbiological concepts. This unit is a pre-requisite for Microbiology 2 and Level 3 Microbiology units.

**300896.1 Microbiology 2**

**Credit Points** 10 **Level** 2

**Assumed Knowledge**

Knowledge of the major groups of microorganisms and their structure and functions including DNA and key metabolic pathways.

**Prerequisite**

**300833.1** Microbiology 1

**Equivalent Units**

300321 - Microbiology 2

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The unit focuses on the origins of genetic variation and the process of gene regulation in prokaryotes and explores the metabolic diversity of microorganisms from a variety of habitats and their application in industry. Using published

scientific literature, students will learn how scientists research functional microbial physiology in the postgenomic era. The principles and applications of recombinant DNA techniques are discussed. Classification and identification of bacteria and yeasts is presented, including an introduction to molecular systematics. Laboratory classes introduce students to techniques used to study microbial physiology and genetics.

### 300044.2 Microcontrollers and PLCs

**Credit Points** 10 **Level** 2

#### Prerequisite

300025.2 Electronics OR 300021.1 Electrical Fundamentals

#### Equivalent Units

86402 - Microprocessor Applications in Mechanical Engineering, 89025 - Computers in Real Time Control

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The aim of this unit is for students to develop an understanding of the hardware, architecture and the assembly language of microcontrollers and to control a mechanical system with a programmable logic controller (PLC). The unit looks at the applications of timers, interrupts and serial ports. Furthermore, the general approach in designing a microcontroller in mechanical systems will be studied. It uses an Omron PLC to control a factory represented by four pneumatic cylinders. After covering the Ladder Logic programming language, it moves on to cover sequential programming and numerical manipulation using PLCs.

### 300076.3 Microprocessor Systems

**Credit Points** 10 **Level** 2

#### Prerequisite

300018.2 Digital Systems 1

#### Equivalent Units

84137 - Microprocessor Systems

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This unit introduces students to the internal structure of microprocessors and its fundamental operations. Topics include assembly language programming, interrupt processing, CPU functions, memory organization, and peripheral programming. Intel 8088 microprocessor will be discussed in great detail. Embedded processor will also be covered.

### 300043.3 Mobile Robotics

**Credit Points** 10 **Level** 4

#### Prerequisite

300463.2 Fundamentals of Mechanics

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To develop an understanding of the basic concepts involved in Mobile Robotics. The areas of mobile robot mechanics, localisation, map building and path planning of mobile robots will be introduced. Various sensors and their applications in mobile robotics are also to be introduced.

### 100271.3 Modern Japanese History

**Credit Points** 10 **Level** 3

#### Equivalent Units

63036 - Themes in Asian History

#### Special Requirements

Successful completion of 60 credit points

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This unit presents a social and cultural history of Japan from the mid nineteenth century to the present. The principle organising theme is the question of modernity: what are the different ways that Japan has expressed its modern identity? How has this been shaped by Japan's position in relation to both the West and its Asian neighbours? What is the relationship among the state, its citizens, and history in negotiating identity? How has war affected Japanese modernity and what we know of modern Japan?

### 101033.4 Modernism

**Credit Points** 10 **Level** 3

#### Special Requirements

Successful completion of 60 credit points

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This unit aims to introduce students to important works of literature from the earlier part of the 20th century. Throughout the course we will be concentrating on literature but will make reference to other art forms (in particular the visual arts) to provide the intellectual context necessary to understanding the ideas of the period. There will be a close study of a small number of important novels or works of poetry from the period, with a close consideration of techniques of writing and the way these techniques contribute to an understanding of the themes in the works.

### 101001.3 Modernity and Cinema

**Credit Points** 10 **Level** 3

#### Equivalent Units

VP215A - Modernity and Cinema

#### Special Requirements

Successful completion of 60 credit points

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This unit will engage with the question of how social and aesthetic issues interact in films by examining specific questions which are related to cinema history. Issues of identity will be used to focus upon the ways in which historical contexts interrelate with artistic practice. The unit will consider the process of creating emotions, the consideration of techniques of production and the manipulation of cinema language, the use of narrative or non-narrative form to convey the sense of reality, (or the unreal, the uncertain).

### 300817.1 Molecular Biology

**Credit Points** 10 **Level** 2

**Prerequisite**

**300936.1** Functional Proteins and Genes OR **300845.1** Genetics OR **300848.1** Metabolism

**Equivalent Units**

300234 - Molecular Biology, 300549 - Human Molecular Biology

**Special Requirements**

Laboratory Safety Glasses

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Molecular biology is central to many fields of the biomedical and natural sciences, and includes genetics, immunology, cell biology, biochemistry, and forensics. Through comparative studies of different organisms, this unit will describe fundamental concepts and methods in the study of DNA and RNA and the application of molecular biology in advanced fields such as genomics. Subjects will include DNA replication; transcriptional, post-transcriptional and epigenetic regulation of gene expression; microarrays, and an introduction to bioinformatics. Practical work will provide opportunities to become familiar with the methods of molecular biology, with an emphasis on the development of problem solving and analytical skills

### 300927.1 Molecular Medicine

**Credit Points** 10 **Level** 3

**Prerequisite**

**300817.1** Molecular Biology

**Equivalent Units**

300551 - Molecular Basis of Disease, 300407 - Mammalian Molecular Medicine

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Molecular Medicine is an inquiry based capstone unit that integrates core concepts in molecular and cell biology with a focus on cancer as a framework to discuss autoimmune, infectious and genetic diseases. This unit aims to enhance critical thinking for the professional environment and prepares students for future innovations in prevention, management and cure of catastrophic diseases. Current research, diagnosis, treatment and policy issues, related to health and disease states, are placed in the context of real world experiences and changing imperatives.

### 300912.1 Molecular Pharmacokinetics

**Credit Points** 10 **Level** 3

**Prerequisite**

**300849.1** Physical Chemistry

**Equivalent Units**

300475 - Molecular Pharmacokinetics

**Special Requirements**

Students are required to have a Lab coat and safety glasses in this unit.

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This Unit examines the Kinetics of the bioavailability, degradation and removal of drug molecules from the body and its response to drug structure, stability and delivery system.

### 400886.2 Motor Control and Skill Acquisition

**Credit Points** 10 **Level** 2

**Prerequisite**

**400868.2** Human Anatomy and Physiology 1 OR **400869.2** Human Anatomy and Physiology 2 OR **400881.3** Functional Anatomy

**Equivalent Units**

100679 - Motor Control and Learning

**Special Requirements**

Students must be enrolled in course 4658 - Bachelor of Health Science (Sport and Exercise Science).

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Motor Control and Skill Acquisition is an investigation of the physiological and psychological processes involved in both the control and the learning of movement. As such, it considers the control mechanisms which are innate to the learner, how these mechanisms change by virtue of both maturation and experience, and how the latter type of changes may be facilitated by manipulation of the learning environment.

### 400891.2 Movement and Skill Development

**Credit Points** 10 **Level** 1

**Prerequisite**

**300361.3** Introduction to Human Biology AND **400880.2** Fundamentals of Exercise Science

**Incompatible Units**

400794 - PDHPE: Exploring Movement Skills, 400796 - PDHPE: Efficient Movement Principles

**Special Requirements**

Students must be enrolled in course 4659 - Bachelor of Health Science (PDHPE) or 4549 - Bachelor of Health Science (PDHPE).

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This unit examines the scientific basis for movement and sports skill development. An understanding of the principles of movement and motor skill and how they apply to performance is examined through a range of movement tasks required for track and field athletics and some team sports. Laboratory activities will focus upon the basic movement tasks of throwing, jumping, balancing, striking, running and rotary activities. An examination of the instruments used in efficient movement analysis is undertaken.

### 100877.3 Multicultural Studies

**Credit Points** 10 **Level** 3

**Equivalent Units**

63057 - Multicultural Studies, SS203A - Multicultural Australia

### Special Requirements

Successful completion of 60 credit points

At the beginning of the twenty-first century, multiculturalism remains an important topic of debate both in Australia and the world at large. This unit explores the concept of multiculturalism in a historical perspective and across a variety of sites. While concentrating upon Australian multiculturalism, the syllabus also encompasses the study of multiculturalism in a variety of international contexts. Particular attention is paid to the relations between multiculturalism and nationalism, the role of religion, the relation of multiculturalism to Indigenous politics, and to the increased pressures placed upon cultural difference and diversity by globalisation.

### 300046.2 Multimedia Signal Processing

**Credit Points** 10 **Level** 4

#### Prerequisite

**300069.3** Digital Signal Processing

#### Equivalent Units

84492 - Honours/Pass Subject 1

This unit introduces students to the digital processing of speech and image signals. Topics include speech generation, analysis, synthesis, speech identification, image processing techniques, image compression and standards. On the completion of this unit, students will gain an understanding of the latest developments in the area of multimedia signal processing.

### 400999.1 Musculoskeletal Physiotherapy

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Human anatomy, human physiology, and pathophysiology

#### Prerequisite

**400982.1** Core Competencies in Physiotherapy Practice OR **400987.1** Neurological Physiotherapy Practice

#### Special Requirements

Students must be enrolled in 4662 Bachelor of Health Science/Master of Physiotherapy, 4667 Master of Physiotherapy, and 4668 Bachelor of Health Science (Honours)/Master of Physiotherapy programs. Students in courses 4662 Bachelor of Health Science/Master of Physiotherapy and 4668 Bachelor of Health Science (Honours)/Master of Physiotherapy are to complete prerequisite unit 400982 - Core Competencies in Physiotherapy Practice. Students in course 4667 Master of Physiotherapy are required to complete prerequisite unit 400987 Neurological Physiotherapy Practice. Students in this program are required to participate fully in practical classes. This involves disrobing to shorts and singlet or swim-suit equivalent in mixed gender classes. Students will practice hands-on physiotherapy examination and treatment techniques on both genders, and will personally experience these techniques which will be performed on them by other students and relevant academic staff.

This unit focuses on client assessment and treatment using manual physiotherapy techniques. An emphasis is placed on diagnostic reasoning and evaluation, understanding the implications of pathology in a physiotherapy context, prioritising problems and integrating manual therapy with other physiotherapy treatments. This requires strong communication skills, ethical and professional behaviour and an appreciation of interprofessional care.

### 300895.1 Nanochemistry

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

An understanding of the content of the unit Nanotechnology or equivalent.

#### Prerequisite

**300800.1** Essential Chemistry 1

#### Equivalent Units

300590 - Nanochemistry, 300416 - Nanopowders and Nanomaterials

The unit covers basic theory of surface chemistry, latest technologies of surface depositions and industrial and commercial applications of nanomaterials and nanopowders. Upon successful completion, the students will achieve an in-depth understanding of techniques of preparation of nanomaterials and nanopowders that includes plasma arching, chemical vapour deposition, electrodeposition, sol-gel synthesis, ball milling and the use of natural particles. Technical aspects of process control on the microstructure and properties of coatings will be discussed. Case studies of applications of nanopowders and nanomaterials such as biomedical implants, insulators, high power magnets, molecular sieves, supercomputers, jet engines and other industrial applications will be pursued.

### 300827.1 Nanotechnology

**Credit Points** 10 **Level** 1

#### Equivalent Units

300705 - Nanotechnology

This unit provides a broad introduction to nanoscience, the current status of nanotechnology and their applications. It introduces main areas that are central to understanding the importance of nanoscale applications and to study the connection between the underlying nanoscience of various nanotechnology devices. Emphasis will be placed to reflect the true interdisciplinary nature that encompasses a broad understanding of basic sciences intertwined with engineering sciences and information sciences pertinent to nanotechnology.

### 300932.1 Natural Science Research Methods

**Credit Points** 10 **Level** 2

#### Equivalent Units

300290 - Research Communities and their Environments, 300662 - Research Methods, 300561 - Animal Research

### Special Requirements

Successful completion of 60 credit points at Level 1 in order to enrol in this unit.

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Formulating research questions to solve problems by designing and selecting a systematic methodology to test hypotheses and evaluate evidence are an essential part of research and inquiry. This unit will provide students with the critical thinking skills needed to undertake applied research, especially how to incorporate quantitative and qualitative evidence into arguments. Students will communicate the results of investigations using a variety of modes for different purposes. The ethical and regulatory frameworks for research on human and animals will be discussed including the UWS human and animal ethics approval process required for research.

### 200613.2 Negotiation, Bargaining and Advocacy

**Credit Points** 10 **Level** 3

#### Prerequisite

**200300.2** Managing People at Work

#### Equivalent Units

61430 - Negotiation, Bargaining and Advocacy

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Negotiation, bargaining and advocacy are central activities in employment relations processes. Effective human resource management and industrial relations practitioners require knowledge of the theoretical perspectives in negotiation together with an ability to critique the relevance and application of these perspectives. The importance of strategy and judgement in negotiation is highlighted and students are given the opportunity to develop their skills through negotiation exercises. An important theme in the unit is the assessment of the contextual and regulatory factors that shape negotiation, bargaining and advocacy practice. This aspect draws on contemporary debates in these spheres most notably concerning the Australian context.

### 300143.3 Network Security

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Good understanding of the principles of information security, and computer networks and internets.

#### Prerequisite

**300094.2** Computer Networking Fundamentals OR **300565.2** Computer Networking

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This unit is concerned with the protection of information transferred over computer networks. It includes discussion of techniques for securing data transported over local and wide area networks. At the conclusion of the unit students will have a good understanding of the practical aspects of securing a computer network against internal and external attacks.

### 300575.2 Networked Systems Design

**Credit Points** 10 **Level** 3

#### Prerequisite

**300095.3** Computer Networks and Internets

#### Equivalent Units

300088 - Broadband Networking

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This unit builds on and consolidates the skills and knowledge gained in Computer Networking and Computer Networks and Internets. Students successfully completing this unit will acquire the necessary design skills and knowledge required to build and configure enterprise scale networks. The unit provides students with an opportunity to develop problem-solving techniques and decision-making skills to resolve networking issues. Students completing this unit and its prerequisites should also now be prepared to attempt world recognized network industry certification (CCNA).

### 300576.2 Networking Workshop

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

- List, discuss and compare the elements of information coding and signal transmission,
- List, describe, and explain the elements and functional relationships of communications hardware and software,
- Identify, locate, distinguish, and describe the individual hardware components of a personal computer (PC) and explain their purpose, functions and operations,
- Install PC components, devices and peripherals in accordance with installation procedures and operational standards.

#### Prerequisite

**300150.3** PC Workshop AND **300565.2** Computer Networking

#### Equivalent Units

300138 - LAN Workshop

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This unit covers in depth the basics of networking and provides students with the knowledge and skills necessary to install, test, tune, customise, repair and maintain networking hardware and software necessary to create a Local Area Network (LAN). Students also learn how to administer a LAN by setting up user accounts, access privileges, security procedures, and back-up/recovery procedures.

### 300754.1 Neuroanatomy

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

The outcomes of: 300543 Cell Biology, 300554 Principles of Chemistry, 300752 Introduction to Anatomy and Histology, 300753 Introduction to Human Physiology; or 400868 Human Anatomy & Physiology 1, 400869 Human Anatomy & Physiology 2; or equivalent units.

### Equivalent Units

300322 - Neuroanatomy, 400964 - Clinical Neurosciences, 400166 - Clinical Neurosciences

### Special Requirements

Due to space limitations, students must be enrolled in the following courses: 3577 Bachelor of Medical Science, 3657 Bachelor of Medical Science/Bachelor of Information and Communication Technology, 4661 Bachelor of Health Science/Master of Podiatric Medicine, 4662 Bachelor of Health Science/Master of Physiotherapy, 4663 Bachelor of Health Science/Master of Occupational Therapy, 4666 Bachelor of Health Science (Honours)/Master of Podiatric Medicine, 4668 Bachelor of Health Science (Honours)/Master of Physiotherapy.

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This unit builds on the human anatomy and physiology studied in first and second year, equipping students with detailed knowledge of functional neuroanatomy, with particular emphasis on the central nervous system. Cadaver specimens are used to facilitate the learning of spatial relationships between structures. The study of neurological function and dysfunction integrates many previously learned scientific principles.

### 300754.2 Neuroanatomy

**Credit Points** 10 **Level** 3

### Assumed Knowledge

The outcomes of: 300543 Cell Biology, 300554 Principles of Chemistry, 300752 Introduction to Anatomy and Histology, 300753 Introduction to Human Physiology; or 400868 Human Anatomy & Physiology 1, 400869 Human Anatomy & Physiology 2; or equivalent units.

### Equivalent Units

300322 - Neuroanatomy, 400964 - Clinical Neurosciences, 400166 - Clinical Neurosciences

### Special Requirements

Due to space limitations, students must be enrolled in the following courses: 3577 Bachelor of Medical Science, 3657 Bachelor of Medical Science/Bachelor of Information and Communication Technology, 4661 Bachelor of Health Science/Master of Podiatric Medicine, 4662 Bachelor of Health Science/Master of Physiotherapy, 4663 Bachelor of Health Science/Master of Occupational Therapy, 4666 Bachelor of Health Science (Honours)/Master of Podiatric Medicine, 4668 Bachelor of Health Science (Honours)/Master of Physiotherapy.

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This unit builds on the human anatomy and physiology studied in first and second year, equipping students with detailed knowledge of functional neuroanatomy, with particular emphasis on the central nervous system. Cadaver specimens are used to facilitate the learning of spatial relationships between structures. The study of neurological function and dysfunction integrates many previously learned scientific principles.

### 400986.1 Neurological Physiotherapy

**Credit Points** 10 **Level** 3

### Prerequisite

**400982.1** Core Competencies in Physiotherapy Practice AND **300754.1** Neuroanatomy AND **400981.1** Clinical Pharmacology AND **400864.2** Research Methods (Quantitative and Qualitative) AND **400866.2** Culture, Diversity and Health

### Corequisite

**400983.1** Orthopaedic Physiotherapy AND **400984.1** Cardiorespiratory Physiotherapy AND **400985.1** Clinical Education A

### Special Requirements

This unit is restricted to students who are enrolled in 4662 Bachelor of Health Science/Master of Physiotherapy and 4668 Bachelor of Health Science (Honours)/Master of Physiotherapy. Students in this program are required to participate fully in practical classes. This involves disrobing to shorts and singlet or swim-suit equivalent in mixed gender classes. Students will practice hands-on physiotherapy examination and treatment techniques on both genders, and will personally experience these techniques which will be performed on them by other students and relevant academic staff. Students cannot enrol in Year 3 Physiotherapy units until they have completed 160 credit points in the Bachelor of Health Science/Master of Physiotherapy and 4668 Bachelor of Health Science (Honours)/Master of Physiotherapy programs.

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This unit builds on the knowledge and skills developed in the first 2 years of physiotherapy study. It focuses on client assessment and evidence-based management in acute neurological physiotherapy contexts. This will require strong communication skills, ethical and professional behaviour and an appreciation of interprofessional care. Professional competencies addressed in this unit include introductory skills in neurological physiotherapy assessment, interpretation and prioritisation of findings along with the implementation and evaluation of appropriate treatment strategies.

### 400998.1 Neurological Rehabilitation

**Credit Points** 10 **Level** 3

### Assumed Knowledge

Human anatomy, human physiology, neuroanatomy, and pathophysiology

### Prerequisite

**400986.1** Neurological Physiotherapy OR **400987.1** Neurological Physiotherapy Practice

### Special Requirements

Students must be enrolled in 4662 Bachelor of Health Science/Master of Physiotherapy, 4668 Bachelor of Health Science (Honours)/Master of Physiotherapy and 4667 Master of Physiotherapy. Students in courses 4662 Bachelor of Health Science/Master of Physiotherapy and 4668 Bachelor of Health Science (Honours)/Master of Physiotherapy are to complete prerequisite unit 400986 -

Physiotherapy Practice. Students in course 4667 Master of Physiotherapy are required to complete prerequisite unit 400987 Neurological Physiotherapy Practice. Students in this program are required to participate fully in practical classes. This involves disrobing to shorts and singlet or swim-suit equivalent in mixed gender classes. Students will practice hands-on physiotherapy examination and treatment techniques on both genders, and will personally experience these techniques which will be performed on them by other students and relevant academic staff.

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This unit focuses on client assessment and evidence-based physiotherapy management in neurological rehabilitation. This will require strong communication skills, ethical and professional behaviour and an appreciation of interprofessional care. Professional competencies addressed in this unit include clinical reasoning in neurological physiotherapy assessment and treatment, implementation and evaluation of evidence-based interventions and management of complex conditions.

### 100273.3 New Ethnicities, Old Racisms

**Credit Points** 10 **Level** 2

#### Special Requirements

Successful completion of 60 credit points at Level 1.

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The notion of 'New Ethnicities', introduced first by Stuart Hall in the 1980s in the context of the ascendancy of the New Right in Britain stressed, among other things, the importance of social and cultural identities, including ethnic and racial identities, generated by the process of globalisation, and the convergence of trans-national and trans-racial loyalties. Based on this notion, this unit critically examines the essentialist definitions of 'ethnicity', 'race' and 'nation', across many areas of cultural policy and practice. It draws theoretical perspectives from many schools of social thought including modernism, Marxism and postmodernism. Empirical examples are drawn from both the western and non-western world.

### 200029.2 Numerical Analysis

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

200189 - Concepts of Mathematics

#### Equivalent Units

J2788 - Numerical Analysis; 14701 - Numerical Methods and Modelling

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This unit covers a substantial range of computational techniques in formulating and solving mathematical, scientific and engineering problems. Topics include: algorithmic approaches to solving nonlinear equations; systems of linear equations; differential equations; polynomial interpolation; numerical differentiation and integration; and curve fitting to approximate functions.

### 300488.3 Numerical Methods in Engineering

**Credit Points** 10 **Level** 3

#### Prerequisite

200238.2 Mathematics for Engineers 2 AND 85006.2 Introduction to Structural Engineering AND 85012.2 Soil Engineering

#### Equivalent Units

85019 - Civil/Environmental Engineering Pass/Hons Elective 1

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The finite element method is a powerful numerical tool for analysing a wide range of engineering problems. The objective of this unit is to introduce the basic and fundamental principles of the finite element techniques by primarily focusing on their applications in the area of structural, solid and soil mechanics.

### 400751.2 Nursing and Healthy Communities

**Credit Points** 10 **Level** 1

#### Assumed Knowledge

400747 - Behavioural Foundations of Nursing Practice

#### Incompatible Units

400053 - Nursing Context 3, 400050 - Nursing Science 3

#### Special Requirements

As a result of space restrictions students must be enrolled in either 4642, 4643 or 4648 Bachelor of Nursing.

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This unit introduces the student to psychosocial concepts and principles that promote and sustain the health of communities and informs professional nursing practice.

### 400745.2 Nursing for Health and Wellbeing

**Credit Points** 10 **Level** 1

#### Equivalent Units

400048 - Nursing Therapeutics 1

#### Special Requirements

Students must be enrolled in course 4642 Bachelor of Nursing.

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This unit introduces the student to nursing concepts, principles and skills that identify, promote, maintain and support health and wellbeing across the lifespan.

### 400204.2 Nursing Honours Thesis (Part-time)

**Credit Points** 60 **Level** 5

#### Assumed Knowledge

A basic knowledge of research methods at undergraduate level or equivalent is required.

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This unit aims to provide an opportunity for students to plan and implement a research project related to nursing which

results in the production of a thesis. In consultation with an academic supervisor, the student will select a topic, conduct a literature review, design a research study, and report the findings and their implications. Attendance and participation at research seminars/colloquia is expected.

#### **400202.2 Nursing Honours Thesis A (Full-time)**

**Credit Points** 20 **Level** 5

##### **Assumed Knowledge**

A basic knowledge of research methods at undergraduate level or equivalent is required.

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This unit aims to provide an opportunity for students to plan and implement a research project related to nursing which results in the production of a thesis. In consultation with an academic supervisor, the student will select a topic, conduct a literature review, design a research study, and report the findings and their implications. Attendance and participation at research seminars/colloquia is expected.

#### **400203.2 Nursing Honours Thesis B (Full-time)**

**Credit Points** 40 **Level** 5

##### **Assumed Knowledge**

A basic knowledge of research methods at undergraduate level or equivalent is required.

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This unit aims to provide an opportunity for students to plan and implement a research project related to nursing which results in the production of a thesis. In consultation with an academic supervisor, the student will select a topic, conduct a literature review, design a research study, and report the findings and their implications. Attendance and participation at research seminars/colloquia is expected.

#### **300933.1 Nutrition and Health 1**

**Credit Points** 10 **Level** 2

##### **Assumed Knowledge**

Sound understanding of undergraduate Level 1 chemistry and biology.

##### **Equivalent Units**

300649 - Nutrition and Health 1

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This unit presents the basic principles and concepts of human nutrition including nutrient requirements, functions, deficiency symptoms and the effects of excess as well as energy balance and weight control. Macronutrients involved with energy metabolism. In addition, all vitamins and essential minerals are covered. Specific topics include requirements, functions and the effects of excess and deficiency. Energy balance and weight control are also covered.

#### **300934.1 Nutrition and Health 2**

**Credit Points** 10 **Level** 2

##### **Prerequisite**

**300933.1** Nutrition and Health 1

##### **Equivalent Units**

300650 - Nutrition and Health 2

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This unit applies the basic concepts of human nutrition to the various stages of the life span (infant to adulthood) as well as examining the development of Australian dietary practices and diet related disorders. This unit provides the student with adequate and reliable information so that they make informed decisions with regard to nutritionally critical moments of the life span as well as new or emerging nutrition opinion or fact.

#### **300144.4 Object Oriented Analysis**

**Credit Points** 10 **Level** 2

##### **Assumed Knowledge**

General understanding of what an information system is and how information systems development is undertaken and; Introductory knowledge about system analysis and design, including - basic problem solving experience in computerised information systems - ability to derive systems requirements from problem definitions - ability to produce system models using process, data, object and network modelling. - understanding design and implementation issues include, (but may not be limited to), elementary database design, input, output and user interface design and prototyping.

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Analyzing and modeling requirements using the object-oriented (OO) approach is the core strength of this unit. The system analysis is taken to greater depths within the context of Object Orientation. The Unified Modeling Language version 2.0 (notably use cases, activity diagrams, class diagrams and sequence diagrams) is used as a modeling standard for creating OO models in the problem space. This unit also covers methodologies for OO analysis work through practical case studies.

#### **700039.1 Object Oriented Analysis (UWSC)**

**Credit Points** 10 **Level** 2

##### **Assumed Knowledge**

General understanding of what an information system is and how information systems development is undertaken and Introductory knowledge about system analysis and design, including - basic problem solving experience in computerised information systems - ability to derive systems requirements from problem definitions - ability to produce system models using process, data, object and network modelling. - understanding design and implementation issues include, (but may not be limited to), elementary database design, input, output and user interface design and prototyping.



**Equivalent Units**

14924, 48525, 61231 - Systems Analysis 1, 14998 - Systems Analysis 1A, 14935, 48526, 61232 - Systems Analysis 2

**Special Requirements**

Only UWS College students enrolled in 7004 Diploma in Information Communications Technology Fast Track and 7005 Diploma in Information Communications Technology can enrol in this unit.

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Analyzing and modeling requirements using the object-oriented (OO) approach is the core strength of this unit. The system analysis is taken to greater depths within the context of Object Orientation. The Unified Modeling Language version 2.0 (notably use cases, activity diagrams, class diagrams and sequence diagrams) is used as a modeling standard for creating OO models in the problem space. This unit also covers methodologies for OO analysis work through practical case studies.

**300147.3 Object Oriented Programming**

**Credit Points** 10 **Level** 2

**Prerequisite**

**300580.2** Programming Fundamentals

**Equivalent Units**

300581 - Programming Techniques

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This unit presents the concepts and principles of programming languages with the emphasis on object oriented paradigm. It addresses the importance of the separation of behaviour and implementation, as well as effective use of encapsulation, inheritance and polymorphism.

**400176.2 Occupation and Ageing**

**Credit Points** 10 **Level** 5

**Incompatible Units**

E2043 - Occupational Therapy 3 (Unit 3): Older Adult, E2045 - Lifespan Development

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The process of ageing will be examined critically using the biopsychosocial model. Students will use research evidence to prepare occupational therapy intervention for older people and their families that promotes quality of life and maximum social participation. Students will reflect on their own attitudes towards ageing and how social stereotypes of older people must be challenged to promote a positive view of this stage of life.

**400176.3 Occupation and Ageing**

**Credit Points** 10 **Level** 3

**Prerequisite**

**400912.1** Occupational Therapy Process

**Special Requirements**

Students must be enrolled in courses 4663 Bachelor of Health Science/Masters of Occupational Therapy and 4664 Master of Occupational Therapy. To undertake this unit, students must comply with the following special requirements: Prior to enrolling in this unit students must have: 1) successfully completed an approved Child Protection Workshop 2) submitted a Prohibited Employment Declaration prior to 1 June 2010 or a Working with Children Check Student Declaration after 1 June 2010 3) possess a current WorkCover Authority approved First Aid Certificate.

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The process of ageing will be examined critically using the biopsychosocial model. Students will use research evidence to prepare occupational therapy intervention for older people and their families that promotes quality of life and maximum social participation. Students will reflect on their own attitudes towards ageing and how social stereotypes of older people must be challenged to promote a positive view of this stage of life.

**400169.2 Occupation and Mental Health**

**Credit Points** 10 **Level** 3

**Assumed Knowledge**

Introductory level psychology.

**Special Requirements**

Students must be enrolled in courses 4663 - Bachelor of Health Science/Masters of Occupational Therapy or 4664 - Master of Occupational Therapy.

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This unit provides an understanding of the aetiology, signs, symptoms and prognosis of psychiatric conditions commonly encountered by occupational therapists. Mental health policies, strategies and consumer issues are examined in relation to the management of mental illness in the community. Occupational therapy theory, assessments, interventions and outcomes related to psychosocial practice are incorporated in the unit to provide a foundation for occupational therapy practice in mental health settings.

**400171.2 Occupation and Neurology**

**Credit Points** 10 **Level** 3

**Assumed Knowledge**

Neuroanatomy.

**Prerequisite**

**300322.1** Neuroanatomy

**Special Requirements**

Students must be enrolled in courses 4663 - Bachelor of Health Science/Masters of Occupational Therapy or 4664 - Master of Occupational Therapy.

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This unit prepares occupational therapy students to work in a variety of settings with individuals who have a neurological condition. The impact of common neurological conditions on the person, their environment and their occupations will be examined. Students will be exposed to

a variety of assessments, interventions and evaluation tools suitable for this client population.

### **400170.2 Occupation and Social Participation**

**Credit Points** 10 **Level** 3

#### **Equivalent Units**

E3026 - Occupational Therapy 5

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This unit will be replaced by 400916 - Occupational Justice from 2013. This unit critically examines practice in the community with a focus on social inclusion. Life experiences of people with disabilities are explored. Ideologies of Normalisation and Social Role Valorisation, which currently form the basis of Disability Legislation and Community Service Standards, are discussed. Rationales for de-institutionalisation and practice in the community are critically appraised. Varied perspectives of disability are examined and applied. Contentious issues such as duty of care, dignity of risk, choice-making, rights and negligence, social dimensions of participation, are critiqued against legal, ethical and personal perspectives. This unit assists students develop empathy, critical thinking and reflection skills.

### **400165.2 Occupation and the Environment**

**Credit Points** 10 **Level** 3

#### **Prerequisite**

**400908.1** People, Environment and Occupations OR  
**400911.1** Occupational Therapy Theory and Practice

#### **Special Requirements**

Students must be enrolled in courses 4663 - Bachelor of Health Science/Masters of Occupational Therapy and 4664 - Master of Occupational Therapy. To undertake this unit, students must comply with the following special requirements: Prior to enrolling in this unit students must have: 1) successfully completed an approved Child Protection Workshop 2) submitted a Prohibited Employment Declaration prior to 1 June 2010 or a Working with Children Check Student Declaration after 1 June 2010 3) possess a current WorkCover Authority approved First Aid Certificate.

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Students will demonstrate skills in the analysis and modification of the environment using principles of ergonomics and appropriate Australian standards in building design. The ICF will provide the context for assessment and modification of the environment to enable individuals with impairments to overcome activity limitations or restrictions in participation.

### **400733.1 Occupational Analysis**

**Credit Points** 10 **Level** 1

#### **Special Requirements**

Students must be enrolled in course codes 4520 Bachelor of Applied Science (Occupational Therapy) or 4521 Bachelor of Applied Science (Honours) Occupational Therapy. This is a specialist professional unit for

occupational therapy practice so is not suited to students from other programs.

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In 2011 this unit is being replaced by 400908 - People, Environment and Occupations. The ability to analyse human occupation including tasks and activities is a core component of occupational therapy practice. This unit provides the students with an understanding of the role of activities in a person's life. Students will develop skills in task and activity analysis and an understanding of assessment related to specific performance components of activity. The ICDH-2 will provide the context for activity analysis. Students will gain an understanding of how the modification of activities can enable individuals with impairments to overcome activity limitations or restrictions in participation.

### **300919.1 Occupational Health and Safety**

**Credit Points** 10 **Level** 3

#### **Equivalent Units**

300794 - Occupational Health and Safety

#### **Special Requirements**

Successful completion of 60 credit points at Level 1 and 20 credit points at Level 2.

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The unit aims to provide students with an essential working understanding of occupational health and safety legislation, risk assessment and risk management currently required for graduate employment across a broad range of industries and workplaces. The unit explores current occupational health, safety and welfare issues in the workplace with specific reference to the enforcement of OHS legislation, workers' compensation, and principles of hazard identification and risk management as required by Australian legislation. The unit also equips students with the capacity to recommend OHS policies to ensure compliance with this legislation and relevant research risk assessment strategies.

### **200753.2 Occupational Health and Safety**

**Credit Points** 10 **Level** 3

#### **Equivalent Units**

61442 Occupational Health and Safety, 200617 - Occupational Health and Safety

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The nature and history of occupational health and safety in Australia, legal frameworks including occupational health and safety acts and workers' compensation. OH&S is considered using the medical, legal, economic, industrial relations and management perspectives. Identifying, assessing, monitoring risks; and specific occupational hazards and intervention strategies are also covered.

### **400916.1 Occupational Justice**

**Credit Points** 10 **Level** 7

#### **Assumed Knowledge**

Students are expected to have completed all of the units of their first three years.

**Prerequisite**

**400912.1** Occupational Therapy Process

**Equivalent Units**

400170 - Occupation & Social Participation

**Special Requirements**

Students must be enrolled in courses 4663 - Bachelor of Health Science/Masters of Occupational Therapy and 4664 - Master of Occupational Therapy. To undertake this unit, students must comply with the following special requirements: Prior to enrolling in this unit students must have: 1) submitted a Criminal Record Check form prior to 1 June 2010 or a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate 2) submitted a Prohibited Employment Declaration prior to 1 June 2010 or a Working with Children Check Student Declaration after 1 June 2010. If students are visiting a NSW Health facility they will need to comply with the occupational screening and immunisation policy of NSW Health.

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This unit critically examines practice in the community with a focus on social inclusion and occupational justice. Life perspectives of people experiencing occupational injustice are explored. Current and historical ideologies which underpin global and national legislation and policies on human rights are examined. The promotion of occupational participation through occupational therapy practice is outlined. This unit challenges popular myths and stereotypes of people with disabilities. Issues such as de-institutionalisation, duty of care, dignity of risk, choice-making, rights and negligence are critiqued against legal, ethical and personal perspectives. This unit assists students to develop critical thinking and reflection skills for practice.

**400167.2 Occupational Therapy Clinical Practice 2**

**Credit Points** 10 **Level** 2

**Prerequisite**

**400161.1** Occupational Therapy Clinical Practice 1

**Equivalent Units**

E3027 - Clinical Placement 2

**Special Requirements**

To undertake this unit, students must comply with the following special requirements: Completion of a Prohibited Persons Declaration; Criminal Record Check Clearance; Provide evidence of compliance with the occupational screening and immunisation policy of NSW Health; Students must possess a current, Workcover Authority approved First Aid Certificate

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In 2013 this unit replaced by 400913 - Occupational Therapy Practice 4 Project. This unit provides opportunities for students to implement skills and integrate theory with practice. The placement will allow students to work for a 2 week period with occupational therapists in one of the many settings where therapists currently practice. The project involves participation in a community based activity

that contributes benefits a community based group. The project may be conducted in an intensive 2 week period or over a period of several weeks / months.

**400174.2 Occupational Therapy Clinical Practice 3a**

**Credit Points** 10 **Level** 3

**Assumed Knowledge**

Client and student safety skills attained in previous clinical units are required before attempting this unit.

**Prerequisite**

**400167.1** Occupational Therapy Clinical Practice 2

**Incompatible Units**

E3028 - Clinical Placement 3

**Special Requirements**

To undertake this unit, students must comply with the following special requirements: Completion of a Prohibited Employment Declaration; Criminal Record Check Clearance; Provide evidence of compliance with the occupational screening and immunisation policy of NSW Health; Students must possess a current, Workcover Authority approved First Aid Certificate

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This unit is being replaced by 400910 Occupational Therapy Practice 3 in 2012. This unit will allow students to consolidate academic knowledge and clinical skills. There will be opportunities to actively participate in assessment, analysis, goal setting, treatment/programme planning and occupational therapy intervention under the supervision of an occupational therapist. The placement will allow students to work for 5 consecutive weeks with occupational therapists in one of the many settings where therapists currently practice.

**400175.2 Occupational Therapy Clinical Practice 3b**

**Credit Points** 10 **Level** 3

**Prerequisite**

**400167.2** Occupational Therapy Clinical Practice 2

**Incompatible Units**

E3028 - Clinical Placement 3

**Special Requirements**

To undertake this unit, students must comply with the following special requirements: Completion of a Prohibited Employment Declaration; Criminal Record Check Clearance; Provide evidence of compliance with the occupational screening and immunisation policy of NSW Health; Students must possess a current, Workcover Authority approved First Aid Certificate

.....

This unit will allow students to consolidate academic knowledge and clinical skills. There will be opportunities to actively participate in assessment, analysis, goal setting, treatment/programme planning and occupational therapy intervention under the supervision of an occupational therapist. The placement will allow students to work for 5

consecutive weeks with occupational therapists in one of the many settings where therapists currently practice.

### **400182.2 Occupational Therapy Clinical Practice 4 (Honours)**

**Credit Points** 10 **Level** 5

#### **Prerequisite**

**400174.1** Occupational Therapy Clinical Practice 3a AND  
**400175.2** Occupational Therapy Clinical Practice 3b

#### **Equivalent Units**

E4115 - Clinical Placement 4

#### **Special Requirements**

To undertake this unit, students must comply with the following special requirements: Completion of a Prohibited Employment Declaration; Criminal Record Check Clearance; Provide evidence of compliance with the occupational screening and immunisation policy of NSW Health; Students must possess a current, Workcover Authority approved First Aid Certificate

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This unit will allow students to consolidate academic knowledge and clinical skills in preparation for becoming a competent beginning practitioner. Students will be expected to actively participate in assessment, analysis, goal setting, treatment/programme planning and occupational therapy intervention under the supervision of an occupational therapist.

### **400172.2 Occupational Therapy Clinical Specialties 1**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

Prior knowledge equivalent to Pathophysiology 1.

#### **Equivalent Units**

E2043 - Occupational Therapy 3

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The unit incorporates the theoretical evidence for clinical practice and an application of clinical practice skills for occupational therapy rehabilitation. The unit will include some of the most common conditions that are currently treated by occupational therapists in rehabilitation settings.

### **400173.2 Occupational Therapy Clinical Specialties 2**

**Credit Points** 10 **Level** 3

#### **Equivalent Units**

E3024 - Counselling & Group Skills

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The unit incorporates the theoretical evidence for clinical practice and an application of skills for group work and creative therapies in clinical practice.

### **400180.2 Occupational Therapy Honours Thesis 1**

**Credit Points** 10 **Level** 5

#### **Assumed Knowledge**

Satisfactory completion of years 1 - 3 of the Bachelor of Applied Science (Occupational Therapy).

#### **Equivalent Units**

E4119 - Advanced Research Methods

#### **Special Requirements**

Students must be enrolled in course 4521 Bachelor of Applied Science (Honours) Occupational Therapy.

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Students will build upon the skills and knowledge of research, evaluation and scholarly enquiry gained in units completed earlier in the program. The emphasis of this unit is on the theory and application of qualitative and quantitative research methods to problems in the student's specialty field. The unit therefore aims to explore: the nature of research and experience of researching in health practitioner roles; technical skills of data collection, management, analysis and interpretation in health practice; and application of this knowledge and skill in research project development in specialist health fields.

### **400181.2 Occupational Therapy Honours Thesis 2**

**Credit Points** 30 **Level** 5

#### **Prerequisite**

**400180.2** Occupational Therapy Honours Thesis 1

#### **Equivalent Units**

E4118 - Research Thesis

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In this unit students will build upon the skills and knowledge of research, evaluation and scholarly enquiry gained in units completed earlier in the program. The emphasis of this unit is the completion of a supervised research project and the production of the honours research thesis. Each student will undertake through supervision the stages of data collection, analysis and will write their results into a format suitable for submission for examination.

### **400907.3 Occupational Therapy Practice 1**

**Credit Points** 10 **Level** 1

#### **Prerequisite**

**400160.3** Introduction to Occupational Therapy

#### **Equivalent Units**

400161 - Occupational Therapy Clinical Practice 1

#### **Special Requirements**

Students must be enrolled in the occupational therapy program. It is profession specific, preparing students to practice as an occupational therapist and not relevant as an elective for non-occupational therapy students. To be able to enrol in the first year Spring unit 400907 Occupational therapy practice 1, all students must have a NSW Health

National Criminal Record Check, a Prohibited Employment Declaration Form and a First Aid Certificate. To be eligible to undertake fieldwork placements in public hospitals, students must comply with NSW Health vaccination requirements and be prepared to submit a completed Adult Immunisation Card to placement institutions. Details of necessary vaccinations are available from NSW Health. NB These are course requirements

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This unit introduces students to the principles of professional practice. Students will be provided with learning opportunities through a variety of experiential and community engagement activities that will begin to develop their skills and competence. Professional competencies addressed include communication, documentation, reflection and professional and ethical behaviour. A professional practice placement is incorporated in this unit. Students will complete practice hours in accordance with World Federation of Occupational Therapy accreditation guidelines

### 400909.2 Occupational Therapy Practice 2

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Completion of the occupational therapy core unit 400160 - Introduction to Occupational Therapy and 400907 - Occupational Therapy Practice 1 is assumed knowledge.

#### Prerequisite

**400907.3** Occupational Therapy Practice 1

#### Equivalent Units

400167 - Occupational Therapy Clinical Practice 2

#### Special Requirements

Students must be enrolled in course 4663 - Bachelor of Health Science/Masters of Occupational Therapy. To undertake this unit, students must comply with the following special requirements: Prior to enrolling in this unit students must have: 1) submitted a Criminal Record Check form prior to 1 June 2010 or a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate 2) submitted a Prohibited Employment Declaration prior to 1 June 2010 or a Working with Children Check Student Declaration after 1 June 2010 3) provide evidence of compliance with the occupational screening and immunisation policy of NSW Health 4) possess a current WorkCover Authority approved First Aid Certificate.

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This unit provides opportunities for students to implement skills and integrate theory with practice. In class students will be provided with learning opportunities through a variety of experiential and self-directed learning exercises that will begin to develop their clinical skills and competence in professional practice. The two week block placement is conducted at the end of the teaching period. This placement will allow students to work with occupational therapists in one of the many settings where therapists currently practice.

### 400910.1 Occupational Therapy Practice 3

**Credit Points** 10 **Level** 3

#### Prerequisite

**400909.1** Occupational Therapy Practice 2

#### Equivalent Units

400174 - Occupational Therapy Clinical Practice 3A

#### Special Requirements

Students must be enrolled in course 4663 Bachelor of Health Science/Masters of Occupational Therapy. Prior to enrolling in this unit students must have: 1) submitted a Criminal Record Check form prior to 1 June 2010 or a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate 2) submitted a Prohibited Employment Declaration prior to 1 June 2010 or a Working with Children Check Student Declaration after 1 June 2010. If students are visiting a NSW Health facility they will need to comply with the occupational screening and immunisation policy of NSW Health.

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This unit will enable students to consolidate academic knowledge and practice skills. There will be opportunities to actively participate in assessment, analysis, goal setting, intervention and evaluation under the supervision of an occupational therapist. Students will experience full time work with occupational therapists in practice settings. Students will complete practice hours in accordance with World Federation of Occupational Therapy accreditation guidelines.

### 400914.1 Occupational Therapy Practice 4

**Credit Points** 20 **Level** 7

#### Assumed Knowledge

Completion of all core Occupational Therapy units.

#### Equivalent Units

400179 - Occupational Therapy Clinical Practice 4

#### Special Requirements

Students must be enrolled in courses 4663 Bachelor of Health Science/Masters of Occupational Therapy or 4664 - Master of Occupational Therapy. Prerequisite requirements: 400910 - Occupational Therapy Practice 3 (for students enrolled in 4663) or 400911 - Occupational Therapy Theory and Practice (for students enrolled in 4664). To undertake this unit, students must comply with the following special requirements: Prior to enrolling in this unit students must have: 1) successfully completed an approved Child Protection Workshop 2) submitted a Prohibited Employment Declaration prior to 1 June 2010 or a Working with Children Check Student Declaration after 1 June 2010 3) provide evidence of compliance with the occupational screening and immunisation policy of NSW Health 4) possess a current WorkCover Authority approved First Aid Certificate.

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This unit will allow students to consolidate academic knowledge and practice skills in preparation for becoming a competent beginning practitioner. Students will be expected to actively participate in assessment, analysis, goal setting,

intervention and evaluation under the supervision of an occupational therapist. Students will complete practice hours in accordance with World Federation of Occupational Therapy accreditation guidelines.

### **400913.1 Occupational Therapy Practice 4 Project**

**Credit Points** 10 **Level** 7

#### **Assumed Knowledge**

Completion of all core Occupational Therapy units.

#### **Special Requirements**

Students must be enrolled in courses 4663 Bachelor of Health Science/Masters of Occupational Therapy or 4664 Master of Occupational Therapy. Prerequisite requirements: 400910 Occupational Therapy Practice 3 (for students enrolled in 4663). To undertake this unit, students must comply with the following special requirements: Prior to enrolling in this unit students must have: 1) submitted a Criminal Record Check form prior to 1 June 2010 or a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate 2) submitted a Prohibited Employment Declaration prior to 1 June 2010 or a Working with Children Check Student Declaration after 1 June 2010. If students are visiting a NSW Health facility they will need to comply with the NSW Health Occupational Screening and Vaccination Against Infectious Diseases Policy.

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This unit gives students an opportunity to participate in a community based project that is part of the fieldwork program. There will be a focus on a self directed practice approach. The unit allows students to develop professional skills in conducting a project which will benefit a community-based group.

### **400915.1 Occupational Therapy Practice 4 Workshop**

**Credit Points** 10 **Level** 7

#### **Assumed Knowledge**

Completion of all core Occupational Therapy units.

#### **Prerequisite**

**400913.1** Occupational Therapy Practice 4 Project

#### **Equivalent Units**

400179 - Occupational Therapy Clinical Practice 4

#### **Special Requirements**

Students must be enrolled in courses 4663 - Bachelor of Health Science/Masters of Occupational Therapy or 4664 - Master of Occupational Therapy. To undertake this unit, students must comply with the following special requirements: Prior to enrolling in this unit students must have: 1) submitted a Criminal Record Check form prior to 1 June 2010 or a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate 2) submitted a Prohibited Employment Declaration prior to 1 June 2010 or a Working with Children Check Student Declaration after 1 June 2010. If students are visiting a NSW Health facility they will need to comply with the NSW Health Occupational Screening and Vaccination Against Infectious Diseases Policy.

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This unit will facilitate the transition from student to occupational therapy practitioner. The unit will allow students to consider employment opportunities for their future and strategies for career and professional development.

### **400912.1 Occupational Therapy Process**

**Credit Points** 10 **Level** 3

#### **Special Requirements**

Students must be enrolled in courses 4663 - Bachelor of Health Science/Masters of Occupational Therapy or 4664 - Master of Occupational Therapy. Pre-requisite for 4663 - 400160 Introduction to Occupational Therapy. Co-requisite for 4664 - 400911 Occupational Therapy Theory and Practice

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This unit provides students with the knowledge and skills to apply the occupational therapy problem-solving process in an evidence-based way, across a diverse range of practice situations. Students will gain knowledge in the application of each stage of the occupational therapy process, learn skills in the selection and implementation of assessments and outcome measures, and undertake intervention planning to suit clients with different occupational needs and health trajectories. Different occupational therapy approaches will be reviewed and students will gain skills in tailoring intervention approaches to suit client need and practice context.

### **400917.1 Occupational Therapy Specialties**

**Credit Points** 10 **Level** 7

#### **Assumed Knowledge**

It is assumed that students entering this unit will have completed all previous occupational therapy units from the third year of the Bachelor of Health Science/Masters of Occupational Therapy.

#### **Prerequisite**

**400912.1** Occupational Therapy Process

#### **Special Requirements**

Students must be enrolled in courses 4663 - Bachelor of Health Science/Masters of Occupational Therapy or 4664 - Master of Occupational Therapy. To undertake this unit, students must comply with the following special requirements: Prior to enrolling in this unit students must have: 1) successfully completed an approved Child Protection Workshop 2) submitted a Prohibited Employment Declaration prior to 1 June 2010 or a Working with Children Check Student Declaration after 1 June 2010 3) possess a current WorkCover Authority approved First Aid Certificate.

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This unit provides occupational therapy students with the opportunity to select from, and undertake advanced study in, a range of occupational therapy clinical specialty areas. Several streams will run concurrently in this unit representing key clinical areas of specialisation in occupational therapy. Students will be able to focus their

study, by selecting a combination of clinical specialty streams. Streams will cover relevant clinical content, examining the unique occupational therapy contribution in each specialty area.

### 400911.1 Occupational Therapy Theory and Practice

**Credit Points** 10 **Level** 7

#### Special Requirements

Students must be enrolled in course 4664 - Master of Occupational Therapy. To undertake this unit, students must comply with the following special requirements: Prior to enrolling in this unit students must have 1) successfully completed an approved Child Protection Workshop; 2) submitted a Prohibited Employment Declaration prior to 1 June 2010 or a Working with Children Check Student Declaration after 1 June 2010; 3) provide evidence of compliance with the occupational screening and immunisation policy of NSW Health; and 4) possess a current First Aid Certificate.

This unit introduces master's entry students to the theory and practice of occupational therapy. Students will explore the unique contribution of occupational therapists in the health care setting, apply theoretical and philosophical principles underpinning the profession to client groups, and learn analytical skills to examine the relationship between a person, their environment and their participation in daily occupations. The occupational therapy problem solving process will be briefly introduced. In addition, students will study clinical and professional competencies related to practice as a health professional. Finally, the above knowledge and skills will be applied during supervised fieldwork experience.

### 300149.2 Operating Systems

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Fundamentals of Computer Science. Basic structure and functioning of computer hardware

#### Prerequisite

**300167.3** Systems Programming 1

#### Equivalent Units

14944 - Operating Systems, J2789 - Operating Systems

This unit provides an introduction to the theory and practice of the internal structure, implementation and functionality of operating systems. The unit is relevant not only for systems programmers, but also for applications developers who need to understand how operating systems control computer hardware, and how they provide convenience, efficiency and security for application development and implementation.

### 300698.3 Operating Systems Programming

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

The students are expected to have general understanding of computer systems, computer fundamentals and programming techniques.

#### Prerequisite

**300581.2** Programming Techniques OR **300903.1** Programming Techniques (Advanced)

#### Equivalent Units

300149 - Operating Systems

#### Incompatible Units

300943 - Operating Systems Programming (Advanced)

This unit provides the knowledge of the internal structure and functionality of Operating Systems. An operating system defines an abstraction of hardware behaviour and provides a range of services more suitable for ICT application development than what raw hardware could deliver, in terms of convenience, efficiency and security. It is important that ICT Professionals have some understanding of how these services are realized. For ICT Professionals whose role includes supporting the operating system this unit provides the introduction to the relevant theory and practice.

### 300670.2 Optimisation Techniques

**Credit Points** 10 **Level** 3

#### Equivalent Units

200197 - Optimisation 1, 14346 - Linear Programming, J3638 - Operations Research 3.1

This unit presents the fundamental mathematical aspects of operations research and develops skills in quantitative approaches in decision making. Students will learn how the optimisation techniques work and how they can be applied by the decision maker in order to generate efficient solutions. The unit focuses on problem formulation and solution methods and covers linear programming primarily and integer programming and dynamic programming briefly.

### 300876.1 Organic Chemistry

**Credit Points** 10 **Level** 2

#### Prerequisite

**300803.1** Essential Chemistry 2

#### Equivalent Units

300553 - Molecules of Life: Synthesis and Reactivity, 300301 - Organic Chemistry

#### Special Requirements

Splash proof safety glasses and laboratory coat, laboratory notebook and closed shoes are required.

Organic molecules are at the heart of the chemistry of life and industry. This unit builds on the fundamental chemical principles, exploring reaction mechanisms and the concept of reactivity and stereo- and regio-selectivity of many of the central reactions that form the basis of living processes, modern research, and contemporary industrial transformations. The unit contains a problem-based module on the application of spectroscopic methods to organic structure elucidation, focusing on spectroscopic data and a practical section on organic synthesis. The unit will focus on complex organic molecules including biologically relevant molecules, and examples from chemical industries, medicinal and pharmaceutical industries.

### 200159.3 Organisation Analysis and Design

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

General knowledge of management principles (such as in MG102A - Management Foundations).

#### Prerequisite

**200571.2** Management Dynamics OR **61611.1** Management Studies OR **H1727.1** Business Management OR **MG102A.3** Management Foundations

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This unit analyses the nature and role of organisational structures and designs within the context of turbulent, rapidly changing, external environments. It equips future managers with the theoretical and practical tools to understand and deal with tensions and paradoxes that arise through processes of 'getting things done' in an era of increased globalisation and 'virtualisation' of work processes. To this end, OAD examines key theoretical schools of organisational analysis, and through the use of case-studies, provides opportunities for students to consolidate their understanding of concepts, structures and processes used to achieve outcomes in organisations. Students are invited to learn through involvement in, and reflection upon, a range of individual and collaborative activities.

### 200585.2 Organisational Behaviour

**Credit Points** 10 **Level** 2

#### Prerequisite

**200571.2** Management Dynamics OR **MG102A.3** Management Foundations

#### Equivalent Units

MG204A - Organisational Behaviour

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Organisational Behaviour focuses on people in the work place, what motivates them, their attitudes, and how they interact with others. The effects of different communication and types of conflict are also examined. The unit focuses on the individual and group processes of organisational behaviour. Students will also gain an understanding of the importance of research in what might be classified as the non-tangibles in organisational effectiveness. This unit aims to develop personal and interpersonal skills of prospective managers for working in contemporary organisational settings.

### 200157.3 Organisational Learning and Development

**Credit Points** 10 **Level** 3

#### Prerequisite

**200571.2** Management Dynamics OR **61611.1** Management Studies OR **H1727.1** Business Management

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Organisational Learning and Development introduces a powerful way of understanding the nature of contemporary organisations and the key strategic tasks they face. Promotion of individual self-development within a continuously self-transforming organisation is presented as essential if organisations are to innovate and evolve, and so meet the challenges of a turbulent world. The unit introduces the idea that promoting organisational learning means adopting an appropriate management philosophy, one that challenges traditional theories of management. The concept and practice of organisational learning and implications for management approaches are introduced and critically evaluated. Students are stimulated to learn through involvement in reflection upon a range of individual and collaborative activities.

### 400983.1 Orthopaedic Physiotherapy

**Credit Points** 10 **Level** 3

#### Prerequisite

**400982.1** Core Competencies in Physiotherapy Practice AND **400981.1** Clinical Pharmacology AND **400871.1** Professional Health Competencies AND **101614.1** Psychology and Health AND **400864.2** Research Methods (Quantitative and Qualitative)

#### Corequisite

**400984.1** Cardiorespiratory Physiotherapy AND **400986.1** Neurological Physiotherapy AND **400985.1** Clinical Education A

#### Special Requirements

Students must be enrolled in 4662 - Bachelor of Health Science/Master of Physiotherapy, 4668 Bachelor of Health Science (Honours)/Master of Physiotherapy or 4667 Graduate Entry Master of Physiotherapy programs. Students in this program are required to participate fully in practical classes. This involves disrobing to shorts and singlet or swim-suit equivalent in mixed gender classes. Students will practice hands-on physiotherapy examination and treatment techniques on both genders, and will personally experience these techniques which will be performed on them by other students and relevant academic staff. Students cannot enrol in Year 3 Physiotherapy units until they have completed 160 credit points in the Bachelor of Health Science/Master of Physiotherapy and 4668 Bachelor of Health Science (Honours)/Master of Physiotherapy programs.

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This unit builds on the knowledge and skills developed in the first 2 years of physiotherapy study. It focuses on client assessment and evidence-based management in acute orthopaedic physiotherapy contexts. This will require strong communication skills, ethical and professional behaviour



and an appreciation of interprofessional care. Professional competencies addressed in this unit include introductory skills in cardiorespiratory physiotherapy assessment, interpretation and prioritisation of findings along with the implementation and evaluation of appropriate treatment strategies.

### **400809.2 Outcome Measures and Indicators in Clinical Practice**

**Credit Points** 10 **Level** 3

#### **Equivalent Units**

400185 - Health Outcomes and Indicators

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This unit aims to provide students with a deeper understanding of the methods used to evaluate clinical practice and service provision. The primary focus of this unit is clinical indicators and outcome measurement. Students will be required to apply their knowledge of professional theory, practice, and research to design a project that could be implemented in the clinical setting to evaluate the effectiveness of clinical intervention or service provision.

### **400808.3 Outdoor Recreation**

**Credit Points** 10 **Level** 1

#### **Equivalent Units**

100666 - Outdoor Recreation 1

#### **Special Requirements**

Students must be enrolled in course 4659 - Bachelor of Health Science (PDHPE) or 4549 - Bachelor of Health Science (PDHPE).

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Students will learn about the variety of outdoor recreational pursuits available to individuals, whether in a school-based or community setting. Through active participation and guided instruction, students will also learn how to supervise specific forms of outdoor recreation. Lecture content will reinforce learning and skill development through the study of the development, administration and delivery of school-based and community public recreation programs, as well as study the role of recreation within Australia.

### **400186.2 Paediatric Practice**

**Credit Points** 10 **Level** 3

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This elective unit aims to give students the opportunity to investigate a particular aspect of paediatric and adolescent clinical practice. This unit will be conducted in a self-directed mode where students will have the opportunity through a learning contract to decide on their own learning objectives and negotiate assessment items. It will provide the opportunity for those students interested in pursuing a career with children and adolescents to enhance and apply their theoretical knowledge of paediatric practice to a particular area of interest.

### **300889.1 Pathological Basis of Disease**

**Credit Points** 10 **Level** 2

#### **Assumed Knowledge**

Knowledge of cell structure and function of cellular components (consistent with the unit Cell Biology); Knowledge of biochemical pathways and energy production (consistent with the unit Functional Proteins and Genes).

#### **Prerequisite**

**300818.1** Introduction to Physiology

#### **Equivalent Units**

300323 - Pathological Basis of Disease

#### **Incompatible Units**

400138 - Pathophysiology 1

#### **Special Requirements**

Students must be enrolled in 3577 - Bachelor of Medical Science, 3657 - Bachelor of Medical Science/Bachelor of Information and Communications Technology, 3673 - Bachelor of Medical Science, 3682 - Bachelor of Medical Science (Advanced), or 3674 - Bachelor of Medical Science (Nanotechnology).

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Pathology is the study of disease. Students will gain an understanding of human pathogenesis, general and systems pathological processes, and the scientific basis of diagnostic and treatment options. The unit also introduces normal human tissue and organ histology, and examines histopathological changes evident in disease states.

### **400138.3 Pathophysiology 1**

**Credit Points** 10 **Level** 2

#### **Prerequisite**

**400868.2** Human Anatomy and Physiology 1 AND **400869.2** Human Anatomy and Physiology 2

#### **Incompatible Units**

300323 - Pathological Basis of Disease

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This unit is intended for students enrolled in a range of health science courses within the School of Science and Health. It is designed to equip students with a detailed knowledge of pathophysiological processes evident in a number of key human diseases that are vocationally relevant to these students. The content is organised using a systems based approach. Problem-based learning methods will be adopted in the tutorial component of this unit to help students develop crucial problem solving skills.

### **400267.3 Pathophysiology 2**

**Credit Points** 10 **Level** 2

#### **Prerequisite**

**300323.3** Pathological Basis of Disease OR **400138.3** Pathophysiology 1

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This unit extends the scope of topics explored in Pathophysiology 1 and is designed to equip students enrolled in health science courses of the School with detailed knowledge of pathophysiological processes evident in a number of key human diseases that are vocationally relevant to these students. Problem-based learning methods will be adopted in the tutorial component of this unit to help students develop crucial problem solving skills.

### 300150.3 PC Workshop

**Credit Points** 10 **Level** 1

#### Assumed Knowledge

Basic knowledge of personal computers.

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This unit introduces students to the hardware and software components of a stand-alone personal computer (PC). Students become familiar with the CPU, memory, secondary storage, IO peripherals and communications devices commonly found in a PC. They learn to assemble and disassemble a PC and to install hardware and software components according to supplier specifications. Students also learn to use and customise the PC operating system to maintain and optimise PC performance.

### 400798.2 PDHPE: Games for Diverse Groups

**Credit Points** 10 **Level** 2

#### Equivalent Units

100832 - Sports Coaching with Juniors

#### Special Requirements

Child protection training, Senior First Aid Certificate

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This unit focuses on the principles of teaching and coaching young children in a range of Indigenous, striking/fielding, and target sports. The aim is to build on students' knowledge, understanding and application of various teaching /coaching styles with a focus on the game sense approach. In particular, the unit addresses issues of diversity and difference, and inclusion in school, sport and recreation activities. As part of the unit, students will implement a coaching/teaching program in a local primary school. Students are also required to a number of Level 0 coaching certificates in both traditional and modified sports. Some of these aspects (e.g. project/coaching clinic hours for AFL/ARU) may occur outside of timetabled class lectures and tutorials.

### 400908.2 People, Environment and Occupations

**Credit Points** 10 **Level** 2

#### Prerequisite

**400160.3** Introduction to Occupational Therapy AND **400907.3** Occupational Therapy Practice 1

#### Equivalent Units

400734 - Functional Analysis

#### Special Requirements

Students must be enrolled in course 4663 - Bachelor of Health Science/Master of Occupational Therapy. This is a specialty unit offered as a compulsory core unit of the occupational therapy program. It is profession specific, preparing students to practice as an occupational therapist and not relevant as an elective for non-occupational therapy students.

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Analysing an individuals participation in meaningful occupations is an essential clinical reasoning process to be mastered by occupational therapists. Therapists must be able to analyse three factors to do so: the persons abilities; the demands of the occupation; and the impact of the environmental context on participation. This unit will facilitate the development of these skills so that students can maximise the person-environment-occupation fit to optimise participation for people with a variety of health challenges or disabilities.

### 101680.3 Perception

**Credit Points** 10 **Level** 2

#### Equivalent Units

100022 - Biological Psychology and Perceptual Processes

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This unit examines the fundamental principles underlying human perception and expands upon the sensation and perception content introduced in the foundational psychology units. After reviewing the biological basis of sensing and perceiving, we will explore the way this relatively raw information is processed and organised into the complex perceptions of the visual, auditory, olfactory, gustatory and somatosensory systems, which constitute the fundamental basis of our experience of the world. The unit will also examine the history of perceptual theories and the use of psychophysical methods and experimental approaches to the study of perceptual processes

### 400897.1 Personal Training and Coaching

**Credit Points** 10 **Level** 3

#### Prerequisite

**300361.1** Introduction to Human Biology AND **400880.1** Fundamentals of Exercise Science AND **400892.1** Physical Activity, Nutrition and Health

#### Special Requirements

Students must be enrolled in course 4659 - Bachelor of Health Science (PDHPE).

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This unit presents the functional anatomy, exercise physiology, physical fitness, biomechanics, motor development and exercise training content required to function as competent personal trainers and/or sports coaches. Students will also complete laboratory exercises designed to train and provide experience in key aspects of personal training and coaching, including assessments of different components of physical fitness in laboratory and field settings, skill analyses from biomechanical and motor

development perspectives, resistance training experience and coaching, and quantifying skill in sports and athletics.

### 300920.1 Pharmacological Chemistry

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

This unit is aimed at undergraduates with a grounding in chemistry and biochemistry.

#### Equivalent Units

300324 - Pharmacological Chemistry

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This unit is aimed at undergraduates with grounding in chemistry and biochemistry who have an interest in a career related to medicinal chemistry. Because it concerns the manner in which foreign molecules can interact with the body's mechanisms it is of direct relevance not only to the pharmaceutical industry but also to the food, agricultural, cosmetic (etc) industries. It conveys the fascination of designing chemical structures for particular uses within biological systems and which overlap the disciplines of chemistry, biochemistry, cell biology and pharmacology. Emphasis is placed upon design of the chemical structure itself rather than an investigation of the specific chemical structure of its site of action in the body. This is reflected in the laboratory work which traces the historical development of drug design, essentially through a process of a series of inorganic syntheses, relevant to a range of common drugs.

### 300884.1 Pharmacology

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Introductory biochemistry and general anatomy of the major body systems such as central and peripheral nervous systems, cardiovascular, respiratory, digestive, endocrine, and urinary systems.

#### Prerequisite

**300753.1** Introduction to Human Physiology

#### Equivalent Units

300505 - Pharmacology

#### Incompatible Units

400981 - Clinical Pharmacology

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Pharmacology is the study of the therapeutic interactions of drugs with the human body, focusing on mechanisms of action at the biochemical and cellular level, on adverse reactions and on clinical applications. This unit provides students with a sound understanding of fundamental aspects of this field to prepare for further study of advanced pharmacology or other biomedical sciences. General principles of pharmacokinetics and pharmacodynamics, will be discussed in detail. The major drug categories that affect different organ systems will be addressed, and research methods in pharmacology and the drug development process will also be introduced.

### 300505.2 Pharmacology

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Assumed knowledge equivalent to 300320 - Introduction to Human Physiology or 300323 - Pathological Basis of Disease

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Pharmacology is the study of the therapeutic interactions of drugs with the human body, focusing on the drug's mechanisms of action at the biochemical and cellular level, on adverse reactions and on clinical applications. The aim of this unit is to provide students with a sound understanding of fundamental aspects of this field to prepare for further study of advanced pharmacology or other biomedical sciences. The general principles of pharmacokinetics and pharmacodynamics will be discussed in detail. This will be followed by the discussions of the major drug categories that affect different organ systems. Research methods in pharmacology and drug development process will also be introduced.

### 100275.4 Philosophies of Love and Death

**Credit Points** 10 **Level** 3

#### Special Requirements

Successful completion of 60 credit points

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The Western experience of the fundamental questions of love and death will be examined. Literary as well as philosophical works will be utilised. Ancient Greek, Christian and medieval attitudes will be contrasted with more modern romantic and existentialist views. Authors will include: Sophocles, Plato, Augustine, Goethe, Austen, Sade, Dostoyevsky and Heidegger.

### 101843.2 Philosophy and Environment

**Credit Points** 10 **Level** 2

#### Special Requirements

Successful completion of 40 credit points at Level 1.

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Philosophy and Environment focuses on how we understand and value our interactions with the natural environment, how humans have changed the world and themselves through those interactions and the questions and problems created through that dynamic. Contemporary issues such as climate change, resource depletion, land degradation, conflict over resources, and treatment of animals have become prominent ethical, political and philosophical concerns. This unit looks at these sort of environmental problems through philosophical methods that reveal the traditions of thought, attitude and action underlying them. Students will be introduced to the major approaches and questions most relevant to explaining contemporary environmental problems.

### 101881.1 Philosophy and the Good Life

**Credit Points** 10 **Level** 2

#### Special Requirements

Successful completion of 40 credit points at level 1.

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What does it mean to live a "good life"? One conception of philosophy that goes back to the teachings of the ancient Greeks and Romans is that it is the discipline pre-eminently concerned with teaching people how to live a good life. This unit will investigate the idea of "the good life" through an examination of select texts in ancient and modern philosophy. It will address questions that both ancient and modern philosophers have grappled with: on the right relation between reason and emotion, on the role of pleasure in human life, on the development of character, on the "care of the self," and on pursuing a meaningful life.

### 101761.2 Philosophy and the Visual

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

It is assumed that the students enrolled in this unit will have completed core units for the BA at the first year level, and all of the general prerequisites for taking a level three unit. No additional knowledge will be assumed.

#### Special Requirements

Successful completion of 60 credit points

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In the past and present, vision has been both privileged as a metaphor for truth, and denigrated as the source of distortion, illusions, and lies. This unit begins by situating the contemporary fascination with 'visual cultures' within the context of a long tradition of philosophical discourse on vision and sight. It traces the relationship between the emergence of visual technologies and the language used by philosophers to discuss truth and falsehood. It explores the manner in which current visual cultures call for both to repeat and to rewrite our philosophical inheritance.

### 100879.2 Philosophy Today

**Credit Points** 10 **Level** 3

#### Equivalent Units

63283 - Contemporary Social and Political Theory

#### Special Requirements

Successful completion of 60 credit points.

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Philosophy Today provides an introduction and analysis of selected issues in contemporary philosophy, with an emphasis on moral and ethical controversies, problems in modern social life, and explanations of human subjectivity and consciousness. Themes and philosophers are selected to provide students with a series of focused perspectives on recent and current philosophical debate - particularly on controversial issues and areas of public debate.

### 400892.2 Physical Activity, Nutrition and Health

**Credit Points** 10 **Level** 2

#### Equivalent Units

400780 - Nutrition, Physical Activity & Mental Health

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Australian society is currently facing critical challenges in the areas of health & wellbeing, mental health, and nutrition. This unit examines the interdependence between these areas, and how personal and socio-cultural health issues can be addressed in a pro-active, holistic and sensitive manner.

### 300849.1 Physical Chemistry

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

This unit requires a knowledge of introductory concepts in differential and integral calculus.

#### Prerequisite

**300800.1** Essential Chemistry 1 AND **300803.1** Essential Chemistry 2

#### Equivalent Units

CH205A - Chemistry 2; J2776 - Physical Chemistry 2; 14142 - Physical Chemistry; 300236 - Physical Chemistry 2; 300540 - Bimolecular Dynamics

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Physical Chemistry describes the fundamentals of energy changes in chemical systems (thermodynamics), the rates and mechanisms of chemical reactions (kinetics), and electrochemistry and/or ion and electron transport. These concepts will be applied to a range of chemical and/or biochemical processes. A major focus of the unit will be to develop the ability to study quantitative chemical/biochemical problems, and develop useful physical chemistry experimental and data-analysis skills.

### 700026.2 Physics (UWSCFS)

**Credit Points** 10 **Level** Z

#### Equivalent Units

900068 - Physics (UWSC)

#### Special Requirements

Students must be enrolled at UWS College.

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This unit serves as an introduction to the fundamentals of physics with appropriate applications in a wide range of engineering areas.

### 300828.1 Physics 1

**Credit Points** 10 **Level** 1

#### Assumed Knowledge

HSC 2 Unit Mathematics Band 4 (Not General Mathematics).

**Equivalent Units**

300558 - Physics 1

**Special Requirements**

Students must have a Scientific Calculator and Laboratory Notebook (good quality A4 size book in which graphs, computer printouts and other relevant information may be stuck in as required) in this unit.

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This unit provides an introduction to physics for science and medical science students as well as providing a basis for further study of more advanced physics for students pursuing courses in nanotechnology, chemical, physical and mathematical sciences. It provides a foundation to understand the physical principles which underlay scientific instrumentation and analysis. Topics covered include systems of units; Introductory mechanics, Newton's laws, work, conservation of energy and momentum; Electricity, electrostatics, DC and AC circuits and components, introductory electromagnetism; Waves and optics, electromagnetic radiation, reflection, refraction, image formation, polarisation, interference and diffraction.

**300558.1 Physics 1**

**Credit Points** 10 **Level** 1

**Assumed Knowledge**

2 units of HSC mathematics or equivalent

**Equivalent Units**

14201 - Foundation Physics 1, 14227 - Engineering Physics, 300050 - Physics 1, 300077 - Physics 1D, EN102A - Engineering Science, J1733 - Physics 1.1, J1763 - Fundamentals of Physics

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This unit provides an introduction to physics for science and medical science students as well as providing a basis for further study of more advanced physics for students pursuing courses in nanotechnology, chemical, physical and mathematical sciences. It provides a foundation to understand the physical principles which underlay scientific instrumentation and analysis. Topics covered include systems of units; Introductory mechanics, Newton's laws, work, conservation of energy and momentum; Electricity, electrostatics, DC and AC circuits and components, introductory electromagnetism; Waves and optics, electromagnetic radiation, reflection, refraction, image formation, polarisation, interference and diffraction.

**300829.1 Physics 2**

**Credit Points** 10 **Level** 1

**Assumed Knowledge**

HSC 2 Unit Physics or one semester of university level Physics or equivalent plus HSC 2 Unit Mathematics Band 4 (Not General Mathematics) or one semester of university level Mathematics or equivalent.

**Equivalent Units**

300559 - Physics 2

**Special Requirements**

Students must have a Scientific calculator and laboratory notebook (this should be a good quality A4 size book into which graphs, computer printouts and other relevant information may be stuck as required).

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This unit develops a deeper understanding of physics for students pursuing courses in nanotechnology, chemical, physical and mathematical sciences. Topics covered include Mechanics: Equilibrium, stress and strain, harmonic oscillators, rotational motion, moment of inertia. Gravitation, types of force in nature. Thermal Physics: temperature, specific & latent heat, heat transfer, kinetic theory of gases, first law of thermodynamics, isothermal, isobaric & adiabatic processes. Introduction to Modern Physics: special relativity, time dilation, length contraction, momentum, mass, rest energy, velocity addition. Basic quantum theory, Planck's hypothesis, wave nature of matter, quantum mechanical view of atoms. Nuclear physics, radiation, half-life, nuclear reactions.

**300464.2 Physics and Materials**

**Credit Points** 10 **Level** 1

**Equivalent Units**

14227 - Engineering Physics

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This unit serves as an introduction to the fundamentals of physics and materials with appropriate applications in a wide range of engineering and industrial design systems.

**700117.1 Physics and Materials (UWSC Assoc Deg)**

**Credit Points** 10 **Level** 1

**Assumed Knowledge**

HSC physics and HSC mathematics

**Equivalent Units**

300464 - Physics and Materials, 700020 - Physics and Materials (UWSC)

**Special Requirements**

Students must be enrolled in the 7022 Associate Degree in Engineering

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This unit serves as an introduction to the fundamentals of physics and materials with appropriate applications in a wide range of engineering and industrial design systems.

**700020.1 Physics and Materials (UWSC)**

**Credit Points** 10 **Level** 1

**Assumed Knowledge**

HSC Physics and HSC Mathematics and/or Physics (UWSC Dip) and Mathematics C (UWSC Dip)

**Equivalent Units**

300464 - Physics and Materials

### Special Requirements

Students must be enrolled at UWS College.

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This unit serves as an introduction to the fundamentals of physics and materials with appropriate applications in a wide range of engineering and industrial design systems.

### 101752.1 Pigments of the Imagination

**Credit Points** 10 **Level** 2

#### Prerequisite

**101751.2** Contextualising Indigenous Australia (Day Mode)

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This unit is available to all Undergraduate students who have open electives. Pigments of the Imagination challenges the accepted view that there is such a thing as 'race' based on skin colour and that identity is based on it. This unit will encourage students to consider their own definitions of race and explore the view that it is an imaginary concept. Students will examine the various ways race as an imaginary concept permeates our education practices and cultural representations influencing the construction of racially classified positions for Indigenous Australians as well as all Australians. Students will be encouraged, by critically analysing a range of cultural texts to re-imagine Indigenous and Non-Indigenous relations.

### 200148.2 Planning and Design of Hospitality Facilities

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

This is an advanced unit, which assumes basic knowledge of hospitality management.

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An understanding of planning and design is critical to the effective long-term sustainability and performance of hospitality businesses. Planning and Design of Hospitality Facilities provides a unique opportunity for students to learn about contemporary planning a design issues including: an examination of design processes; the role of government and building authorities; design principles for hospitality facilities; sustainability; and managerial aspects related to commissioning and evaluating hospitality facilities.

### 300921.1 Plant Health and Biosecurity

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Foundation in chemical and biological sciences, quantitative thinking

#### Equivalent Units

300787 - Plant Microbiology and Protection

#### Incompatible Units

300336 - Plant Microbiology Interactions, 300643 - Plant Protection

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This unit explores the positive and negative aspects of interactions between plants, arthropods and microorganisms in the environment. Students learn to recognise the significance of plant pests, their impact on human society and food security, and methods of reducing their damage to plants and plant products. Major areas of study include: groups of organisms causing plant losses: arthropods, weeds and pathogens (viruses, bacteria, fungi), their modes of action, life cycles, symptomatology, natural plant defence mechanisms; strategies for reducing pest damage (including legislative, physical, biological, genetic and chemical) - their benefits and limitations; recognition of pests and field damage assessment.

### 300865.1 Plant Physiology

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Sound knowledge of biology and chemistry equivalent to undergraduate Level 1 units.

#### Equivalent Units

300333 - Introductory Plant Physiology, 300609 - Plant Physiology

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Plants are the primary producers of terrestrial ecosystems and the key moderators of climate change. Hence, it is vital for students to appreciate how plants produce sugars and interact with their environment. This unit will introduce students to how plants fix and allocate carbon and energy, acquire water and mineral nutrients, and conduct water and organic compounds, the key determinants of plant growth. Students will also learn about how plants interact with their biotic and abiotic environments. This knowledge is crucial for understanding how crop productivity and ecosystem function will be affected by the unfolding global climate change.

### 400928.2 Podiatric Clinical Block

**Credit Points** 20 **Level** 7

#### Assumed Knowledge

Human Anatomy , Podiatry Pre-clinical, Podiatric Techniques 1A, 1B, 2B, 3A, 3B

#### Prerequisite

**400930.2** Podiatric Practice 2 AND **400931.2** Podiatric Practice 3 AND **400937.2** Podiatric Techniques 2A AND **400941.1** Podiatric Techniques 3C

#### Special Requirements

Podiatry specific - students will be participating in patient assessment and management. It is essential that they have been able to demonstrate competencies in patient assessment, documentation, treatment programs and communication within allied health / community settings. The podiatric practice units in combination with the clinical block placement have been designed to be an integrated suite of units where one unit builds on the clinical competencies of the others. Students must hold: 1. Senior First Aid Certificate and completed the OxyViva Resuscitation and EpiPen components as administered by a work cover accredited educational body. 2. National Criminal History Record Check (National Police Certificate)

3. Prohibited Employment Declaration Form prior to 1st June 2010 or a Working with Children Check Student Declaration after 1st June 2010 4. NSW Health Department Category A Vaccinations

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This unit will further develop students assessment skills encouraging the student to make the appropriate selection of assessment techniques to diagnose, treat and provide long term health outcomes especially in the public / community based patients. In this clinical unit, students will continue to participate in clinical activities under supervision in public sector placements to manage foot pathologies with increased scope of treating special populations (the high risk foot). Supporting workshop activities will be divided into two areas: Lecture / tutorial format to prepare the student for the block placement and a final feedback session at the end of the placement.

### 400943.2 Podiatric Clinical Block for Honours Students

**Credit Points** 10 **Level** 7

#### Assumed Knowledge

Anatomy, Podiatry Pre-clinical, Podiatric Techniques 1A, 1B, 2B, 3A, 3B.

#### Prerequisite

**400930.3** Podiatric Practice 2 AND **400931.2** Podiatric Practice 3 AND **400937.3** Podiatric Techniques 2A AND **400941.2** Podiatric Techniques 3C

#### Special Requirements

Podiatry specific - students will be participating in patient assessment and management. It is essential that they have been able to demonstrate competencies in patient assessment, documentation, treatment programs and communication within allied health / community settings. The podiatric practice units in combination with the clinical block placement have been designed to be an integrated suite of units where one unit builds on the clinical competencies of the others. Students must hold a: Prior to enrolling in this unit students must have: 1) submitted a Criminal Record Check form prior to 1 June 2010 or a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate 2) submitted a Prohibited Employment Declaration prior to 1 June 2010 or a Working with Children Check Student Declaration after 1 June 2010. 3) Senior First Aid Certificate and completed the OxyViva Resuscitation and EpiPen components as administration by a work cover accredited educational body 4) NSW Health Department Category A Vaccinations

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This unit will introduce students to the principles of professional development and appropriate requirements to function as a registered podiatrist. As podiatrists may work as a primary provider, as part of a multidisciplinary team, in the public or private health care setting, they require extensive knowledge of many aspects of the management of a practice or business. Students will then undertake a clinical placement to further develop the assessment skills to diagnose, treat and provide long term health outcomes with public / community based patients. Students will participate in clinical activities under supervision in public sector placements to manage foot pathologies with

increased scope of treating special populations (the high risk foot). Supporting workshop activities will provide an opportunity to discuss complex cases and professional issues.

### 400929.2 Podiatric Practice 1

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Functional Anatomy

#### Prerequisite

**400933.2** Podiatry Pre-Clinical

#### Corequisite

**400942.3** Introduction to Podiatry and Clinical Education

#### Equivalent Units

400141 - Podiatry Practice 1

#### Special Requirements

Podiatry specific - students will be participating in patient assessment and management. It is essential that they have been able to demonstrate baseline competencies in patient assessment and infection control procedures. The podiatric practice units have been designed to be an integrated suite of units where one unit builds on the clinical competencies of the others. Students must hold: 1. Senior First Aid Certificate and completed the OxyViva Resuscitation and EpiPen components as administered by a work cover accredited educational body. 2. National Criminal History Record Check (National Police Certificate) 3. Prohibited Employment Declaration Form prior to 1st June 2010 or a Working with Children Check Student Declaration after 1st June 2010 4. NSW Health Department Category A Vaccinations

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This unit will introduce students to the first clinical unit in the series of 4 where students will demonstrate basic competencies in patient assessment, communication and management skills. The student will also be introduced to basic skills in mechanical therapy as part of the clinical therapies unit. In this unit students will participate in clinics as informed and guided observers, and will commence elementary assessment and diagnostic skills. The activities will be divided into four areas: new patient clinics, clinical tutorials, clinical therapies and a one-week external clinical placement at the end of semester.

### 400930.3 Podiatric Practice 2

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Functional Anatomy, Podiatry Pre-clinical, Podiatric Techniques 1A, 1B

#### Prerequisite

**400929.2** Podiatric Practice 1

#### Equivalent Units

400145 - Podiatric Practice 2

#### Special Requirements

Podiatry specific - students will be participating in patient assessment and management. It is essential that they have

been able to demonstrate baseline competencies in patient assessment and infection control procedures. The podiatric practice units have been designed to be an integrated suite of units where one unit builds on the clinical competencies of the others. Must hold a: 1. Senior First Aid Certificate and completed the OxyViva Resuscitation and EpiPen components as administered by a work cover accredited educational body. 2. National Criminal History Record Check (National Police Certificate) 3. Prohibited Employment Declaration Form prior to 1st June 2010 or a Working with Children Check Student Declaration after 1st June 2010 4. NSW Health Department Category A Vaccinations

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This unit will further develop students assessment skills encouraging the student to make the appropriate selection of techniques (biomechanical assessments) and to introduce the student to the diagnosis and management of a variety of simple foot pathologies. In this unit, the second of the four clinical practice units, students will participate in assessments of patients under supervision and continue with the management of foot pathologies. Clinical activities will be divided into five areas: General Medicine Clinic, Biomechanical Assessment Clinical, Tutorial, Clinical Therapies and External Clinical Placement.

### 400931.2 Podiatric Practice 3

**Credit Points** 10 **Level** 7

#### Assumed Knowledge

Functional Anatomy, Podiatry Pre-clinical, Podiatric Techniques 1A, 1B, 2B

#### Prerequisite

**400930.3** Podiatric Practice 2 AND **400937.3** Podiatric Techniques 2A

#### Equivalent Units

400152 - Podiatric Practice 4

#### Special Requirements

Podiatry specific - students will be participating in patient assessment and management. It is essential that they have been able to demonstrate baseline competencies in patient assessment and infection control procedures. The podiatric practice units have been designed to be an integrated suite of units where one unit builds on the clinical competencies of the others. Must hold a: 1. Senior First Aid Certificate and completed the OxyViva Resuscitation and EpiPen components as administered by a work cover accredited educational body. 2. National Criminal History Record Check (National Police Certificate) 3. Prohibited Employment Declaration Form prior to 1st June 2010 or a Working with Children Check Student Declaration after 1st June 2010 4. NSW Health Department Category A Vaccinations

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This unit will further develop students assessment skills encouraging the student to make the appropriate selection of assessment techniques to diagnose, treat and provide long term health outcomes. In this unit, the third of the four clinical practice units, students will continue to participate in clinical activities under supervision to manage foot pathologies with increased scope of treating special

population groups. Clinical activities will be divided into four areas: Clinic-general, biomechanical and surgical assessments, Tutorial, Clinical Therapies and External Clinical Placement.

### 400932.2 Podiatric Practice 4

**Credit Points** 10 **Level** 7

#### Assumed Knowledge

Functional Anatomy, Podiatry Pre-clinical, Podiatric Techniques 1A, 1B, 2B, 3A

#### Prerequisite

**400931.2** Podiatric Practice 3 AND **400937.2** Podiatric Techniques 2A AND **400941.1** Podiatric Techniques 3C

#### Equivalent Units

400158 - Podiatric Practice 6

#### Special Requirements

Students must be enrolled in course 4661 Bachelor of Health Science/Master of Podiatric Medicine, 4665 Master of Podiatric Medicine or 4666 Bachelor of Health Science (Honours)/Master of Podiatric Medicine to enrol in this unit. Students will be participating in patient assessment and management. It is essential that they have been able to demonstrate baseline competencies in patient assessment and infection control procedures. The podiatric practice units have been designed to be an integrated suite of units where one unit builds on the clinical competencies of the others. Students must hold: 1. Senior First Aid Certificate and completed the OxyViva Resuscitation and EpiPen components as administered by a work cover accredited educational body. 2. National Criminal History Record Check (National Police Certificate) 3. Prohibited Employment Declaration Form prior to 1st June 2010 or a Working with Children Check Student Declaration after 1st June 2010 4. NSW Health Department Category A Vaccinations.

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This unit will further develop students assessment skills encouraging the student to make the appropriate selection of assessment techniques to diagnose, treat and provide long term health outcomes. In this final clinical unit, students will continue to participate in clinical activities under supervision in both the Uniclinic and public sector placements to manage foot pathologies with increased scope of treating special population groups. Clinical activities will be divided into four areas: Clinic-general, biomechanical and surgical assessments, Tutorial, Clinical Therapies and External Clinical Placement.

### 400934.2 Podiatric Professional Practice Studies

**Credit Points** 10 **Level** 7

#### Special Requirements

Podiatry specific.

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This unit will introduce students to the principles of professional development and appropriate requirements to function as a registered podiatrist. As podiatrists may work as a primary provider, as part of a multidisciplinary team, in the public or private health care setting, they require



extensive knowledge of many aspects of the management of a practice or business. During a one week conference, students will be introduced to a gumut of principles specific to professional, ethical and legal issues associated with working as a podiatrist and practice and workplace administrative policies and procedures.

### 400935.3 Podiatric Techniques 1A

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Anatomy – structure and function of the lower extremity is important as the focus of this unit is on abnormalities of the lower limb and subsequent assessment and management of conditions of the foot and leg

#### Prerequisite

**400881.3** Functional Anatomy AND **400933.2** Podiatry Pre-Clinical

#### Incompatible Units

400142 - Pathomechanics of Human Locomotion, 400144 - Podiatric Medicine

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This unit will introduce students to clinical (practical hands on) and theoretical foundations of human biomechanics of the foot and lower extremity and the mechanics, diagnosis and treatment of pathological conditions. The unit consists of coordinated lectures and practical components to cover the introductory theory of gait analysis, relevant physical examinations (joint, muscle testing to therapeutic options), diagnosing conditions such as shin pain, foot pain (plantar fasciitis, heel spur syndrome or digital deformities) and related treatment options.

### 400936.3 Podiatric Techniques 1B

**Credit Points** 10 **Level** 3

#### Prerequisite

**400933.2** Podiatry Pre-Clinical AND **400881.3** Functional Anatomy

#### Incompatible Units

400140 - Introduction to Radiology, 400143 - Musculoskeletal Disorders of the Lower Extremity

#### Special Requirements

Podiatry specific.

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This unit will introduce students to clinical and theoretical foundations of the musculoskeletal system conditions that will impact on the function of the lower extremity. Disease processes that affect the joint structure such as osteoarthritis, rheumatoid arthritis, arthropathies, gout, osteoporosis, osteomyelitis, systematic disorders and tumours will be covered. Advanced assessment evaluation will be taught that will include diagnostic techniques, eg. x-rays, ultrasound, magnetic resonance imaging and computer tomography. This will assist in the application and clinical interpretation of presenting disease processes in podiatric settings.

### 400937.3 Podiatric Techniques 2A

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Regional anatomy of the lower extremity is essential as students will be injecting local anaesthesia into the foot. Infection control and manual dexterity skills are essential which will be covered in Podiatric Practice 1 and Podiatry Pre-Clinical.

#### Prerequisite

**400869.2** Human Anatomy and Physiology 2 AND **400881.3** Functional Anatomy AND **400933.2** Podiatry Pre-Clinical AND **400981.2** Clinical Pharmacology

#### Equivalent Units

400150 - Surgery for Podiatrists

#### Special Requirements

Students must hold a Senior First Aid Certificate and must have completed the OxyViva Resuscitation and EpiPen components as administered by a Work Cover accredited educational body.

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This unit will introduce students to local anaesthesia, the theory of surgical procedures and the practice of skin and nail surgical techniques. As such, this unit allows students to assess patients suitability for administration of local anaesthesia; understand procedures involved in obtaining voluntary consent, appreciate, reasonably predict and describe the possible adverse effects of administering local anaesthesia. Surgery will focus the medico-legal requirements, principles of theatre protocol, peri-operative and post surgical management of the patient and nail and skin surgery, in preparation for student undertaking surgery during Podiatric Practice 3 and 4.

### 400938.3 Podiatric Techniques 2B

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

400135 - Clinical Pharmacology and Microbiology. As this unit builds on the concepts presented in Clinical Pharmacology and Microbiology, an understanding of the pharmacokinetics and dynamics of drugs is recommended.

#### Prerequisite

**400981.2** Clinical Pharmacology

#### Incompatible Units

400146 - Pharmacology and Dermatology

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This unit will introduce students to the principles of pharmacology in podiatry and further develop the understanding of drug prescription issues, with particular focus on drugs of importance to podiatry patients, drug interactions and poly pharmacological issues.

### 400939.2 Podiatric Techniques 3A

**Credit Points** 10 **Level** 7

#### Assumed Knowledge

Anatomy and Physiology taught in core units covering the structure and function of the human body coupled with the content about the mechanics and abnormalities in podiatric specific units with particular focus on assessment, treatment and management of the foot and leg taught in Year 3.

#### Incompatible Units

400147 - Paediatrics and Sports Medicine for Podiatry, 400153 - Gerontology and Neurology

#### Special Requirements

Students must be enrolled in course 4661 Bachelor of Health Science/Master of Podiatric Medicine, 4665 Master of Podiatric Medicine or 4666 Bachelor of Health Science (Honours)/Master of Podiatric Medicine.

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This unit will introduce students to clinical and theoretical foundations of biomechanical alignment, trauma, psychological and behavioural factors leading to pain and restricted function of the foot and lower extremity affecting daily living activities. Particular focus will be placed on the mechanics, diagnosis and treatment options of problems experienced in special populations or different age groups in normal daily activities or the sporting arena. Furthermore, this integration will enhance the previously taught assessment and diagnostic techniques in the development of appropriate management and treatment programs of the lower extremity in different populations.

### 400940.2 Podiatric Techniques 3B

**Credit Points** 10 **Level** 7

#### Assumed Knowledge

As this unit builds on the concepts presented in Clinical Pharmacology, an understanding of the pharmacokinetics and dynamics of drugs is recommended.

#### Incompatible Units

400146 - Pharmacology and Dermatology

#### Special Requirements

Students must be enrolled in course 4661 Bachelor of Health Science/Master of Podiatric Medicine, 4665 Master of Podiatric Medicine or 4666 Bachelor of Health Science (Honours)/Master of Podiatric Medicine.

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This unit will introduce students to clinical and theoretical foundations of dermatology including the function and structure of the skin, assessment, diagnosis, aetiological factors and the management of disorders of the skin, with particular emphasis on common foot conditions.

### 400941.2 Podiatric Techniques 3C

**Credit Points** 10 **Level** 7

#### Assumed Knowledge

Anatomy and Physiology taught in core units covering the structure and function of the human body coupled with the content about the mechanics and abnormalities in podiatric specific units. There will be a particular focus on pharmacological aspects in podiatric settings involving assessments, treatment and management of the foot and leg taught in Year 3.

#### Incompatible Units

400151 - The High Risk Foot, 400153 - Gerontology and Neurology

#### Special Requirements

Students must be enrolled in course 4661 Bachelor of Health Science/Master of Podiatric Medicine, 4665 Master of Podiatric Medicine or 4666 Bachelor of Health Science (Honours)/Master of Podiatric Medicine.

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This unit will introduce students to clinical (practical hands on) and theoretical foundations of the management of the high risk foot. The unit consists of coordinated lectures and practical components to cover the overview of systemic conditions covered in pathophysiology and will explore the management of the foot and lower extremity manifestations associated with vascular, endocrine, neurological and immunosuppression. Particular emphasis will be placed on the foot at risk and podiatry assessment, diagnosis and management in context of a health profession team management approach. Diagnostic assessment techniques, both clinical and laboratory based will be covered. Infection control, wound classification and wound care management will be discussed in detail.

### 400933.2 Podiatry Pre-Clinical

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Introduction to Podiatry, Anatomy, Communication skills and Biomechanics.

#### Prerequisite

**400905.1** Introduction to Podiatry AND **400881.1** Functional Anatomy AND **400871.1** Professional Health Competencies AND **400732.1** Communication in Health AND **400882.1** Introduction to Biomechanics

#### Incompatible Units

400133 - Podiatry Pre-clinical Studies

#### Special Requirements

Podiatry specific. Students must hold a: 1. Senior First Aid Certificate and completed the OxyViva Resuscitation and EpiPen components as administered by a work cover accredited educational body. 2. National Criminal History Record Check (National Police Certificate) 3. Prohibited Employment Declaration Form prior to 1st June 2010 or a Working with Children Check Student Declaration after 1st June 2010 4. NSW Health Department Category A Vaccinations

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This unit will build on the skills introduced in Year One with an emphasis on clinical competencies in patient communication and management. The clinical component will cover an introduction to basic treatment skills of skin conditions and the evaluation of functional anatomy, gait, cursory examinations and communication. Introduction to general clinical treatment skills such as chair side devices and strapping and removable pads to more complex skills such as the manufacture of non-cast orthotic devices will be covered.

### 101797.2 Political Terror

**Credit Points** 10 **Level** 2

#### Special Requirements

Successful completion of 40 credit points at Level 1

Since the terrorist attacks of 11 September, 2001, threats of terrorism have been entrenched in both headlines and the collective psyche. Across the globe, terrorism, anti-terrorism and the politics of fear are influential factors in the formulation of domestic and foreign policies. The current wave of terror and counter-terror raises important questions. What do we mean by terror? Is the war on terror really a war like no other? Is the current terrorist threat unprecedented? This unit will examine historical precedents and theories of terrorism.

### 100904.2 Politics and Business in Asia

**Credit Points** 10 **Level** 2

#### Equivalent Units

63158 - Politics and Business in Asia

#### Special Requirements

Successful completion of 60 credit points at Level 1.

This unit examines the interaction between politics and business in the contemporary East Asian and Southeast Asian contexts. Particular attention will be paid to the business-government relationship in a number of key countries and comparisons drawn. The unit examines the issue of the so-called "Asian Way" with respect to business, governing and achieving economic development. It also looks at the so-called "Asian economic miracle" and the "Asian economic crisis" and considers contemporary reform programs aimed at the business-politics nexus in Asia.

### 101665.3 Politics and Religion

**Credit Points** 10 **Level** 3

#### Special Requirements

Successful completion of 60 credit points at Level 1

In the West, it is assumed that the authorities of the state and of the church are separate. The state looks after the public or political affairs, while religion takes care of one's private beliefs and moral values. In practice, however, such a separation has always been precarious. From American politics to the conflicts in the Middle East, the two have remained intermeshed. The unit will trace the idea of the

separation of state and church back to its genesis and track its development in modern thought. The aim is to demonstrate the variegated relation between politics and theology by closely examining a wide array of texts in a variety of disciplinary fields, including literature.

### 100277.3 Politics of Australia and Asia Relations

**Credit Points** 10 **Level** 2

#### Special Requirements

Successful completion of 40 credit points at Level 1

This unit provides an introduction to the history of Australian foreign policy relations with Asia. It seeks to acquaint students with Australia's historic and contemporary relations with countries in East and Southeast Asia and to identify the factors that have contributed to their development.

### 100278.2 Politics of Post-War Japan

**Credit Points** 10 **Level** 3

#### Special Requirements

Successful completion of 60 credit points at Level 1.

This unit studies the history of the post-war Japanese political experience. In particular, examining the interaction between domestic political developments, and security and foreign policy matters.

### 100882.2 Politics of Sex and Gender

**Credit Points** 10 **Level** 2

#### Equivalent Units

63196 - Sex, Gender and Social Relations

#### Special Requirements

Successful completion of 40 credit points at Level 1.

This unit introduces students to the contemporary analysis of sex, gender, and sexualities. Students study key concepts and learn to apply these concepts in the analysis of contemporary issues. Concepts covered include the meanings of sex, gender and sexuality; gender as 'doing'; equality and difference; gendered bodies; biology and social constructionism; and intersectionality (how gender intersects with other differences such as ethnicity, sexuality and class). Students develop a research project in one of the following broad areas: gender and work; gender and politics; gender and sport; sexual politics; and young people and the politics of sex and gender.

### 400870.2 Population Health and Society

**Credit Points** 10 **Level** 1

#### Equivalent Units

400781 - Dynamics of Health, 400270 - Meanings of Health and Models of Care

This unit deals with foundational concepts and factors relating to population health in our society. Issues that determine both social and environmental aspects of disease, health and wellbeing will be examined. Contemporary problems impacting on states of health will be explored, including current day trends in communicable and non-communicable disease.

### **700066.1 Population Health and Society (UWSC)**

**Credit Points** 10 **Level** 1

#### **Equivalent Units**

400870 - Population Health and Society

#### **Special Requirements**

Students must be enrolled at UWS College.

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This unit deals with foundational concepts and factors relating to population health in our society. Issues that determine both social and environmental aspects of disease, health and wellbeing will be examined. Contemporary problems impacting on states of health will be explored, including current day trends in communicable and non-communicable disease.

### **200078.2 Portfolio Management**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

200057 - Investment Management

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This unit covers the contemporary theory of portfolio analysis and management. Topics include: risk and diversification; the two and n security case; the Markowitz efficient frontier; investor indifference curves and optimal portfolios; CML and optimal portfolios; beta, SML and the discount rate re-visited; Sharpe single index model and APT asset allocation; investments to the portfolio and portfolio strategies; measuring portfolio performance and security selection decisions; active portfolio management; international diversification; process of portfolio management; and risk management and hedging.

### **300869.1 Postharvest**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

This unit assumes that students have a basic knowledge of biology, plant morphology and anatomy, chemistry and mathematics. Students are also assumed to be familiar with the World Wide Web and the tools for database searching and basic computer packages such as WORD and EXCEL.

#### **Equivalent Units**

300452 - Prostarvest

#### **Special Requirements**

Students must have completed at least 40 credit points at Level 1 or above.

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The quality of fresh fruit, vegetables and cut flowers affects growers and consumers. In this unit, students will develop an understanding of the role of fresh produce for the health and wellbeing of people; the growth, maturation and physiology of fresh produce; the importance of managing temperature and relative humidity of the storage environment; the responses of fresh produce to changes in temperature and water loss; and the role of ethylene in fruit ripening and senescence. The practical issues of assessing harvest maturity and the packaging, distribution and the control of postharvest diseases and pests will be set in the context of market access.

### **300052.2 Power and Machines**

**Credit Points** 10 **Level** 2

#### **Prerequisite**

**300005.2** Circuit Theory

#### **Equivalent Units**

84239 - Introduction to Power and Machines

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This unit introduces basic concepts of power and machines, including an introduction to modern power systems and transformers, and fundamentals of electromechanical energy conversion. It also covers magnetic circuits, modern permanent magnet materials and their characteristics, and balanced and unbalanced three-phase power systems.

### **200752.2 Power, Politics and Knowledge**

**Credit Points** 10 **Level** 3

#### **Equivalent Units**

H3743 - Power Politics and Knowledge, 200583 - Power, Politics and Knowledge

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The core aim of this unit is to provide students with a thorough grasp of the complex relationships between power, politics and knowledge in organisational settings. It also highlights the need for managers to use power ethically and equitably. These aims are addressed through an examination of a range of theories of power and topics such as: distribution and exercise of power in organisational settings, organisational politics, gender and power, language and power, resistance to power, and others. Innovative class activities and assessment methods (e.g., reflective brainstorming; storytelling; film analysis) are used in this unit to ensure that students are able to effectively apply theoretical concepts to real life situations.

### **400156.2 Practice Management for Health Professionals**

**Credit Points** 10 **Level** 3

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This unit is aimed to introduce the student to the management issues in establishing and working in a clinical practice. While the unit will cover issues related to health professionals and public sector management, the focus of the unit will be on issues in private practice. The aim of the unit is to introduce the student to a wide range of topics,

including an over view of health care funding in Australia, private and public health system, developing a business plan, different business structures, financial management, managing staff and occupational health and safety issues.

### **300671.2 Principles and Practice of Decision Making**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

200192 Statistics for Science or 200032 Statistics for Business or 200263 Biometry and 200189 Concepts of Mathematics and 300606 Foundations of Statistical Modelling and Decision Making

#### **Equivalent Units**

200043 - Stochastic Decision Theory, 200035 - Decision Analysis and Statistical Process Control

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This Level 3 unit investigates models for making optimal decisions under conditions of uncertainty and presents a number of relevant quantitative techniques. Topics covered include probabilistic and non probabilistic decision making criteria, decision trees, sensitivity analysis, using utility for decision making and risk analysis, inventory management, queuing analysis, and introduction to simulation.

### **200525.2 Principles of Economics**

**Credit Points** 10 **Level** 1

#### **Assumed Knowledge**

HSC Mathematics

#### **Equivalent Units**

200076 - Introductory Economics, 200046 - Microeconomics, EC102A - Principles of Economics

#### **Special Requirements**

External offerings for this unit are only available to students who are enrolled in a Property course, Key Program or Major.

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This unit is an introduction to economic concepts and contemporary economic issues. It introduces students to basic concepts such as markets and their operation, the behaviour of firms, the efficiency and potential failings of free markets, the role of government, key macroeconomic variables and problems such as unemployment. It illuminates these concepts via application to contemporary economic issues and debates over different theoretical perspectives. This unit also exposes students to recent developments in economics via presentations by specialist guest lecturers.

### **100483.2 Principles of Professional Communication 1**

**Credit Points** 10 **Level** 1

#### **Equivalent Units**

63901 - Written and Oral Presentation 2, H1745 - Business Skills for Professionals, J1751- Professional Skills for Science and Technology

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The unit provides students with an introductory understanding of a range of communication theories and practices necessary for academic work and professional success.

### **700040.2 Principles of Professional Communication 1 (UWSC)**

**Credit Points** 10 **Level** 1

#### **Equivalent Units**

63901 - Written and Oral Presentation 2, H1745 - Business Skills for Professionals, J1751 - Professional Skills for Science and Technology

#### **Special Requirements**

Students must be enrolled at UWS College.

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This unit provides students with an introductory understanding of a range of communication theories and practices necessary for academic work and professional success.

### **200575.3 Processes and Evaluation in Employment Relations**

**Credit Points** 10 **Level** 3

#### **Prerequisite**

**200300.2** Managing People at Work

#### **Equivalent Units**

200381 - Human Resources Development Seminar

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This unit applies theory and skills developed throughout the key program in HRM/IR to real-world organisational and policy challenges and opportunities. Students will develop and use employment relations concepts and 'metrics' to design implementation plans and to evaluate policies, practices and change initiatives. Evaluation of non-employment relations policies and procedures in terms of their potential impact on employment relations performance will also be assessed. Sustainable and competitive employment relations will be evaluated at organisational, local, regional, national and industry levels.

### **300578.3 Professional Development**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

Understanding of systems analysis and design.

#### **Equivalent Units**

300372 - Professional Preparation and Project Management

#### **Special Requirements**

Students must have completed 140 credit points in their course before enrolling in this unit. For students enrolled in 3663 Graduate Certificate in Health Informatics, 3645 Graduate Diploma in IT and 3646 Graduate Certificate in ICT this pre-requisite is not applicable.

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This is a final year unit that builds on foundation and intermediate computing units to prepare students for professional experience. The unit covers the content in three modules as 1) Ethics and Professional Code of Conduct, 2) Project Management, and 3) Legal, Social, Environmental issues, Quality Assurance and IT Compliance. The content covered in these three modules are carefully designed to fill in the gaps in knowledge that is not so far covered previous units in preparing students for the challenging projects units and professional working life ahead. This unit is a pre-requisite to the capstone project, covered in Professional Experience Project unit.

### **400903.2 Professional Development and Work Experience**

**Credit Points** 10 **Level** 2

#### **Assumed Knowledge**

It is expected that students have the knowledge and skills associated with the prerequisite units.

#### **Prerequisite**

**400880.2** Fundamentals of Exercise Science

#### **Corequisite**

**400326.4** Exercise Prescription for General Populations

#### **Equivalent Units**

400650 - Professional Practice in Sport & Exercise Science 2

#### **Special Requirements**

Students must be enrolled in course 4658 - Bachelor of Health Science (Sport and Exercise Science). Special Requirements are those stipulated by NSW Health and UWS. At present these include: Prior to enrolling in this unit students must have: 1) submitted a Criminal Record Check form prior to 1 June 2010 or a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate 2) submitted a Prohibited Employment Declaration prior to 1 June 2010 or a Working with Children Check Student Declaration after 1 June 2010 3) Adult Health Immunisation 4) Workcover accredited Senior First Aid Certificate

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Experience in the field of study is an essential ingredient in marketing an individual for employment and often for professional memberships. Professional Practice provides students with an opportunity to observe and assist Sport & Exercise Science practitioners in action and to learn in a practical hands on setting. Students will have the opportunity to see how knowledge and skills acquired in lectures and tutorials/laboratories can be applied and also relate theoretical concepts and skills to situations in exercise-related settings. This unit is the first of two units which require a work placement which is usually off campus.

### **300579.3 Professional Experience**

**Credit Points** 10 **Level** 3

#### **Prerequisite**

**300578.3** Professional Development

#### **Equivalent Units**

300097 - Computing Project 1

#### **Incompatible Units**

14951 - SAD Project, 14958 - SAD Project, 300136 - IT Support Practicum, 48528 - SAD Project, 61235 - Software Engineering Project 1, J3664 - Computer Project 3, 54919 - Computing Project A, 54920 - Computing Project B

#### **Special Requirements**

This is a final year capstone unit. Therefore in addition to the successful completion of pre-requisite unit 300578 - Professional Development, students should have completed at least 140 credit points, out of which at least 30 credit points are achieved by the successful completion of level 2 units owned by School of Computing and Mathematics. Due to the capstone nature, this unit can be undertaken only by students enrolled in 3506 - Bachelor of Computer Science, 3633 - Bachelor of Computer Science, 3639 - Bachelor of Information and Communication Technology, 3661 - Bachelor of Information and Communication Technology (Enhanced Pathway), 3654 - Bachelor of Information and Communications Technology/ Bachelor of Arts, 3655 - Bachelor of Information and Communications Technology/Bachelor of Business and Commerce, 3656 - Bachelor of Information and Communications Technology/Bachelor of Business and Commerce (Accounting) or 3657 - Bachelor of Medical Science/Bachelor of Information and Communications Technology.

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Professional Experience is a final year capstone project unit. This unit provides opportunities for students to gain hands-on experience in software systems requirements definition, analysis, design and implementation, in a real-world setting. Students work in groups, guided by an academic supervisor or an industry mentor, in achieving the goals set by the client that provides the project. Suitable projects are sourced from external organisations or within UWS by way of giving the students professional experience in independent learning and reflective practice.

### **300900.1 Professional Experience (Advanced)**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

Software development methodologies, software analysis and design modelling tools and techniques, programming languages, implementing databases management systems, software construction and testing, system documentation and Project Management

#### **Prerequisite**

**300578.3** Professional Development

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Professional Experience (Advanced) is a final year 'capstone' work-placement unit. This advanced unit provides the opportunity for students to gain hands-on experience in software systems requirements definition, analysis, design, implementation and project management, in an external organisation under the supervision of industry experts. During the work placement students work in a real-

life project applying the theories and technical skills learned in previous units in an industry setting. Students are allowed to propose a work-placement of their choice within an external organisation. School will assess the suggested work-placement for its suitability in meeting the set unit outcomes, prior to approval.

### 400871.2 Professional Health Competencies

**Credit Points** 10 **Level** 1

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This unit introduces skills for studying and working in health science. Students will gain an understanding of the interdisciplinary and multi-disciplinary nature of health science practice in the 21st century, and how this interacts with the specialty health professions, client and community expectations of health care and employment opportunities in health science. Students will learn foundation competencies that will underpin their academic development and their safe, responsible and ethical practice in health science service environments.

### 700067.1 Professional Health Competencies (UWSC)

**Credit Points** 10 **Level** 1

#### Equivalent Units

400871 - Professional Health Competencies

#### Special Requirements

Students must be enrolled at UWS College.

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This unit introduces skills for studying and working in health science. Students will gain an understanding of the interdisciplinary and multi-disciplinary nature of health science practice in the 21st century, and how this interacts with the specialty health professions, client and community expectations of health care and employment opportunities in health science. Students will learn foundation competencies that will underpin their academic development and their safe, responsible and ethical practice in health science service environments.

### 400783.2 Professional Pathways in Health Science

**Credit Points** 10 **Level** 1

#### Equivalent Units

400769 - Foundations of Health Sciences 400242 - Foundation of Therapeutic Recreation

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The unit introduces students to professional issues, history and the philosophy in health sciences: health promotion, health service management and therapeutic recreation. Theories and key concepts of health promotion, health service management, social health and therapeutic recreation are introduced. Students will be introduced to an understanding of human development and the health science processes. Students will examine how human growth and development influences development of socio-economic, cultural, gender, environmental, health science issues. Students will begin an electronic portfolio to help

them take more control over their education and assist students to make connections with their learning experiences while building critical and reflective skills. Therapeutic Recreation students will complete a 35 hour workplace learning placement. Health Promotion and Health Service Management students will complete a community project.

### 700075.1 Professional Pathways in Health Science (UWSC)

**Credit Points** 10 **Level** 1

#### Equivalent Units

400783 - Professional Pathways in Health Science, 400769 - Foundations of Health Science, 400242 - Foundations of Therapeutic Recreation.

#### Special Requirements

Students must be enrolled at UWS College unless permission has been granted by the School Science and Health

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This unit introduces students to professional issues, history and the philosophy in health sciences: health promotion, health service management and therapeutic recreation. Theories and key concepts of health promotion, health service management, social health and therapeutic recreation are introduced. Students will be introduced to an understanding of human development and the health science processes. Students will examine how human growth and development influences development of socio-economic, cultural, gender, environmental, health science issues. Students will begin an electronic portfolio to help them take more control over their education and assist students to make connections with their learning experiences while building critical and reflective skills.

### 300053.3 Professional Practice

**Credit Points** 10 **Level** 3

#### Prerequisite

**300461.1** Engineering and Industrial Design Practice OR **300674.2** Engineering, Design and Construction Practice

#### Equivalent Units

85013 - Civil and Environmental Engineering Practice 2

#### Special Requirements

Successful completion of 160 credit points.

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This unit focuses on an integrated project of various sub-disciplines in key programs. The unit describes engineering and construction as professions. Theories related to contract and project management will also form a part of this unit. Throughout the semester, the focus will be on an integrated project and the development of research skills of students enrolled in this unit. This will be achieved through employment of appropriate research skills and completion of professional/technical reports.

### **700118.1 Professional Practice for Engineer Associates (UWSC Assoc Deg)**

**Credit Points** 10 **Level** 2

#### **Prerequisite**

**700109.1** Engineering Management for Engineer Associates (UWSC Assoc Deg)

#### **Special Requirements**

Students must be enrolled in 7022 Associate Degree in Engineering

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This unit will provide the knowledge and skills to enable students to support the achievement of organisational goals through applying knowledge of environment and internal culture. The unit evaluates planning processes and goal setting to achieve superior performance and compares alternative approaches to motivation of work team members. Students will consider types of managerial communications and their associated communications channels in achieving best professional practice.

### **400968.2 Professional Practice in Aged Care and Disability**

**Credit Points** 10 **Level** 3

#### **Equivalent Units**

400248 - Professional Practice in Aged Care, 400790 - Professional Practice in Aged Care and Disability

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This unit provides the student with an understanding of current trends underlying policies and services in the aged care and disability industry, which will help them to understand the dynamics of the changing aged care and disability service sector. Students will examine the strategic environments of aged care and disability to develop global and national perspectives, identify drivers of change and development, and the major players in aged care and disability policies. Students will develop an understanding of the aged care and disability competencies and determinants of well-being for aged and disabled persons, which can be used in their future roles in the health industry. Through reflections on practice in aged care and disability, students will develop an individual approach to aged care and disability service issues which they can use in the future as health care professionals.

### **400925.1 Professional Reasoning**

**Credit Points** 10 **Level** 7

#### **Special Requirements**

Students must be enrolled in courses 4663 - Bachelor of Health Science/Masters of Occupational Therapy and 4664 - Master of Occupational Therapy. To undertake this unit, students must comply with the following special requirements: Prior to enrolling in this unit students must have: 1) successfully completed an approved Child Protection Workshop 2) submitted a Prohibited Employment Declaration prior to 1 June 2010 or a Working with Children Check Student Declaration after 1 June 2010 3) possess a current WorkCover Authority approved First Aid Certificate.

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This final year unit focuses on the transition from student to practitioner. The aim of this unit is to provide students with learning opportunities that will consolidate and enhance their competence in professional practice throughout their career. Professional competencies of central concern include advanced clinical reasoning skills, evidence based-practice, reflective practice, personal and career management strategies, self-directed and life long learning. These competencies contribute positively to the effective management of graduates clinical practice in various work contexts, and their future career paths. Acquisition of such skills will allow the graduate to direct and adapt to change in these areas.

### **400177.2 Professional Reasoning**

**Credit Points** 10 **Level** 5

#### **Equivalent Units**

E4114 - Ergonomics 3, E4116 - Occupational Therapy 6

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This unit will be replaced by 400925 - Professional Reasoning from 2013. This final year unit focuses on the transition from student to practitioner. The aim of this unit is to provide students with learning opportunities that will consolidate and enhance their competence in professional practice throughout their career. Professional competencies of central concern include advanced clinical reasoning skills, evidence based-practice, reflective practice, personal and career management strategies, self-directed and life long learning. These competencies contribute positively to the effective management of graduates' clinical practice in various work contexts, and their future career paths. Acquisition of such skills will allow the graduate to direct and adapt to change in these areas.

### **400786.2 Professional Transition Project**

**Credit Points** 10 **Level** 3

#### **Special Requirements**

Students must be enrolled in the final semester of a Bachelor of Health Science course.

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This unit is designed to assist students to make the transition from undergraduate student life to professional life. The student centred learning approach used in this unit enables students to focus their own learning styles and personal capabilities. Students will explore the strengths and weaknesses of their own learning styles and develop strategies to strengthen their personal learning and teaching capabilities for use as professionals. A structure for developing professional performance will be introduced that includes: management skills, interpersonal skills, problem solving skills, project and procedure skills, personal growth, development and socialisation and education roles. Students will participate in hands-on instructor led sessions, through the E-portfolio project to reflect on and connect academic experiences with their life to anticipated graduate capability



### 700047.1 Programming Design (UWSCFS)

**Credit Points** 5 **Level** Z

#### Special Requirements

Students must be enrolled at UWS College.

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Programming Design introduces students to the principles required for the effective design of solutions to computer program related problems. The course has been developed to enhance a student's practical ability as well as build a solid theoretical foundation for further study.

### 300580.2 Programming Fundamentals

**Credit Points** 10 **Level** 1

#### Equivalent Units

300405 - Fundamentals of Programming, 300155 - Programming Principles 1, 200122 - Business Application Development 1

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As a first unit in computer programming, Programming Fundamentals covers basic computer architecture, basic data and file structures, concept of algorithms, programming constructs, programming language features and functions, program design, test design, basic documentation. A high level programming language is employed to solve problems in a structured manner.

### 700008.1 Programming Fundamentals (UWSC)

**Credit Points** 10 **Level** 1

#### Equivalent Units

300405 - Fundamentals of Programming, 300155 - Programming Principles 1, 200122 - Business Application Development 1, 300580 - Programming Fundamentals

#### Special Requirements

Students must be enrolled at UWS College.

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As a first unit in computer programming, Programming Fundamentals covers basic computer architecture, basic data and file structures, concept of algorithms, programming constructs, programming language features and functions, program design, test design, basic documentation. A high level programming language is employed to solve problems in a structured manner.

### 300581.2 Programming Techniques

**Credit Points** 10 **Level** 2

#### Prerequisite

**300580.2** Programming Fundamentals

#### Equivalent Units

300156 - Programming Principles 2, 300147 Object-Oriented Programming

This unit builds on the programming foundation laid in the unit Programming Fundamentals. Utilising an object-oriented language it continues the development of programming skills and methodologies required for professional programming and for further study in later computing units. Topics covered include object-oriented programming techniques of encapsulation, inheritance and polymorphism, programming concepts including pointers, references, multi-dimensional arrays, strings, file I/O, and abstract data types.

### 300903.1 Programming Techniques (Advanced)

**Credit Points** 10 **Level** 2

#### Prerequisite

**300580.2** Programming Fundamentals

#### Incompatible Units

300581 - Programming Techniques

#### Special Requirements

Students must be enrolled in course 3685 - Bachelor of Computing (Information Systems) Advanced or 3684 - Bachelor of Information and Communication Technology (Advanced)

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This unit builds on the programming foundation laid in the unit Programming Fundamentals. Utilising an object-oriented language it continues the development of programming skills and methodologies required for professional programming and for further study in later computing units. Topics covered include object-oriented programming techniques of encapsulation, inheritance and polymorphism, programming concepts including pointers, references, multi-dimensional arrays, strings, file I/O, and abstract data types. In addition advanced concepts such as type-casting, class templates, standard template library and slicing will be dealt with via a series of seminars.

### MG313A.1 Project Management

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

An understanding of construction planning and planning techniques (such as critical path method)

#### Equivalent Units

300727 - Project Management.

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In 2010 this unit replaced by 300727 - Project Management. This unit is intended to give students an understanding of appropriate methods of managing projects and to develop skills in using these methods on the type of projects the students expect to undertake in their professional careers. Content: Management of time, management of cost, quality, resources and communications.

### **300727.2 Project Management**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

An understanding of construction planning and planning techniques (such as critical path method).

#### **Equivalent Units**

MG313A - Project Management

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This unit is to give students an understanding of appropriate methods of managing construction projects and to develop skills in using these methods on the type of projects the students expect to undertake in their professional careers. Content: Major knowledge areas of project management.

### **101252.2 Psychoanalytic Criticism**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

Successful completion of 60 credit points at Level 1.

#### **Equivalent Units**

SS221A -The Origins of Sexuality

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Psychoanalytic criticism introduces students to key developments in psychoanalytic theory after Freud including the work of Lacan, Kristeva, Klein, Benjamin, Mitchell and Zizek. The unit applies these theories to the analysis and critique of cultural formations (institutions etc), the media (film and television) and everyday practices (such as shopping, sport etc).

### **101614.2 Psychology and Health**

**Credit Points** 10 **Level** 1

#### **Equivalent Units**

400136.1 Introduction to the Psychology of Health

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This unit provides an introduction to the psychology of health and behaviour as relevant to the health sciences. Students will be introduced to the principles and applications of psychology and health behaviour using a developmental framework. This will be followed by an examination of the psychological aspects of injury and illness and an introduction to psychological interventions for health concerns. Emphasis is upon to understanding health status and behaviour in light of relevant theory and research.

### **700060.1 Psychology and Health (UWSC)**

**Credit Points** 10 **Level** 1

#### **Equivalent Units**

101614 - Psychology and Health

#### **Special Requirements**

Students must be enrolled at UWS College.

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This unit provides an introduction to the psychology of health and behaviour as relevant to the health sciences. Students will be introduced to the principles and applications of psychology and health behaviour using a developmental framework. This will be followed by an examination of the psychological aspects of injury and illness and an introduction to psychological interventions for health concerns. Emphasis is on understanding health status and behaviour in light of relevant theory and research.

### **101183.2 Psychology: Behavioural Science**

**Credit Points** 10 **Level** 1

#### **Equivalent Units**

B1910 - Psychology 1B, 100930 - Psychology 1B

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Psychology is a field of scientific inquiry that uses a set of scientific techniques and methods to explain and understand the causes of behaviour. As a profession, psychology applies its knowledge to practical problems in human behaviour. This unit covers a range of topics in psychology at an introductory level including memory, perception, learning, and the workings of the brain.

### **101184.2 Psychology: Human Behaviour**

**Credit Points** 10 **Level** 1

#### **Equivalent Units**

B1909 - Psychology 1A, 100929 - Psychology 1A

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Psychology is a field of scientific inquiry that uses a set of scientific techniques and methods to explain and understand the causes of behaviour. As a profession, psychology applies its knowledge to practical problems in human behaviour. This unit covers a range of topics in psychology at an introductory level including: the history of psychology, intelligence, social psychology, developmental psychology, indigenous and cultural psychology, personality, and abnormal psychology.

### **400285.2 Public Health**

**Credit Points** 10 **Level** 2

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This is a flexible learning unit that deals with foundational concepts and issues relating to public health. The philosophical and historical development and the roles of public health in Australia are examined, as are the theories, policies, politics and principles that govern and inform practice. Emphasis is placed on understanding health issues and concerns in Greater Western Sydney Region as well as on national and international contexts of population health. The unit draws on current and emerging practical situations to highlight the dynamic yet continuing legacy of public health.

### 101253.3 Public Memory and Commemoration

**Credit Points** 10 **Level** 3

#### Equivalent Units

100508 - Dangerous Visions, 100995 - Dangerous Visions

#### Special Requirements

Successful completion of 60 credit points

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Throughout history various forms of material culture (such as art, architecture, sculpture, objects and photographs) have been used to memorialize individuals as well as to commemorate events, both personal and national. As such, an examination of commemorative works offer valuable insights into the production of public memory and history. This unit explores the particular contexts of such memorials; their meaning, design and, politics. The diverse expressions of commemoration in Australia and the consequent production of public memory provides the arena for such considerations.

### 300748.2 Quality and Value Management

**Credit Points** 10 **Level** 3

#### Equivalent Units

200469 - Quality and Value Management

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Introduces students to the concepts of quality systems value management techniques and their application to the built environment. Students will gain knowledge of quality assurance and value management theories, techniques and principles so that they can apply as they enter into their professional careers.

### 300922.1 Quality Assurance and Food Analysis

**Credit Points** 10 **Level** 3

#### Prerequisite

**300842.1** Food Science 2

#### Equivalent Units

300785 - Quality Assurance and Food Analysis

#### Incompatible Units

300636 - Food Processing and Analysis, 300701 - Food Quality Assurance

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This unit introduces students to the standard methods of analysis of foods as used for nutritional analysis and quality assessment of foods. Practicals will include determination of major and minor food components; functionality tests and sensory analysis of foods. The data obtained in the laboratory will be compared to published data and students will gain an appreciation of the limitations of data collection. Students will learn how to construct nutrition information panels for food labels and develop a working knowledge food labelling legislation. The unit integrates previous studies in food science and food safety to develop an understanding of food quality assurance, good

manufacturing practices and quality management systems as they are applied to the control and quality management of food. Food laws, regulations and codes at State, National and International levels are covered. The students will develop a working knowledge of the implementation of food safety quality management systems such as ISO22000.

### 400148.2 Quantitative Research

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Students should be able to perform basic mathematic operation and have some understanding of research process.

#### Equivalent Units

E2230 - Biostatistics for the Health Sciences, 25719 Quantitative Research, 25823 - Quantitative Research

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This unit is being replaced by 400864 Research Methods (Quantative and Qualitative) in 2011. This unit will explore essential elements of quantitative research methods as used in health sciences. It will prepare students for the planning, designing, conducting, evaluating and reporting of a research project. The most common research designs will be examined for their relative strengths and weaknesses, with particular emphasis on how these will have an impact on interpretation and conclusion of the study. It will also introduce basic concepts in epidemiology and biostatistics as well as in using SPSS to analyse and interpret data. The overall aim is to provide skills in designing and evaluating research studies in health sciences.

### 300831.1 Quantitative Thinking

**Credit Points** 10 **Level** 1

#### Assumed Knowledge

Basic competence in algebraic manipulation and some familiarity with elementary probability and statistical concepts.

#### Equivalent Units

200191 - Fundamentals of Mathematics

#### Special Requirements

Students must have a Scientific calculator and access to a computer with the appropriate mathematics software. Students may complete the 3 units Quantitative Thinking, Analysis of Change and Maths 1A in the following order: 300831 Quantitative Thinking, 300830 Analysis of Change, 300672 Mathematics 1A. This means that students may complete 300831 before attempting 300830, but not after. 300830 and 300831 may be attempted before 300672, but not after. Students may not enrol in 300831 and 300830 or 300831 and 300672 or 300831 and 300672 in the same teaching session. Students enrolled in the 3621 Bachelor of Engineering or 3664 Bachelor of Engineering Science may not enrol in any of the units 300830, 300831 or 300672.

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This level 1 unit develops the quantitative skills that underpin many fields of study in the sciences. The content covered includes basic algebra, functions, graphs, equations, linear and quadratic, introductory probability and

descriptive statistics. These mathematical/statistical concepts will be revised and developed using scientific concepts such as molarity and dilution, optical density, population growth, and predator-prey models. In all aspects of this unit, students will be developing and using critical thinking skills to solve mathematical/statistical problems set in a scientific context.

### 700123.1 Quantitative Thinking (UWSC)

**Credit Points** 10 **Level** 1

#### Assumed Knowledge

Basic competence in algebraic manipulation and some familiarity with elementary probability and statistical concepts.

#### Equivalent Units

200191 - Fundamentals of Mathematics, 300831 - Quantitative Thinking

#### Special Requirements

Students must be enrolled at UWSCollege in either 7003 Diploma in Science or 7009 Diploma in Science Fast Track. Students may complete 700123 Quantitative Thinking before 700108 Analysis of Change. This means that students may complete Quantitative Thinking before attempting Analysis of Change, but not after. Students may not enrol in Quantitative Thinking and Analysis of Change in the same teaching session.

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This level 1 unit develops the quantitative skills that underpin many fields of study in the sciences. The content covered includes basic algebra, functions, graphs, equations – linear and quadratic, introductory probability and descriptive statistics. These mathematical/statistical concepts will be revised and developed using scientific concepts such as molarity and dilution, optical density, population growth, and predator-prey models. In all aspects of this unit, students will be developing and using critical thinking skills to solve mathematical/statistical problems set in a scientific context.

### 200486.2 Quantity Surveying 1

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

300706 - Building 1 and 300707 - Building 2 OR BG101A - Building 1 and BG103A - Building 2: Specifically building construction including residential, light industrial and small commercial.

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This unit is designed to develop the techniques required to measure, quantify and prepare bills of quantities for residential construction. It will help students to develop an understanding of the factors that affect the cost of building and introduces costing techniques for work on new and existing buildings.

### 200487.3 Quantity Surveying 2

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Building construction including residential, light industrial and small commercial as covered in the subjects Building 1, Building 2 and Quantity Surveying 1.

#### Prerequisite

[200486.2](#) Quantity Surveying 1

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This subject is designed to provide students with an advanced understanding of the various roles of a quantity surveyor. Students will develop an ability to apply the skills necessary to deliver both pre-contract and post-contract quantity surveying services.

### 300923.1 Quantum Physics

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Mathematics 1A, Mathematics 1B, Physics 1 and Physics 2

#### Prerequisite

[300828.1](#) Physics 1 AND [300829.1](#) Physics 2

#### Equivalent Units

300419 - Quantum Properties of Chemical Systems

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The unit builds on quantum concepts that have been introduced in earlier units such Physics 1,2, Nanotechnology and Chemistry. It aims at developing the student's understanding of quantum principles as they apply to hard and soft matter systems, including atoms, molecules and extended arrays such as metal and semiconductors as well as biological tissue

### 101406.2 Queering Text

**Credit Points** 10 **Level** 3

#### Equivalent Units

100279 - Queering Text

#### Special Requirements

Successful completion of 60 credit points.

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This unit explores the idea of queering texts - texts that queer or texts that are queered by particular readings. The exploration will be propelled by a consideration of gender, sexuality and/or desire and the process of 'making strange'. This unit explores theories of estrangement, alienation, and dis/placement ranging from Formalist ideas of defamiliarisation and foregrounding in relation to language and other semiotic systems, Brecht's politics of alienation, Bakhtin's work on the body and carnival to contemporary notions of performativity and homographesis. Throughout, the unit will be oriented to the use of language in the literary process of queering.

### 101650.3 Race in Literature

**Credit Points** 10 **Level** 3

#### Special Requirements

Successful completion of 60 credit points

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This unit explores a selection of modern literary works that focus on the question of "race." Readings will allow students to learn how notions of race have shifted over time, giving particular attention to how mixed-race people challenge dyadic conceptions of racial difference. Readings may include one or more national literatures, such as American or Australian literature.

### 100908.2 Race Politics

**Credit Points** 10 **Level** 3

#### Equivalent Units

B3894 - Race Politics

#### Special Requirements

Successful completion of 60 credit points at Level 1.

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This unit offers a general overview of race in politics as it exists in Europe, Asia, the Americas and Australasia. It will focus on theories of race, racist policies and practices and the political economy of race.

### 101666.2 Race, Identity and Globalisation

**Credit Points** 10 **Level** 3

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This unit looks at the emergence of 'hybridity' as a category of cultural and social thought by tracing its historical and philosophical genealogies in a wider global context. It looks at the contested ways in which racial mixing or métissage have been articulated in the Western imagination, from 'contamination' to 'cosmopolitanism'. Through charting the changing meanings of 'miscegenation' over time, and in imperial contexts, new insights are offered on the ways in which we might situate current debates on cultural and social identity.

### 300489.2 Radio and Satellite Communication

**Credit Points** 10 **Level** 4

#### Assumed Knowledge

Physics and Materials, Mathematics for Engineers 1 and 2, Astrophysics

#### Prerequisite

[300007.2](#) Communication Systems OR [300010.3](#) Data Networks

#### Equivalent Units

14297 - Satellite Communication

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This unit is offered in alternate years. This unit will develop an understanding of the theory and practice of radio and satellite communication techniques and measurements and

provide an introduction to space communication systems. It will complement the general communication engineering units, addressing advanced topics important and specific to radio and satellite communications.

### 400201.3 Readings and Methodology

**Credit Points** 10 **Level** 5

#### Assumed Knowledge

A basic knowledge of research methods at undergraduate level or equivalent is required.

#### Special Requirements

Students must be enrolled in the Bachelor of Nursing (Honours).

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This unit will broaden and deepen students understanding of research methodologies and develop research skills in order to apply these to a specific B Nursing (Honours) research project.

### 200037.4 Regression Analysis & Experimental Design

**Credit Points** 10 **Level** 3

#### Prerequisite

[200033.4](#) Applied Statistics OR [200052.4](#) Introduction to Economic Methods

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This unit covers regression analysis and experimental design. The regression section of the unit develops the theory and application of one of the most commonly used statistical tools: regression analysis. Topics covered include simple linear regression, multiple regression, and model diagnostics and selection. The experimental design section deals with completely randomized design, randomized block design, Latin square design, and factorial experiment models. Such design models are useful for applications in engineering and physical sciences and in the business and behavioural disciplines. The integration of the theory and practice of the two sections will be enhanced by using the statistical computing package MINITAB.

### 101003.2 Religion and Culture

**Credit Points** 10 **Level** 3

#### Equivalent Units

100883 - Religion and Culture, 63141 - Culture, Religion and Spirituality

#### Special Requirements

Successful completion of 60 credit points at Level 1.

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This unit focuses on the relationship between religion and culture and considers the role of religion as elemental to forces of cultural change. Various religions are studied with a view to investigating how culture shapes religion and in turn how religion shapes and moulds culture. Topics include the rise of fundamentalism, the relationship between gender and religion, religion and violence, religion and ethics, the relationship between science and religion,

the rise of new forms of spirituality including New Age, and the role of religion in popular culture.

#### 101005.4 Representing Crime

**Credit Points** 10 **Level** 3

##### Equivalent Units

SS233A - Representing Crime.

##### Special Requirements

Successful completion of 60 credit points

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This unit deals with the evolution of the figure of the detective and of the criminal; the development of an aesthetics of crime from the later 18th Century; the dynamic nature of fiction, film and television genres of detection. Literatures of sensation, detective fictions, true crime writing and the non-fiction novel will all be examined to allow an in-depth analysis of the changing ethical and psychological character of the detective, and of his nemeses. The crime story in film, television and in other new media may also be addressed to facilitate an analysis of changing cultural contexts for the crime story.

#### 400803.2 Research in Nursing Practice

**Credit Points** 10 **Level** 5

##### Assumed Knowledge

A basic knowledge of research methods at undergraduate level.

##### Incompatible Units

400200 - Applied Nursing Research

##### Special Requirements

Students must be enrolled in Bachelor of Nursing (Honours).

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Research is a necessary undertaking toward the continued development of nursing science and practice. The aim of this unit is to both broaden and deepen students' understanding of research methods and to extend their ability to discuss, appraise the work of others and participate in their own research.

#### 400864.3 Research Methods (Quantitative and Qualitative)

**Credit Points** 10 **Level** 2

##### Prerequisite

**400863.2** Foundations of Research and Evidence-Based Practice

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This unit further explores research methods used to acquire knowledge in healthcare. This includes research designs, international standards, key statistics, and interpretation of results. The range of health research methods will be presented, and studies about treatment effectiveness (clinical trials and systematic reviews), diagnostic effectiveness and qualitative approaches will be explored in detail. The pathways and resources for conducting beginner research will also be introduced in this unit.

#### 200412.5 Research Proposal and Seminar

**Credit Points** 10 **Level** 5

##### Assumed Knowledge

Students to have the basic disciplinary knowledge and skills necessary to design and undertake their honours level research project.

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The aim of this unit is to identify a suitable honours thesis topic, conduct a preliminary review of the relevant literature, identify research methods applicable to the study, consider any relevant ethical issues applicable to the study, devise a resource management plan and schedule of study and to seek feedback and input from academics with appropriate skills and experience in the research area. This unit gives honours students access and exposure to research communities via attendance and participation at school research seminars. Students will publicly present and defend their thesis proposal to peers and the academic community.

#### 400890.1 Resistance Training and Physiology

**Credit Points** 10 **Level** 3

##### Prerequisite

**400883.1** Exercise Bioenergetics AND **400885.1** Sport and Exercise Physiology AND **400888.1** Advanced Sports Physiology

##### Special Requirements

Students must be enrolled in course 4658 - Bachelor of Health Science (Sport and Exercise Science). To undertake this unit, students must comply with the following special requirements: Prior to enrolling in this unit students must have: 1) submitted a Criminal Record Check form prior to 1 June 2010 or a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate 2) submitted a Prohibited Employment Declaration prior to 1 June 2010 or a Working with Children Check Student Declaration after 1 June 2010 3) possess a current WorkCover Authority approved First Aid Certificate.

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Resistance Training and Physiology presents the growing body of research evidence supporting specific methods of resistance exercise and training, as well as the role of resistance exercise in disease prevention and health promotion. Students gain an increased understanding of the energetics and physiology of resistance exercise by also completing laboratories focussed on the research of important applied concepts in resistance exercise and training. Students also experience resistance training.

#### 300663.2 Resource Sustainability

**Credit Points** 10 **Level** 1

##### Assumed Knowledge

Basic biological sciences and an understanding of writing & referencing.

##### Equivalent Units

EY101A - Terrestrial Environmental Management

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In 2012 this unit is replaced with 300810 - Resource Sustainability. Students enrolled in Resources Sustainability will learn about local, national, and global issues concerning human interactions with the environment. The course is designed to provide the practical and theoretical information required for students to think critically about environmental issues and to contribute to the sustainable management of natural and built environments. The course is underpinned by the scientific method and the concept of ecologically sustainable development. Students will undertake a series of exercises to assess sustainability at local and/or personal levels and will analyse and present their data in both audio/visual and written forms, along with suggestions for increasing sustainable resource use.

**300810.1 Resource Sustainability**

**Credit Points** 10 **Level** 1

**Assumed Knowledge**

Understanding of ecological terminology and referencing.

**Equivalent Units**

300663 - Resource Sustainability, 700099 - Resource Sustainability (UWSC)

**Special Requirements**

Students require enclosed footwear in this unit

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Resource sustainability deals with the local, national, and global sustainability issues concerning human interactions with the environment. The unit uses current resource issues and scientific concepts to provide the practical and theoretical information needed for students to think critically about environmental issues and to contribute to the sustainable management of natural and built environments. Students will also learn how science and society interact in the management of resources. Using the concept of ecologically sustainable development as a foundation, students will use critical thinking skills to research a resource issue of their choice at the local, national and/or international level. Students will communicate their research using new mediaexploring the issue and make recommendations for improving sustainability.

**700099.1 Resource Sustainability (UWSC)**

**Credit Points** 10 **Level** 1

**Assumed Knowledge**

Basic biological science and an understanding of referencing

**Equivalent Units**

300663 - Resource Sustainability, 300810 - Resource Sustainability

**Special Requirements**

Students must be enrolled at UWSCollege in 7003 Diploma in Science or 7009 Diploma in Science Fast Track

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Resource sustainability deals with the local, national, and global sustainability issues concerning human interactions with the environment. The unit uses current resource

issues and scientific concepts to provide the practical and theoretical information needed for students to think critically about environmental issues and to contribute to the sustainable management of natural and built environments. Students will also learn how science and society interact in the management of resources. Using the concept of ecologically sustainable development as a foundation, students will use critical thinking skills to research a resource issue of their choice at the local, national and/or international level. Students will communicate their research using new mediaexploring the issue and make recommendations for improving sustainability.

**101759.1 Rethinking Research with Indigenous Australians: Independent Study Project (Day Mode)**

**Credit Points** 10 **Level** 3

**Prerequisite**

**101751.2** Contextualising Indigenous Australia (Day Mode)

**Special Requirements**

Successful completion of 60 credit points

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This unit will provide students with an exciting opportunity to undertake an Independent Study Project that will engage them in a dialogue and partnership with Indigenous Australians. Students will gain greater knowledge of Indigenous people and develop effective communication skills as well as a level of cultural competency. The Independent Study Project will expose students to the complexities of the cultural inter-relationships and the politics of undertaking research with Indigenous people. It will also provide students with skills and ideas for future research projects that will add to Indigenous knowledge and provide a sound foundation for ethical research.

**101753.2 Revaluing Indigenous Economics (Day Mode)**

**Credit Points** 10 **Level** 2

**Prerequisite**

**101751.2** Contextualising Indigenous Australia (Day Mode)

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Revaluing Indigenous Economics will examine Australia's Indigenous economy and its dynamics. It will challenge students to reflect on the significant contribution Indigenous Australians have made and continue to make to our growing economy. It will also challenge students to rethink the politics of the welfare economy as it relates to Indigenous Australians. Students will be introduced to a number of enterprise development case studies for example, The Arts, Mining and Land Development, Tourism and the Environment, Sports and Small Business.

**200739.2 Reward and Performance Management**

**Credit Points** 10 **Level** 3

**Prerequisite**

**200300.2** Managing People at Work

### Incompatible Units

200611 - Management of Employee Performance, 200612 - Remuneration Theory and Practice

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The unit introduces students to critical perspectives in reward management. The structure of the course is initially thematic and considers in turn: the wider context in which reward strategies are devised; the strategic decisions that arise in the organisational context if reward is to meet regulatory requirements, the organisation's objectives and the expectations of the workforce, and the component parts (base pay, variable pay, transactional rewards, relational rewards of contemporary reward). This unit examines the relationship between performance and reward, performance management systems and the alignment of employer performance with achievement of organisational objectives. Various models of performance management and performance appraisal techniques are critically assessed.

### 300056.3 Robotics

**Credit Points** 10 **Level** 4

#### Prerequisite

**300463.2** Fundamentals of Mechanics

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To develop an understanding of the basic concepts involved in Robotics. The kinematics, dynamics, control and sensing aspects in robotics will be introduced. In addition, the concepts of artificial intelligence (AI) and their applications in robotics will also be introduced. There will be considerable use of MATLAB in the unit.

### 700059.2 Science for Health Science (UWSCFS)

**Credit Points** 10 **Level** Z

#### Equivalent Units

900049 - Science for Health Science (UWSC), 900068 - Science for Nursing (UWSC)

#### Special Requirements

Students must be enrolled at UWSCollege.

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This unit replaces 700059.1 Science for Health Science (UWSCFS) from Term 1 2011. The depth of knowledge and practical skills required by health professionals in the 21st century are very different to that which were required in the past. Medical treatment of illness and disease has become increasingly technical and health professionals are expected to work in partnership in determining patient care. In order to achieve this, today's health professional must have a basic understanding of the fundamental scientific principles behind both the diseases and their treatments. Increasingly, modern health science is concerned with maintaining health as a way of preventing disease and this is achieved through a holistic approach to the human state. This course is an introduction to the basic concepts in physics, chemistry and biology that will be required in order to commence any tertiary health science course.

### 300924.1 Science Research Project

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

This unit is aimed at undergraduates in their final year of undergraduate study who have a good grounding in the Level 2 units for the discipline area of their individual project.

#### Equivalent Units

300788 - Science Research Project

#### Incompatible Units

300645 - Science Research Project 2, 300299 - Chemistry Project 3, J3659 - Biological Science Project 3, 14117 - Chemistry Project, 300542 - Biomolecular Science Project

#### Special Requirements

Successful completion of at least two Level 3 units and have a GPA of 5.5 or above.

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Science Research Project is a final-year capstone unit that gives students an introduction to scientific research, while extending their knowledge and practical skills. Each student undertakes a research project supervised by an academic staff member. With the assistance of their supervisor, students will research the literature and define the problem to be studied, carry out a risk assessment, develop the appropriate experimental methods, carry out research on their project, and present a final written report and a poster or oral presentation. This unit offers a challenge to final-year students, and allows innovation by the student with respect to both method and research direction.

### 300412.3 Science, Technology and Environment Honours Project

**Credit Points** 60 **Level** 5

#### Assumed Knowledge

Successful completion of a Bachelors degree in a science discipline. Normally the student will have achieved a grade point average of greater than 5.0 in Level 2 and 3 units.

#### Special Requirements

Students must be enrolled in postgraduate or honours courses.

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The aim of this unit is to further develop the student's research and problem solving skills. The student is required to implement a research plan, complete a substantive piece of research in a relevant field within Science, Technology and the Environment and to communicate the results of that work to an interested and technically literate audience. Students will present their research as a thesis with a substantial chapter detailing research objectives, methodology and research outcomes. The thesis topic and structure will vary according to the area of interest of the student and the expertise of the supervisor. The project is meant to be a significant undertaking and to incorporate some element of innovation. Throughout this unit regular planned consultations between the student and supervisor (s) will occur and students will be required to attend seminar series or regular research meetings; these may be formal components of other units within the Bachelor



(Honours) course. Students are expected to work to a schedule devised in consultation with their supervisor. The schedule will include dates set for progress reports and the presentation of draft chapters for review by the supervisor. The unit builds upon the skills developed in the undergraduate course, extending students' competencies in a range of practical techniques and processes of critical thinking. Students who successfully complete the Honours program will have achieved the appropriate background to enable them to pursue further postgraduate research and/or coursework in the sciences or pursue a career in industry or profession.

### 300811.1 Scientific Literacy

**Credit Points** 10 **Level** 1

#### Assumed Knowledge

Basic literacy and numeracy.

#### Equivalent Units

300497 - Professional Skills for Science

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This unit is designed to provide students with scientific literacy and generic skills required to successfully undertake science-related undergraduate studies. Students learn, develop and utilise academic and interpersonal methodologies within the context of applied scientific principles in society and take responsibility for their own learning. Students are introduced to the contestable and uncertain nature of science and the scientific method. Activities encourage development of self-confidence, self-efficacy, creative thinking through problem solving, group process, communication and peer support. Academic skills include scientific reading and report writing, researching scientific information and library skills, oral presentation, taking tests and exams, effective personal and group based learning strategies, peer assessment, and online learning.

### 700124.1 Scientific Literacy (UWSC)

**Credit Points** 10 **Level** 1

#### Assumed Knowledge

Basic literacy & numeracy

#### Equivalent Units

300497 - Professional Skills for Science, 700042 - Professional Skills for Science (UWSC), 300811 - Scientific Literacy

#### Special Requirements

Students must be enrolled at UWSCollege in either 7003 Diploma in Science or 7009 Diploma in Science Fast Track

.....

This unit is designed to provide students with scientific literacy and generic skills required to successfully undertake science-related undergraduate studies. Students learn, develop and utilise academic and interpersonal methodologies within the context of applied scientific principles in society and take responsibility for their own learning. Students are introduced to the contestable and uncertain nature of science and the scientific method. Activities encourage development of self-confidence, self-efficacy, creative thinking through problem solving, group process, communication and peer support. Academic skills

include scientific reading and report writing, researching scientific information and library skills, oral presentation, taking tests and exams, effective personal and group based learning strategies, peer assessment, and online learning.

### 101451.2 Second Language Acquisition

**Credit Points** 10 **Level** 3

#### Equivalent Units

A1081 - Second Language Acquisition

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This unit is designed for students who are interested in understanding how a second language is learned. It examines learning in both natural or classroom contexts as well as language development in child and adult learners. Students are introduced to current theories of Second Language Acquisition, as well as current research and its applications to the classroom or the translation process. Students will conduct a small research project to become familiar with the process of learning a second language and some basic research notions and techniques.

### 101721.2 Second Language Learning and Teaching

**Credit Points** 10 **Level** 3

#### Equivalent Units

100200 - L2 Learning and Teaching Methodology, 101456 - Second Language Learning and Teaching

#### Special Requirements

Successful completion of 60 credit points at Levels 1/2.

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This unit provides students with knowledge of second language learning processes, an understanding of how research-based teaching may effectively help that process in learners as well as reflections and experiences on teaching practices.

### 200707.2 Service Industry Studies

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Basic understanding of the service and experience economies is assumed.

#### Equivalent Units

200581 - Sport Management Research Methods, 200559 - Hospitality Business Research Methods, 200681 - Services Research Methods

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Service Industry Studies is designed to allow students to develop skills of research planning, execution, interpretation and results dissemination from service industry research projects. Students will learn about and have an opportunity to prepare a literature review, conduct research on a 'problem', collect, analyse and present data on a hypothetical or case based service business issue. Strategies and recommendations in the form of a report will be the outcome of the unit.

### 300568.2 Services Computing in Healthcare

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Some ability in design and implementation of Web Applications is desirable but not essential. Students who have worked in the Health sector, or who have gained a broad understanding of Health system and uses of ICT therein may be exempted from the prerequisite unit.

#### Prerequisite

**300566.2** Introduction to Health Informatics

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In this unit students will learn the concepts underpinning the services computing paradigm of 'bridging the gap between Business Services and IT Services'. Services Computing technology includes Web services and service-oriented architecture (SOA), business consulting methodology and utilities, business process modelling, transformation and integration. Students will learn, through the development of practical examples, how to utilise these technologies within a healthcare context.

### 100281.3 Sexual Culture/s

**Credit Points** 10 **Level** 2

#### Special Requirements

Successful completion of 60 credit points at Level 1.

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This unit examines cultural forms and practices as they relate to sex and sexual activity. Its primary focus is sociological and ethnographic. The unit introduces students to methods and approaches in the researching of sex's role in cultural formation. We look at the way in which sex, sexual practice and sexual identity are experienced as social and cultural practices. The unit looks closely at particular sexual cultures, and moves from research regarding these sexual cultures to understandings of sex as culture. Each topic takes a trajectory from empirical, qualitative or other sociological studies of sites and practices, drawing on a range of theoretical approaches to develop understandings of sex as culture.

### 101791.2 Short Fiction in the Americas

**Credit Points** 10 **Level** 3

#### Special Requirements

Successful completion of 60 credit points

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This unit surveys short fiction written in the Americas in English, French, Spanish and Portuguese during the twentieth century. It examines the history of short fictional genres, theories of their functioning, and the ways in which they register and transmit the various national and regional cultures of the Americas. The unit allows students majoring in Spanish to undertake language-specific assessment tasks (reading original texts in Spanish and writing their essay in Spanish) while other students read the texts and complete their assessment tasks in English.

### 300057.3 Signals and Systems

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

300005 - Circuit Theory: this unit requires the knowledge in Laplace transforms, Calculus, Trigonometry and Complex number theory, since understanding of System theory and Fourier series and transform requires a strong background in those areas. Most of the examples and applications in this unit are based on Circuit Theory material.

#### Prerequisite

**200238.2** Mathematics for Engineers 2

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This unit aims to develop students' understanding of continuous-time and discrete-time concepts and methods. It covers various signals and their analysis, as encountered in the fields of electrical, computer and telecommunication engineering.

### 200044.1 Simulation Techniques

**Credit Points** 10 **Level** 3

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This unit covers a general introduction to simulation modelling, with a special focus on systems that change only at discrete points in time. It begins with Monte-Carlo methods for evaluating integrals, and moves into the simulation of simple queuing and inventory systems with the use of Pascal. It then introduces special simulation languages, with special reference to SEESIM. The purpose is to be able to set up and solve simple practical problems. In doing so we emphasise the need to analyse outputs statistically, and to offer advice on the basis of the analysis. Although requiring computer programming, the emphasis of the unit is mathematical and statistical. It deals with an introduction to random number generation by computers; it also deals with the computer generation of independent random variables with a common probability distribution.

### 63178.2 Social and Political Developments in Contemporary China

**Credit Points** 10 **Level** 3

#### Special Requirements

Successful completion of 60 credit points.

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This unit is concerned with developments in China since the establishment of the People's Republic in 1949. It will focus on the post-1976 period, which saw the adoption and implementation of an "open-door" policy and the launch of the "Four Modernisations". Due attention, however, will also be paid to the history and politics of the 1950s and 1960s as backgrounds. The unit will be issue-oriented, exploring a whole range of social and political issues that will have a bearing on China's future as a potential world power in the twenty-first century.

### 100884.2 Social Inequalities

**Credit Points** 10 **Level** 2

**Equivalent Units**

100283 - Social Inequalities

**Special Requirements**

Successful completion of 60 credit points at Level 1.

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Social inequality arising from the operations of power creates patterns of unequal participation and unequal access of people to economic, social and political resources, in different ways in different societies and cultures. These processes raise fundamental theoretical issues, as well as matters of serious practical concern. This unit will critically examine theoretical analyses of different kinds of inequalities, including class, race, ethnicity, gender, and sexuality.

### 101006.2 Social Semiotics

**Credit Points** 10 **Level** 3

**Equivalent Units**

VP201A - Social Semiotics, 100885 - Social Semiotics

**Special Requirements**

Successful completion of 60 credit points at Level 1.

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Students doing social semiotics will learn a variety of skills in social and textual analysis. These skills are vital to an understanding of communication, society, and culture. The unit will offer insights into the history of the rise of semiotics, especially from the work of Roland Barthes onwards. The unit combines theory with practice in analysing and producing text in a variety of media. It also looks at the contexts of textual production, ranging from general examples to issues of multicultural and postcolonial social analysis.

### 101450.2 Sociolinguistics

**Credit Points** 10 **Level** 3

**Equivalent Units**

A1080 - Sociolinguistics

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This unit is designed to develop students' interest in language and society and give them an understanding and appreciation of variation in language (accents, dialects) and language change, language planning, as well as the interdependent relationship between language learning, communicative competence and cultural practices, both in the Australian context and also in a more global context. It also aims to show students how this unit fits in with other language and linguistics-related disciplines, e.g. Linguistics, Bilingualism and Biculturalism, Second Language Acquisition.

### 101359.5 Sociology of Religion

**Credit Points** 10 **Level** 3

**Equivalent Units**

Unit B3967 - Sociology of Religion

**Special Requirements**

Successful completion of 40 credit points of study OR 101336 - Introduction to Sociology OR 101551 - Understanding Society OR 100960 - Contemporary Society.

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In this unit some of the main sociological approaches to the study of religion will be considered. The unit will be orientated particularly to the tension between religion and social theory in the evolution of sociological thought. It addresses the impact of religion and religious bodies on Australian society and politics. The unit will focus on the relation of theory and practice, on the research of contemporary religious practice, and on the contemporary relevance of major theorists in the sociology of religion. It will address issues such as Buddhism, Fundamentalism(s), gender in religion, globalisation, Islam, modernity/post modernity, neo-paganism, networks in spiritualities, New Age, popular culture, and new religious movements.

### 300731.2 Soil Engineering

**Credit Points** 10 **Level** 2

**Prerequisite**

200237.3 Mathematics for Engineers 1

**Equivalent Units**

85012 - Soil Engineering

**Special Requirements**

Restriction on size of lab class.

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This unit is an introductory course covering the use of soil, and the water in it, as an engineering material. It will provide students with a basic understanding of the physical and mechanical properties of soils, simple soil testing methods to characterise soil strength and deformation behaviour and how to apply basic techniques to assess the hydro-mechanical response of soils subjected to loading.

### 700119.1 Soil Engineering (UWSC Assoc Deg)

**Credit Points** 10 **Level** 2

**Prerequisite**

700101.1 Mathematics for Engineers 1 (UWSC Assoc Deg)

**Equivalent Units**

300731 - Soil Engineering

**Special Requirements**

Students must be enrolled in 7022 Associate Degree in Engineering

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This unit is an introductory unit covering the use of soil, and the water in it, as an engineering material. It will provide

students with a basic understanding of the physical and mechanical properties of soils, simple soil testing methods to characterise soil strength and deformation behaviour and how to apply basic techniques to assess the hydro-mechanical response of soils subjected to loading.

### **300823.1 Soils**

**Credit Points 10 Level 1**

#### **Equivalent Units**

300625 - Noise Assessment, 300362 - Environment and Health

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This unit provides students with a basic understanding of soil formation and erosion processes, soil physical, chemical and biological properties, and the diversity and classification of soils in the Australian landscape. These basic principles are explored in relation to the sustainable management of soils for horticultural and agricultural production and for environmental management, other land uses and in relation to forensic investigation and studies. The practical sessions are designed to reinforce the lecture material and include field description and analysis of soil profiles and properties, soil sampling principles and practice, laboratory measurement of soil physical and chemical properties essential/important for plant growth, soil biology and human and animal remains.

### **100145.2 Spanish 101**

**Credit Points 10 Level 1**

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This is an introductory unit in Spanish language studies for students with little or no previous knowledge of the language. It aims to introduce students to the four skills of listening, speaking, reading and writing in elementary Spanish. The unit includes a study of elements of the contemporary Spanish-speaking world and its culture, and their relevance to Australia, with a particular emphasis on the Spanish-speaking community in Australia.

### **100146.2 Spanish 102**

**Credit Points 10 Level 1**

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The aim of this unit is to build on the basic knowledge of Spanish language and cultural background acquired in Spanish 101, keeping the same emphasis in aural comprehension and oral performance, as well as on the reading and writing necessary to communicate effectively in Spanish. It also enables students to begin to study the Spanish language as used in the Australian context by gradually introducing them to lexical differences between the Spanish spoken in different parts of the Spanish-speaking world. In addition it will examine the main cultural attractions of the Spanish-speaking world.

### **100153.2 Spanish 303: Advanced Writing Skills**

**Credit Points 10 Level 3**

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This unit aims to develop the writing skills to prepare them to make professional use of the language. It is particularly recommended for those who wish to involve themselves in areas such as language teaching and translation. Students will be introduced to a full range of text types and language purposes. They will be guided to analyse, interpret and evaluate passages provided, and will be encouraged to extend their ability by experimenting with a variety of writing styles.

### **100154.2 Spanish 304: Advanced Speaking Skills**

**Credit Points 10 Level 3**

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As a companion unit to Spanish 303: Advanced Writing Skills, this unit aims to prepare students to make professional use of the language, in this case by placing particular emphasis on oral skills. It is also specially recommended for those wishing to pursue careers in areas such as language teaching and translation. Students will be introduced to a full range of oral text types and language purposes. They will be guided to analyse, interpret and evaluate examples of oral discourse, and encouraged to develop effective public speaking skills.

### **100155.2 Spanish 305: Contemporary Literature**

**Credit Points 10 Level 3**

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This is a compulsory unit for students of the BA (Interpreting and Translation) (Spanish), and one of the optional units for students with advanced language skills in Spanish enrolled in the BA. It aims to introduce students to the study of contemporary Hispanic literary works so that they may acquire an appreciation of contemporary Latin American and Spanish literature and an understanding of the historical, political and social contexts in which that literature developed. Emphasis will be placed on the writer's role as an interpreter and critic of society.

### **100156.2 Spanish 306: Contemporary History**

**Credit Points 10 Level 3**

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This unit aims to introduce students to the history of Spain and Latin America in the Twentieth century to enable them to understand the historical background to present-day events, and to identify the major contemporary policy issues in these regions of the world.

### **100157.2 Spanish 307: Classical Literature**

**Credit Points 10 Level 3**

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This unit provides an introduction to the social and cultural history of Spain of the Sixteenth and Seventeenth centuries, and to the principal literary monuments of this period. The unit is based on the study of selected representative texts and appropriate background readings.

### 100158.2 Spanish 308: Spanish Sociolinguistics

**Credit Points** 10 **Level** 3

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This unit aims to give students an understanding of the phonological, morpho-syntactic, semantic and pragmatic changes in the Spanish language as spoken and written at the start of its second millennium. Particular attention will be paid to the dialectal geography of the Hispanic world, and to the problems faced by the language today, with particular reference to its 'Spanglish' version in emigre communities in the United States and Australia, and to information technology.

### 100201.2 Special Study in Languages and Linguistics

**Credit Points** 10 **Level** 3

#### Equivalent Units

A3470 - Special Study in Languages and Linguistics 1

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This is primarily a self-study unit designed to cater for a special area of interest in languages and/or linguistics not otherwise covered in the units on offer in the languages Key Program and where the student may otherwise find it difficult to complete his or her program of study. Once the student is approved by the Head of Program to undertake such study a supervisor is nominated and an individually-tailored learning contract, which will include appropriate language-specific readings and tasks, is drawn up in collaboration with the supervisor and is submitted to the Head of Program for approval.

### 63111.3 Special Topics in Asian and International Studies

**Credit Points** 10 **Level** 2

#### Special Requirements

Successful completion of 40 credit points of study at Level 1

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This unit focuses on current issues in Asian Studies and International Relations, and may include study of international relations among nations in Asia and Europe.

### 100886.2 Special Topics in Cultural and Social Analysis

**Credit Points** 10 **Level** 2

#### Equivalent Units

63115 - Special Topics in Cultural Studies

#### Special Requirements

Successful completion of 60 credit points at Level 1.

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This is a "shell" unit, in which new unit content and critical approaches in Cultural and Social Analysis can be trialled. Content will depend on student requirements in conjunction with staff research and teaching expertise. The unit may

also be used to provide students with the opportunity to undertake primary research or a project in the area of Cultural and Social Analysis.

### 100505.2 Special Topics in English, Text and Writing

**Credit Points** 10 **Level** 2

#### Equivalent Units

63258 - Special Topics in Text and Writing

#### Special Requirements

Successful completion of 60 credit points.

.....

This is a "shell" unit, in which new unit content and critical approaches in English, Text & Writing can be trialled. Content will depend on student requirements in conjunction with staff research and teaching interests. The unit might also be used to provide students with the opportunity to undertake primary research or a project in the area of English, Text & Writing.

### 400919.1 Specialities in Traditional Chinese Medicine 1 (PG)

**Credit Points** 10 **Level** 7

#### Corequisite

**400918.1** Chinese Internal Medicine 1 (PG)

#### Incompatible Units

400358 - Specialities in Traditional Chinese Medicine

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This unit provides learning experiences that enable the health professional to analyse, diagnose and treat common gynaecological diseases and musculoskeletal conditions using a TCM approach with acupuncture and Chinese herbal medicine. Students will develop a good understanding of the causes and pathophysiological mechanisms of common gynaecological diseases and musculoskeletal conditions.

### 400923.1 Specialities in Traditional Chinese Medicine 2 (PG)

**Credit Points** 10 **Level** 7

#### Prerequisite

**400918.1** Chinese Internal Medicine 1 (PG)

#### Incompatible Units

400364 - Specialities in Traditional Chinese Medicine 2

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The specialities of pediatrics, dermatology, ear, nose, throat (ENT) and eye diseases, are important divisions of TCM activity. This unit enables students to develop an understanding of the aetiology and pathophysiology of common paediatric, dermatological, ENT and eye disorders, and to analyze, diagnose and treat these conditions using acupuncture and Chinese herbal medicine.

## 400885.2 Sport and Exercise Physiology

**Credit Points** 10 **Level** 2

### Prerequisite

**400869.2** Human Anatomy and Physiology 2 AND

**400880.2** Fundamentals of Exercise Science AND

**400868.2** Human Anatomy and Physiology 1

### Special Requirements

Students must be enrolled in course 4658 - Bachelor of Health Science (Sport and Exercise Science).

.....

Sport and Exercise Physiology introduces students to the essential physiological knowledge required to understand how human beings move and exercise. Students will explore how the nervous system controls muscle force and movement during exercise, how the cardiovascular and respiratory systems adjust to exercise and support the increased muscular work, and how body temperature is regulated during exercise. Students will need to apply this knowledge in an attempt to understand signs and symptoms of heat stress during exercise. Students will also learn how to record, analyse and interpret physiological data recorded during exercise, and to collate and organise this information in a clear and useful manner.

## 400980.2 Sport and Exercise Psychology

**Credit Points** 10 **Level** 2

### Assumed Knowledge

It is expected that students have the knowledge and skills associated with the prerequisite unit.

### Equivalent Units

100678 - Introduction to Sport Psychology, 100680 - Exercise Psychology, 400322 - Sociological Aspects, 101615 - Sport and Exercise Psychology

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Sport and Exercise Psychology is a topic of particular relevance to those working in the sport, health and fitness, and performance industry. The field of Sport and Exercise Psychology is primarily concerned with the study of the psychological factors which impact on the adoption of physical activity, the maintenance of physical activity, and the quality of sporting performance. This unit examines pertinent theory, research, and application in the field of Sport and Exercise Psychology.

## 200742.2 Sport and Hospitality Event Management

**Credit Points** 10 **Level** 3

### Assumed Knowledge

This is an advanced unit which assumes basic knowledge of sport/hospitality management.

### Incompatible Units

200579 - Sport Event and Facility Management; 200682 - Convention and Special Event Management

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An essential part of many sport and hospitality businesses involves the organisation and management of special events and the facilities which host them. Sport and Hospitality Event Management provides knowledge and understanding by giving students the opportunity to practically apply skills and knowledge through development and execution of their own special event. The unit calls for students to apply previously learned management strategies, leadership theories, communication skills, and staff management to facilitate their event projects.

## 200751.2 Sport Management Applied Project

**Credit Points** 10 **Level** 3

### Assumed Knowledge

Students are expected to have gained an introductory level of knowledge in sport management.

### Prerequisite

**200707.2** Service Industry Studies

### Equivalent Units

200580 - Sport Management Applied Project

### Incompatible Units

200561 - Hospitality Management Applied Project

.....

Students studying Sport Management Applied Project may have the opportunity to undertake an international field trip to experience the sport environment from an international perspective. This unit provides students a unique opportunity to integrate knowledge gained from operational and theoretical perspectives of sport studies into application in an engaged research project in sport management. Students will engage in comprehensive projects which bring together real world industry problems and sport theory.

## 200664.2 Sport Management Internship

**Credit Points** 10 **Level** 3

### Assumed Knowledge

Students are expected to have gained an introductory level of knowledge in sport management.

### Equivalent Units

400649 - Professional Practice in Sport Management 3, 400648 - Professional Practice in Sport Management 2, 200576 - Professional Practice in Sport Management

### Special Requirements

Some placement agencies require completion of a Prohibited Persons Declaration; Criminal Record Check Clearance and Immunisation.

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Sport Management Internship provides students with an opportunity to engage with the sport industry through a 120 hour industry placement. This unit provides the opportunity to observe practitioners in action and to learn in a practical "hands-on" setting. Experience in the field of study is an essential ingredient in preparing an individual for employment either during the period of study or after graduation. Students have the opportunity to see how knowledge and skills acquired in lectures and tutorials/

laboratories can be applied and also relate theoretical concepts and skills to situations in sport or exercise-related settings.

### 200754.2 Sports Management - Planning and Development

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Students must have an introductory level of knowledge in sport management.

#### Equivalent Units

200244 - Sports Management - Planning and Development

With sport professionalism, globalisation, population change and consumer pressure there is a need for government, not for profit and private enterprise to better plan for and provide sport and leisure facilities and services. Sport Management - Planning and Development provides an in-depth study of the planning and development of sport in the Australian context. Throughout this unit there is a focus on managing change to appropriately planning for future sport and leisure needs within a context of public policy. An introductory framework will be provided emphasizing the historical perspectives of sport and leisure and its history and role within contemporary Australian society.

### 300700.5 Statistical Decision Making

**Credit Points** 10 **Level** 1

#### Equivalent Units

200192 - Statistics for Science, 200263 - Biometry, 200032 - Statistics for Business, 200052 - Introduction to Economic Methods

#### Incompatible Units

200182 - Quantitative Techniques

Statistical Decision Making introduces students to various statistical techniques supporting the study of computing and science. Presentation of the content will emphasize the correct principles and procedures for collecting and analysing scientific data, using information and communication technologies. Topics include describing different sets of data, probability distributions, statistical inference, and simple linear regression and correlation.

### 700041.3 Statistical Decision Making (UWSC)

**Credit Points** 10 **Level** 1

#### Equivalent Units

200192 - Statistics for Science, 200263 - Biometry, 200032 - Statistics for Business, 200052 - Introduction to Economic Methods, 300700 - Statistical Decision Making, 700007 - Statistics for Business (UWSC), 700033 - Biometry (UWSC)

#### Incompatible Units

200182 - Quantitative Techniques

#### Special Requirements

Students must be enrolled at UWS College

Statistical Decision Making introduces students to various statistical techniques supporting the study of computing and science. Presentation of the content will emphasise the correct principles and procedures for collecting and analysing scientific data, using information and communication technologies. Topics include describing different sets of data, probability distributions, statistical inference and simple linear regression and correlation.

### 700045.1 Statistics for Academic Purposes (UWSCFS)

**Credit Points** 5 **Level** Z

#### Special Requirements

Students must be enrolled at UWS College.

Statistics for Academic Purposes is designed and written to prepare students for study in Statistics at first year university level. The unit develops those skills peculiar to the statistical requirements of further study in the areas of Arts, Business, Science and the Humanities.

### 200032.5 Statistics for Business

**Credit Points** 10 **Level** 1

#### Assumed Knowledge

HSC Mathematics/Mathematics Extension 1 is desirable.

#### Equivalent Units

200192 - Statistics for Science, 300700 - Statistical Decision Making, 200263 - Biometry, 200052 - Introduction to Economic Methods

#### Incompatible Units

200182 - Quantitative Techniques

Statistics for Business introduces the basic concepts and techniques of statistics that are particularly relevant to problem solving in business. It also provides a sound base for more advanced study in statistics and forecasting in subsequent sessions. Topics include: presentation of data; descriptive statistics; the role of uncertainty in business decision making; hypothesis testing; and basic forecasting.

### 700007.3 Statistics for Business (UWSC)

**Credit Points** 10 **Level** 1

#### Assumed Knowledge

HSC Mathematics/Mathematics Extension 1 is desirable.

#### Equivalent Units

200032 - Statistics for Business

#### Incompatible Units

200192 - Statistics for Science, 200052 - Introduction to Economic Methods, 200182 - Quantitative Techniques, 200263 - Biometry, 300700 - Statistical Decision Making

#### Special Requirements

Students must be enrolled at UWS College.

This unit introduces the basic concepts and techniques of statistics that are particularly relevant to problem solving in business. It also provides a sound base for more advanced study in statistics and forecasting in subsequent sessions. Topics include: presentation of data; descriptive statistics; the role of uncertainty in business decision making; hypothesis testing; and basic forecasting.

### 300730.2 Steel Structures

**Credit Points** 10 **Level** 3

#### Prerequisite

**300733.2** Introduction to Structural Engineering

#### Corequisite

**300732.2** Structural Analysis

#### Equivalent Units

85014 - Steel Structures

.....

This unit covers the basic behaviour of steel members and structures, the appropriate methods to analyse them and the design criteria and methods used to proportion them.

### 200665.2 Strategic Communication in Sport

**Credit Points** 10 **Level** 2

#### Equivalent Units

400321 - Sport Management 2, 200556 - Communication in Sport

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Strategic Communication in Sport offers students the opportunity to explore the management of the different types of communication available to sporting organisations. With the high profile of many sporting organisations, communication plays a key part of organisational strategy. Maximising communication through an understanding of the interconnect media relationships and the role of communication within these relationships is explored.

### 200587.2 Strategic Management

**Credit Points** 10 **Level** 3

#### Prerequisite

**200571.2** Management Dynamics OR **MG102A.3** Management Foundations

#### Equivalent Units

MG302A - Strategic Management

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The choice perspective of strategic management. External environmental assessment and choice. Analysis of international strategic capabilities. Strategy formulation: choice of mission, strategic goals, and a strategy. Implementing strategies through plans, functional strategies, and budgets. Implementing strategy through organisation structure. Implementing strategy through culture, leadership, and human resource management. Control of strategy. Special cases of strategic management: entrepreneurial and non-profit organisations. Strategic

management in the international area. Social issues in strategic management. Strategic management in the future.

### 200087.3 Strategic Marketing Management

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

This is a capstone unit in marketing. It is assumed that students have knowledge of basic marketing concepts, theories, and frameworks in consumer behaviour, marketing communications and marketing research.

#### Prerequisite

**200083.2** Marketing Principles

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This unit is about developing and managing innovative competitive marketing strategies. It crosses the traditional boundaries of marketing and is therefore influenced by concepts and tools from a range of disciplines including strategic management, entrepreneurship and marketing. The central focus is on how marketing strategy and its management can create superior and sustainable value for both customers and shareholders.

### 300732.2 Structural Analysis

**Credit Points** 10 **Level** 3

#### Prerequisite

**300733.2** Introduction to Structural Engineering

#### Equivalent Units

85010 - Structural Analysis

.....

This unit introduces students to the aspects of structural analysis of trusses, beams and frames. It covers the first-order elastic analysis of statically determinate and indeterminate structures. This course aims to teach students to master basic skills in structural analysis as well as skills in using computer software to analyse complex structures.

### 101869.1 Studies in Postcolonial Literature

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

An idea of the genre of the English novel and a history of imperialism.

#### Special Requirements

Successful completion of 40 credit points at level 1.

.....

This unit focuses on Postcolonial Studies, which has been one of the most important literary and theoretical movements that makes meaning of colonial discourse theory and offers a stringent critique of it at the same time. The field offers ways of understanding literature, culture and society in modern postcolonial nations in Asia and Africa after the collapse of colonial rule. Simultaneously it also affords a re-visioning of the central tenets of Eurocentric thinking that were used to colonise third world nations and thus is a vital mode and methodology for understanding contemporary society. This particular unit will



look at models and examples of African postcolonialism from early to late 20th century.

### **400187.2 Supervision in Clinical Practice**

**Credit Points** 10 **Level** 3

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This unit will provide an introduction to supervision of students in clinical practice settings. Students will have an opportunity to consider clinical education from a supervision perspective. This will provide them with beginning supervisory skills that can be utilised in clinical settings in the early stages of their professional career.

### **700120.1 Surveying for Engineers (UWSC Assoc Deg)**

**Credit Points** 10 **Level** 1

#### **Assumed Knowledge**

Knowledge of trigonometry

#### **Special Requirements**

Students must be enrolled in 7022 Associate Degree in Engineering

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This unit provides students with a basic knowledge of Surveying as it relates to various Engineering projects. It provides material for units such as Water Engineering, Environmental Engineering, Infrastructure Engineering & Engineering Project.

### **200039.2 Surveys and Multivariate Analysis**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

200192 - Statistics for Business, 200032 - Statistics for Science

#### **Equivalent Units**

J3693 - Sample Survey Techniques, J3692 - Regression and Multivariate Analysis

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In the first half of this unit students gain an appreciation of survey methodology, including questionnaire design, as well as the application of sampling techniques. These include simple random sampling, stratification, supplementary information and cluster sampling. The second half of the unit covers the principal methods of multivariate data analysis, principal components, factor analysis, discriminant analysis, and cluster analysis.

### **300309.3 Sustainable Design: Life Cycle Analysis**

**Credit Points** 10 **Level** 2

#### **Equivalent Units**

J2806 - Manufacturing Technology and Design, 10910 - Environmental Planning 1

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Designers prescribe the use of our limited materials resources with every product that transpires from their

work. With an informed approach to design, based on a sound knowledge of materials from their origins to their disposal as well as how those materials are utilised in existing contexts of use, a designer can maximise the positive impact of their designing on local and global communities. In this unit students will develop an understanding of the central importance of design in developing a more sustainable world on both production and consumption sides. They will reflect critically on their role as both designers and end-users and will exercise their creative intuition to confidently generate and present designs for sustainability. The aim of the unit is to enhance students' ecological literacy and perception of sustainability as a creative opportunity.

### **300304.3 Sustainable Design: Materials Technology**

**Credit Points** 10 **Level** 1

#### **Equivalent Units**

J1758 - Engineering Design, J2807 - Materials Technology, J2817 - Manufacturing Processes and Materials

.....

In this unit we explore materials from a design perspective - their properties, qualities, typical applications, their cost and the environmental impact associated with their extraction, use and disposal. We also look at how they can be formed using contemporary and emerging processing techniques - from sand casting to rapid prototyping. Lectures are supplemented with live demonstrations of materials processing techniques and students undertake materials research and a design for manufacture project.

### **300306.3 Sustainable Design: Sustainable Futures**

**Credit Points** 10 **Level** 2

#### **Assumed Knowledge**

300309 - Sustainable Design: Life Cycle Analysis

#### **Equivalent Units**

10913 - Environmental Planning 2

.....

If science and planning march under the banner of 'everything is possible', design culture must know how to point out a path for these potential possibilities, a path that can be completely opposed to that which technological-scientific development has followed up to now. This unit explores the challenges facing design culture in which the designer must now provide scenarios that visualise some aspects of how the world could be and, at the same time, present it with such characteristics that can be supported by complex ecological equilibria, which are acceptable socially and attractive culturally.

### **700013.1 System Analysis and Design (UWSC)**

**Credit Points** 10 **Level** 1

#### **Assumed Knowledge**

Students should have knowledge of the fundamentals of information systems, computer systems, computer applications and information processing

### Equivalent Units

300131 - Introduction to Analysis and Design, 300585 - System Analysis and Design

### Special Requirements

Students must be enrolled at UWS College.

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This unit provides an introduction to systems analysis and design. Incorporating systems concepts, theories and methodologies, this unit provides students with elementary problem solving experience in computerised information systems. Students will gain the ability to derive systems requirements from problem definitions and to produce system models using process, data, object and network modelling. Design and implementation issues include, (but may not be limited to), elementary database design, input, output and user interface design and prototyping. Students are also introduced to roles and responsibilities in information systems development, selection of packaged solutions and the principles of software quality.

### 300165.3 Systems Administration Programming

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

A good understanding of programming concepts, such as selection, iteration, modularization, and one dimensional arrays. Basic knowledge of Windows operation system.

#### Prerequisite

**300167.3** Systems Programming 1

#### Incompatible Units

300577 - Script programming

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This unit covers programming techniques and tools used to administer standalone and networked computer systems. The unit focuses on the use of high level interpretive scripting languages to automate everyday administrative tasks, and to monitor and control running systems. Techniques to extend scripting language capabilities by dynamic linking to compiled code are examined, particularly in terms of access to operating system level functions. The unit also examines the use of administrative programs and tools to monitor and adjust system performance and capacity.

### 300585.2 Systems Analysis and Design

**Credit Points** 10 **Level** 1

#### Assumed Knowledge

Students should have knowledge of the fundamentals of information systems, computer systems, computer applications and information processing

.....

This unit introduces the concepts of System Analysis and Design. The study of methodologies and techniques for problem recognition, requirement analysis, process modelling and/or data modelling are essential elements of this unit. The Systems Development Life Cycle model is employed as the prime approach to teach the unit,

providing students with the basic skills required for analysis and design of logical solutions to information systems problems. The use of Computer Aided System Engineering tools will be investigated in practical sessions.

### 300166.2 Systems and Network Management

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Students should be familiar with the fundamentals of computer networking and data communications.

#### Prerequisite

**300095.3** Computer Networks and Internets

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The rapid progress in technology, the increasing demand for IT services, and the strong expansion of the Internet have resulted in heterogeneous interconnected networks with many distributed systems that run on them. To ensure access and efficient utilization of network resources, subject to organisational policy restrictions, networked systems must be managed properly. This unit addresses the issues relevant to such management. It covers the principles and current practices pertinent to integrated management of networks, systems, services, and applications. The unit helps the student to understand management functions and architectures as well as current standards and relevant protocols.

### 300167.3 Systems Programming 1

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

This unit requires a knowledge base of at least the level of a completed first year in a professional Computing degree. Ability to apply fundamental concepts in data structures, algorithms, programming principles will be assumed.

#### Prerequisite

**300580.2** Programming Fundamentals OR **300018.2** Digital Systems 1 AND **300027.2** Engineering Computing

#### Equivalent Units

14943 - Systems Programming 1, J2822 - Unix System Programming 1

#### Special Requirements

Students enrolled in 3621 Bachelor of Engineering must be enrolled in one of the key programs attached to the course.

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This unit provides an introduction to the knowledge and skills required for the design, writing and support of technical software and other such functions normally falling within the role of the systems programmer. It provides for detailed study of a systems programming environment and its application to systems programming tasks.

### 300168.2 Systems Programming 2

**Credit Points** 10 **Level** 3

#### Prerequisite

**300167.3** Systems Programming 1

**Corequisite**

**300149.2** Operating Systems

**Equivalent Units**

14963 - Systems

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This unit complements and extends the work already done in Systems Programming 1. It covers advanced topics in programming that are directly relevant to systems level application design and implementation. As such it addresses the main concepts, principles, and techniques for system level programs that utilise virtual memory, dynamic link libraries, asynchronous I/O, and multi-threading that can support high levels of concurrency. The unit also emphasises and builds a sound understanding of kernel level objects, as well as error and exception handling techniques, and focuses primarily on using the low-level functionality exposed by the operating system's C/C++ language API.

**101832.2 Talking Normal: Sociolinguistics and Modern Literature**

**Credit Points** 10 **Level** 3

**Special Requirements**

Successful completion of 60 credit points

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This unit studies the ways in which speech disorders like stuttering and mutism, along with other 'non-standard' forms of language (dialects, accents, slang, etc.) have been portrayed and oftentimes stigmatized in twentieth-century literary and visual culture. Students will engage with a range of genres and texts, all of which deal with the question of how we are defined based on the way we speak. Readings may include one or more national literatures such as American, British, European, and Australian literature.

**100889.2 Technocultures**

**Credit Points** 10 **Level** 2

**Equivalent Units**

63121 - Technology, Culture and Society, 63273 - Science as Culture, 100295 -Women, Technology and Information, 100493 - Imagined Futures

**Special Requirements**

Successful completion of 60 credit points at Level 1.

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This unit examines the social contexts and cultural meanings of technology and science in contemporary society, particularly in relation to questions of power. It begins with an overview of key analytical issues - does technology shape society or does society shape technology? What is the nature of the human-technology relation? How objective is science? It considers current debates around information technologies and the idea of the information society, and the representations of science and technology in popular culture, debates around biotechnology, etc. It develops a critical awareness of the relations between the state, the military, the market and

social life in relation to issues around surveillance, work, and military technology.

**300582.2 Technologies for Web Applications**

**Credit Points** 10 **Level** 2

**Assumed Knowledge**

Basic programming principles and program control structures equivalent to that covered in Programming Fundamentals. Basic file management and PC operation including how to access and search the World Wide Web.

**Prerequisite**

**300580.2** Programming Fundamentals

**Equivalent Units**

300129 - Interactive Web Site Development, J2826 - Internet and Web Communications, D2826 - Internet and Web Communications

**Incompatible Units**

300101 - Creating and Managing Web Sites, CP108A - Principles of the Internet, 101180 - Web and Time Based Design

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Building on material covered in Programming Fundamentals this unit introduces students to the basics of developing interactive and dynamic web applications from both the client and server perspective. The unit covers web site design, web site development, web page accessibility and usability, XHTML, CSS, client side and server side scripting, database interaction, web site promotion (SEO), legal issues and web security.

**101008.2 Technologies of Racism**

**Credit Points** 10 **Level** 3

**Equivalent Units**

100287 - Technologies of Racism

**Special Requirements**

Successful completion of 60 credit points at Level 1.

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This unit assesses the various social, political, scientific and electronic technologies that serve some cultures whilst discriminating against others. The lectures are broad in scope but will at times focus specifically on Indigenous Australia and the kinds of issues around race and racism that emerge within technological practices of management, filtering and representation. Globalisation, localization, ethnicity and identity will be explored along with many different kinds of technology, including those that generate the mass media, to analyse the ways in which technologies play a part in race and racism.

**EY101A.1 Terrestrial Environment Management**

**Credit Points** 10 **Level** 1

**Equivalent Units**

300663 - Resource Sustainability

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This unit includes lectures, seminars, group discussions and field activities pertinent to catchment management, landuse and environmental impacts. Content covers mapping spatial data management, impact assessment, State of the Environment reporting, rapid appraisal techniques, Ecologically Sustainable Development, using science as a tool, teamwork, analysis and critical reflection. It also involves the integration of the biophysical environment with the investigation of the impacts of man and implications of the socio-political interface.

### **101453.2 Text and Discourse in English**

**Credit Points** 10 **Level** 3

#### **Equivalent Units**

A4028 - Text and Discourse in English

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This unit explores language at the text or discourse level, overviewing several linguistic approaches to the analysis of discourse and focusing on the role of features such as context, social purpose, appropriateness, and textual cohesion and coherence in the production of texts.

### **101792.2 Texts in Contemporary Arab Society and Culture**

**Credit Points** 10 **Level** 3

#### **Special Requirements**

Successful completion of 60 credit points

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This unit provides students with a theoretical grounding in major issues and debates related to contemporary Arab society and culture. Students will be able to appreciate and critically examine social, political and cultural complexities of the modern Arab Middle East covering a range of topics from Arab political culture, gender and women's rights to education and civil society. This cross-disciplinary unit will cater for students who seek to advance their knowledge in specific aspects of the modern Arab world for purposes of using this knowledge in further research study and for occupational purposes. The unit will be useful for students majoring in Islamic studies, Arabic, international relations, history and social science.

### **200118.3 The Accountant as a Consultant**

**Credit Points** 10 **Level** 3

#### **Prerequisite**

**200108.2** Contemporary Management Accounting

#### **Equivalent Units**

H3328 - The Accountant as a Management Consultant

#### **Special Requirements**

The need to seek college approval relating to ethics risks and the need for university insurance to cover engaged learning.

.....

This unit focuses on the role that accountants play in the effective management of businesses, using case studies covering a range of accounting areas.

### **101254.3 The Animated Image: Histories and Theories**

**Credit Points** 10 **Level** 2

#### **Equivalent Units**

10898 - Design Issues 4B: Animating the Image

#### **Special Requirements**

Successful completion of 40 credit points at level 1

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This unit explores the histories and theories of animation, from its origins to its contemporary critical practice. The unit covers independent and experimental animation: digital animation and special effects; anime; and the subversive impulse in adult animation. The lectures involve viewing a broad range of works from these areas, followed by tutorial-based close readings of the works. These close readings will facilitate an understanding of the artform's aesthetic, socio-cultural and technological aspects, contextualising it within the history and theory of art and design—live action cinema, photography, painting, video, TV—and popular culture more generally.

### **300898.1 The Appendicular Skeleton**

**Credit Points** 10 **Level** 2

#### **Prerequisite**

**300825.1** Introduction to Anatomy

#### **Equivalent Units**

300755 - The Appendicular Skeleton, 300325 - The Appendicular Skeleton

#### **Incompatible Units**

400881 - Functional Anatomy

#### **Special Requirements**

Students must be enrolled in 3577 Bachelor of Medical Science, 3657 Bachelor of Medical Science (Advanced), 3673 - Bachelor of Medical Science or 3682 Bachelor of Medical Science (Advanced). Students must also have a laboratory coat in this unit.

.....

This musculoskeletal unit builds on the basic anatomy taught during the first year, offering a regional study of the human upper and lower limbs, including their respective girdles. Emphasis is placed on the identification and description of the structures, including the correlation of structure and function. Cadaveric specimens are used to aid the learning of these regions and their three-dimensional aspect, including the anatomical variation found in these regions.

### **101738.2 The Art Game: Fraud, Forgery, Theft and Perfidy**

**Credit Points** 10 **Level** 3

#### **Special Requirements**

Successful completion of 60 credit points.

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The content of this elective will be taught on campus, utilizing field trips, major collections and occasional visiting lecturers. The focus of the content is both the history of art fraud, theft and forgery and the implications of current art crime. This unit reflects the interest in and ramifications of the growth in art crime both domestically (particularly in the realm of indigenous art) and internationally. It will provide students with a lively knowledge of this area of the art domain, an area that is contemporary in its relevance.

### **10371.3 The Art Museum - from the Prince to the Public**

**Credit Points** 10 **Level** 2

#### **Special Requirements**

Successful completion of 40 credit points at level 1

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This unit studies the history and development of museums and issues related to the collection and display of art, and the role of the museum within contemporary culture. It surveys critical writings and discussions currently surrounding museums and their audiences.

### **100890.2 The Art of Landscape**

**Credit Points** 10 **Level** 2

#### **Equivalent Units**

B1326 - Far Horizons and Open Spaces

#### **Special Requirements**

Successful completion of 60 credit points at Level 1.

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Landscape as a subject has been one of the major pre-occupations of artists throughout time. This unit examines the Western artist's perception of the natural environment and humankind's changing relationship to it in both two and three dimensional forms. The various theoretical and pictorial constructs governing the ways in which this has been exposed are explored as well as the many ways landscape has been used metaphorically, politically and philosophically.

### **101266.2 The Art of Modern Life**

**Credit Points** 10 **Level** 3

#### **Equivalent Units**

10274 - Art of Modern Life

#### **Special Requirements**

Successful completion of 60 credit points at Level 1.

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This unit studies the period 1850-1900 and examines the distinct art of the time in relation to changing notions of modernity. A major strand is analyzing the complexity of realism; questioning the so-called objectivity of vision and discussing realism as a social issue, as a threat to existing values and power structures resulting in the depoliticisation of artists. Another strand is feminine visual culture and women's experience of modernism in the 19th century. The unit also includes French architecture of the period and aims to acquaint students with a broad range of buildings

and innovative construction techniques, as well as theoretical and philosophical debates and issues relating to 19th century architecture.

### **200549.2 The Australian Macroeconomy**

**Credit Points** 10 **Level** 1

#### **Assumed Knowledge**

HSC Mathematics

#### **Equivalent Units**

200049 - Macroeconomics

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This unit is an introduction to macroeconomic concepts, analysis and issues in the Australian context. Basic concepts introduced and applied include: national income accounting, economic structure, price indexes and inflation, the balance of payments, and labour market aggregates. These concepts are applied in describing and explaining the recent evolution of the Australian economy in terms of growth, structural change, price stability, and employment. This leads to a discussion of major policy issues such as the role of governments in managing economic fluctuations, and the implications of Australia's foreign liabilities. The course ends with a brief introduction to modelling income determination.

### **101009.3 The Body in Culture**

**Credit Points** 10 **Level** 3

#### **Equivalent Units**

SS224A - Gender, Culture and the Body, 100286 - The Body in Culture

#### **Special Requirements**

Successful completion of 60 credit points

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This unit introduces students to ways of thinking about the body in late modernity. Drawing on several theoretical approaches, including psychoanalysis, phenomenology and feminism, it examines the body as a site of cultural inscription and a symbol of the social order. Key concepts include: the mind/body split; disgust and taboos; the creation of borders, surfaces and depths; and the plasticity of bodies in culture. Tutorial work will vary according to student interest, but may include such things as: carnival, pregnancy, body modification, beauty practices, yoga, fashion, and the post-human, as well as the body politics of gender, race and class.

### **101867.1 The Ethical Life**

**Credit Points** 10 **Level** 2

#### **Special Requirements**

Successful completion of 40 credit points at Level 1.

.....

This unit introduces students to time-honoured ethical questions and controversies. The issues to be examined point to questions that students are likely to face at some stage during their lives: Is death always a bad thing? Is abortion immoral? Are we obligated to give to charity? Should we be vegetarian? Should you have sex outside of

a committed relationship? Is ethics founded upon religion, reason or community standards? As well as examining specific issues, students will be introduced to the leading secular and theistic ethical theories.

### **101667.3 The External Relations of the European Union**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

Knowledge of international relations theory and (general) European history

#### **Special Requirements**

Successful completion of 60 credit points

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Since the end of the Cold War, the European Union (EU) has become not only one of the central actors in world affairs, but its novel forms of governance and dynamics of integration have marked its uniqueness in the history of international life. This unit introduces students to the diverse international roles of the EU as well as the nature of its external relations. It also considers the recent assertions that the EU's foreign policy is 'in crisis.' The unit will evaluate, from different perspectives, the institutions involved in the international diplomacy of the EU and its development of foreign policy.

### **101673.2 The First Globalisation**

**Credit Points** 10 **Level** 1

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Often called the 'first globalisation', the dramatic changes that led to European expansion from 1450 to 1800 were part of broader historical shifts. In this unit, we also consider the initial dominance of Asian and Islamic worlds, and the factors that led Europeans to explore the oceans. We analyse the outcome of these ventures in the formation of a new world-system where the peoples of Europe, Asia, Africa and the Americas became intimately interconnected. By considering the impact of this economic and cultural exchange on indigenous peoples and settlers alike, we evaluate the costs of the rise of European domination.

### **101782.2 The History and Politics of Contemporary Central Asia**

**Credit Points** 10 **Level** 3

#### **Special Requirements**

Successful completion of 60 credit points

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This unit will introduce students to the contemporary history and politics of Central Asia. With the collapse of the Soviet Union, the region of Central Asia (encompassing Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan) has reclaimed its importance as a political, economic, and cultural region. Located in a key geo-strategic position between Russia, China, South Asia, and Iran, and with extensive natural resources (especially oil and gas), the region has attracted significant policy and popular attention. The aim of this unit is to introduce students to key domestic and regional issues affecting

Central Asia. The unit will look at the historical legacy of Russian and Soviet regimes, the broad effects of post-Soviet independence, the politics and economics of state-building, and the roles played by international actors and organizations. The unit will also examine how government efforts to build states, nations, and economies historically and recently have influenced societal institutions, such as Islam, community groups, and gender relations.

### **101404.3 The History of Modern Indonesia**

**Credit Points** 10 **Level** 2

#### **Equivalent Units**

B3283 - Modern Indonesia

#### **Special Requirements**

Successful completion of 40 credit points at Level 1

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This unit surveys the history of Indonesia, Australia's nearest and most important Asian neighbour. Commencing with the coming of Islam to Indonesia in the twelfth century it concludes with the overthrow of Soeharto in 1998, but the focus is primarily on the C20th. The unit looks briefly at the Islamic and Hindu-Buddhist kingdoms, the colonial period, the nationalist struggle, the Japanese occupation and in more detail the first fifty years of independence. Indonesia's rich heritage of trade, culture, religions, and ethnicities are all dealt with. The unit also examines historiographical problems for the study of Indonesian history and seeks to identify historical patterns.

### **101783.2 The International Relations of the Middle East Since 1945**

**Credit Points** 10 **Level** 3

#### **Special Requirements**

Successful completion of 60 credit points

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This unit offers a historical study of the international relations of the Middle East from 1945 to the present. It examines the relations of Middle Eastern states to global structures of power; the pattern of relations between regional states; the causes of regional wars and international co-operation; the impact of domestic factors on the foreign policy of states; the importance of oil to international politics and the global economy; and the role of ideologies and non-state forces in international relations and between states in the Middle East.

### **101717.2 The Italian Renaissance Unpacked**

**Credit Points** 10 **Level** 3

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A multidisciplinary approach to Italian Renaissance visual culture. Topics to be studied include Italian Renaissance art, architecture, as well as their transmission across cultures and nations through travel, heritage, tourism, religion, food and fashion.

### 101757.1 The Making of the 'Aborigines'

**Credit Points** 10 **Level** 3

**Prerequisite**

**101751.2** Contextualising Indigenous Australia (Day Mode)

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This unit is available to all Undergraduate students who have open electives. The Making of the 'Aborigines' explores the complex human relations and historical forces that have constructed Australia's indigenous people as 'Aboriginal' and/or 'Torres Strait Islander'. It will involve a critical examination of a range of contemporary social and political issues impacting on and being engaged by Indigenous people. A more comprehensive understanding of the position of Indigenous people in contemporary Australian society will enable students to engage more effectively with Indigenous people.

### 200098.2 The Markets of Asia

**Credit Points** 10 **Level** 3

**Equivalent Units**

61751 - Regional Market Study (Asia)

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Markets of Asia unit offers a balanced and practical introduction to the dynamic and robust Asian market place. Most of the students undertaking this unit will have exposure to countries other than Australia and would have travelled internationally or have an intention to do so. In the present context of globalisation, business is international business. In Australia today even a small locally based manufacturing company's operations are in some way influenced by the tentacles of Asian businesses. This is a journey that starts with a major Asian powerhouse, Peoples Republic of China and ends at the doorstep of another Asian powerhouse, India.

### 200099.3 The Markets of Europe

**Credit Points** 10 **Level** 3

**Assumed Knowledge**

A knowledge of the basic principles of marketing, consumer behaviour and international marketing

**Prerequisite**

**200083.2** Marketing Principles AND **200094.2** International Marketing

.....

This unit will profile the member states of the European Union in terms of their marketing environment, with emphasis on those various features, similarities, differences and interactions deemed to be of commercial and marketing significance. A major focus of the course will be the impact of European integration and the relevance of the European Union. The European Union will be discussed in its global context, particularly its relationship with Central and Eastern Europe and the Asia-Pacific. The course therefore gives students the opportunity to undertake macro-environmental analysis and examine the effects of environmental influences on marketing, while also learning about other cultures.

### 101795.2 The Musical

**Credit Points** 10 **Level** 2

**Special Requirements**

Successful completion of 40 credit points at Level 1.

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The Musical will involve the examination of the history and development of the stage musical in its social and cultural context. The unit will also explore the structure of the musical as a 'text' and performance genre, looking closely at narrative structure, the structure of songs and the construction of character types and interaction. 'The Musical' will also involve students in the critical analysis of the representation of gender and race in the stage musical.

### 100893.3 The Novel

**Credit Points** 10 **Level** 2

**Special Requirements**

Completion of 40 credit points at Level 1

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This unit explores the status and success of the novel as the dominant modern literary form. It examines aspects of the history and development of the novel from the seventeenth century up to the present, along with a range of novelistic texts from one or a number of literary traditions: from classic British and/or American texts to contemporary postcolonial fiction; from the search for the mythical "great Australian novel" to famous and not-so-famous works in languages other than English.

### 101405.2 The Politics of Contemporary Indonesia

**Credit Points** 10 **Level** 3

**Equivalent Units**

100263 - Indonesia: Revolution to Reform, 100881 - Politics of Contemporary Indonesia.

.....

This unit investigates the far-reaching political and social changes underway in Indonesia, Australia's closest and most important Asian neighbour. It studies in depth the turbulent period since the 1998 overthrow of Soeharto, paying particular attention to the dramatic struggle for political reform against efforts to preserve much of the status quo. The unit examines the far-reaching constitutional reforms implemented since 2000 and the accompanying new political structure that is emerging. Indonesia's status as an emerging democracy is a particular focus of the unit against the backdrop of challenges such as economic crisis, Islamist terror, separatist pressures, and endemic corruption.

### 101873.1 The Sound of Language

**Credit Points** 10 **Level** 2

**Special Requirements**

Successful completion of 40 credit points at Level 1.

.....

The richness of information conveyed through spoken language owes its form to the combination and recombination of a small number of sounds. In this unit, students will learn the sounds of the world's languages (phonetics) and the ways in which they are combined to build words (phonology). Examples will draw from English, Australian Aboriginal languages, and a diverse range of languages spoken around the world.

### 101880.1 The Space of Literature

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

An idea of the genre of the English novel and a history of imperialism.

#### Special Requirements

Successful completion of 60 credit points

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This unit considers philosophies of writing by 'drilling down' through the work of one philosopher or through a survey of philosophers. Philosophies of writing are found in the thinking of the Sophists, Classical Greek philosophy, Continental philosophy, as well as in the work of philosophers of new media. The focus upon philosophies of writing is to develop student's understanding of the pragmatic and performative nature of writing and with that the question of ethics in relation to creative writing. These are important concepts to advanced literary theory inquiry and will be tackled in this unit in depth.

### 101455.3 The Structure of English

**Credit Points** 10 **Level** 2

#### Equivalent Units

A2912 - The Structure of English

#### Special Requirements

Successful completion of 40 credit points at level 1

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This unit aims to give students skills to analyse and understand the structure of the English language, in both spoken and written form from the level of the smallest structural unit to the level of the sentence using techniques and terminology drawn from various schools of linguistics. Students will analyse the English sound system and the English word building system, English vocabulary and the relationships between words, and the grammar and syntax of English

### 200077.2 The Superannuation Industry

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

200049 - Macroeconomics, 200076 - Introductory Economics, 200488 - Corporate Financial Management

.....

This unit provides students with an understanding of the economics of retirement and retirement income provision, with particular emphasis on the Australian superannuation industry. On completion of this unit, students should have a

comprehensive understanding of superannuation in Australia, as well as an appreciation of the economic issues associated with alternative models of retirement income provision.

### 101294.3 The Western Philosophical Tradition

**Credit Points** 10 **Level** 2

#### Equivalent Units

Unit 63286 - The Western Philosophical Tradition

#### Special Requirements

Successful completion of 40 credit points at level 1

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The major social and political philosophy of the West, from the 5th century BC Greece till the 18th century will be examined. The development of ideas of citizenship, subjectivity, freedom, equality and the democratic state will be explored. The influence of Christianity will also be a major theme. Authors will include: Plato, Aristotle, Augustine, Aquinas, More, Hobbes, Locke, Vico, Rousseau.

### 200705.2 The World of Sport Management

**Credit Points** 10 **Level** 1

#### Equivalent Units

400319 - Sport Management 1, 200564 - Introduction to Sport Management

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The World of Sport Management offers a contemporary view of sport organisations which are uniquely situated within a broader social, cultural and political environment and requires a different managerial approach. Students will be exposed to key areas within the sport management field including developing goals, decision making, strategic planning, leadership styles, and human resource management.

### 100969.2 Theories of Conflict and Violence

**Credit Points** 10 **Level** 3

#### Equivalent Units

100288 - Theories of Violence and Conflict

#### Special Requirements

Successful completion of 60 credit points.

.....

Why do humans kill? What is the nature of war? This course is a selection of different established theories offering explanations of human violence and social conflict. Both theories of individual violence and aggression, and collective conflict are studied to give students a perspective on the forces behind these phenomena. Theories from politics, philosophy, psychoanalysis, sociobiology, sociology, and cultural studies are introduced to exemplify the classic positions and lines of reasoning. These are used to question and explain current forms of violence and conflict, and to give students better understanding of the issues behind attempts to forestall, manage or end conflict.



**400254.2 Therapeutic Recreation Professional Project**

**Credit Points** 10 **Level** 3

**Prerequisite**

**400863.1** Foundations of Research and Evidence-Based Practice OR **400252.1** Workplace Learning 2 (Community Placement)

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The aim of this unit is for students to apply their knowledge of professional theory, practice, research and evaluation skills to the investigation of a therapeutic recreation professional issue. Emphasis in the unit is on the development of a research/evaluation proposal through literature review and research design outline of a program with a proposed method of evaluation suitable for use in a community setting.

**300759.1 Thermal and Fluid Engineering**

**Credit Points** 10 **Level** 3

**Prerequisite**

**200238.1** Mathematics for Engineers 2 AND **300464.1** Physics and Materials AND **300762.1** Fluid Mechanics AND **300760.1** Thermodynamics and Heat Transfer

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The unit provides an understanding of thermo-fluid principles and their engineering applications involving thermal processes and energy conversion. Laminar, , turbulent and compressible fluid flows are discussed. Fluid-structure interactions, buoyancy driven flows and other special thermal and fluid engineering topic are also covered. Basic computational techniques to solve thermodynamics and fluid flow problems are introduced. The theories learned in classes will be reinforced in laboratory sessions and through assignments and tutorials.

**300760.1 Thermodynamics and Heat Transfer**

**Credit Points** 10 **Level** 3

**Prerequisite**

**300464.1** Physics and Materials AND **200238.1** Mathematics for Engineers 2

.....

This unit introduces students to the fundamentals of thermodynamics and heat transfer. The unit covers the properties of thermodynamic systems, laws of thermodynamics, energy, work and heat, entropy, reversible and irreversible processes, power and refrigeration cycles, heat conduction, natural and forced convection, radiation heat transfer, heat exchanger.

**300739.2 Timber Structures (UG)**

**Credit Points** 10 **Level** 4

**Prerequisite**

**300733.2** Introduction to Structural Engineering

**Corequisite**

**300732.2** Structural Analysis

**Equivalent Units**

85015 - Timber Structures (UG)

.....

Students learn about the engineering properties of timber and assess it as a construction material. Design methods based on structural mechanics are covered including the design of members and connections.

**200038.3 Time Series and Forecasting**

**Credit Points** 10 **Level** 3

**Prerequisite**

**200033.4** Applied Statistics

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Time Series and Forecasting presents the basic techniques of time series analysis with emphasis on model identification, parameter estimation and diagnostic checking. The use of time series models for the process of forecasting future behaviour is discussed. In addition, alternative forecasting approaches, in particular econometric methods, are introduced and evaluated.

**300893.1 Topics in Medical Science**

**Credit Points** 10 **Level** 3

**Special Requirements**

Students must be enrolled in course 3673 - Bachelor of Medical Science, 3674 - Bachelor of Medical Science (Nanotechnology) or 3682 - Bachelor of Medical Science (Advanced) in order to enroll in this unit. Successful completion of 80 credit points at Level 2 or 3.

.....

This unit builds on the content and concepts developed across multiple discipline areas during the Bachelor of Medical Science, integrating them together into the context of human health and disease. Students will work in groups to undertake an in depth exploration of an issue related to Medical Science. Topics addressed each year will vary, and will include issues currently at the forefront of Medical Science, issues for which there is currently significant scientific debate, and issues in which students have expressed a particular personal interest.

**300819.1 Topics in Physiology**

**Credit Points** 10 **Level** 3

**Prerequisite**

**300818.1** Introduction to Physiology OR **300838.1** Comparative Physiology OR **300851.1** Advanced Physiology

**Equivalent Units**

300756 - Topics in Physiology

.....

This unit builds on the physiological concepts of "Introduction to Physiology". It provides a greater depth and breadth of understanding of aspects of whole-body

physiology which are explored in group work. Topics may include, but are not limited to, locomotion, physiology of reproductive technology, physiology of interaction between humans, physiology under extreme conditions (including pathophysiology), physiology of learning and memory, sleep physiology, animal physiology, nutritional physiology and others.

### 300877.1 Toxicology

**Credit Points** 10 **Level** 2

#### Equivalent Units

300627 - Toxicology

.....

Toxicology is the study of toxicants or poisonous substances: their nature, effects on the human body, and on human, animal and plant populations. Poisonous substances have been used by humans from antiquity for both beneficial and malevolent purposes and today a vast array of toxic industrial chemicals are produced. Both accidental (workplace and environmental) and intentional (forensic) exposure are covered, in terms of group properties, chronic and acute, toxicity, exposure potential, health impact and intervention are presented through forensic case studies. Students carry out a toxicology audit of an operation or premises of their choice.

### 400346.2 Traditional Chinese Medicine 1

**Credit Points** 10 **Level** 1

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This unit provides a comprehensive introduction to traditional Chinese medicine (TCM). Students are introduced to basic TCM theory, and the physiological principles of the diagnostic system that forms the basis of TCM practice. The history and philosophy of Chinese medicine is introduced and discussed in the light of contemporary clinical practice.

### 400348.2 Traditional Chinese Medicine 2

**Credit Points** 10 **Level** 1

#### Assumed Knowledge

Prior knowledge equivalent to Traditional Chinese Medicine 1.

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This unit provides learning experiences that enable students to expand upon their understanding of TCM philosophy and principles, with particular reference to developing diagnostic skills in TCM. Students acquire basic skills in case history taking, interpretation of relevant signs and symptoms, arriving at a TCM diagnosis, and devising suitable treatment strategies.

### 400352.2 Traditional Chinese Medicine 3

**Credit Points** 10 **Level** 2

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This unit enables students to develop a sound understanding of causes of disease in TCM with a particular focus on disease pattern differentiation. This is

complemented by the reinforcement of skills in case history taking and TCM diagnostics.

### 400354.2 Traditional Chinese Medicine Practice 1

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Assumed knowledge equivalent to Traditional Chinese Medicine 3, and Acupuncture 2, and Chinese Herbal Medicine 2.

#### Special Requirements

Students must have completed a Work Cover approved First Aid Certificate.

.....

This unit is focused on introductory clinical practice in a clinical setting. It enables the students to link theory with practice. It expands the students' knowledge base of acupuncture and Chinese herbal medicine, as well as Chinese language in practice of Chinese medicine. Students assist with clinical practice and perform basic acupuncture related techniques. Students will also learn basic skills in handling herbal preparation, processing and dispensing.

### 400356.2 Traditional Chinese Medicine Practice 2

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Assumed knowledge and experience equivalent to Traditional Chinese Medicine Practice 1.

#### Special Requirements

To undertake this unit, students must comply with the following special requirements: Prior to enrolling in this unit students must have: 1) submitted a Criminal Record Check form prior to 1 June 2010 OR a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate 2) submitted a Prohibited Employment Declaration prior to 1 June 2010 OR a Working with Children Check Student Declaration after 1 June 2010. Students must have completed a Work Cover approved First Aid Certificate.

.....

This unit is focused on clinical practice in a clinical setting. It enables the student to link theory with practice. It expands the students knowledge base of acupuncture and Chinese herbal medicine, as well as TCM theory and diagnostics. Students facilitate clinical practice and perform a wide range of acupuncture and related techniques, in addition to basic herbal prescribing.

### 400920.1 Traditional Chinese Medicine Practice 3 (PG)

**Credit Points** 10 **Level** 7

#### Assumed Knowledge

Foundations of Research and Evidence-Based Practice, TCM Practice 2

**Incompatible Units**

400359 - Traditional Chinese Medicine Practice (Research Project)

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This unit represents a continuation of the clinical practicum and development of clinical skills. Students will also be able to apply their knowledge of professional theory, practice, research and evaluation skills to the investigation of TCM problem. Students will be expected to demonstrate competence in handling patients in a clinical context, synthesise knowledge from their studies of specialities in TCM and critically examine the practical aspects of acupuncture and Chinese herbal medicine research.

**400924.1 Traditional Chinese Medicine Practice 4 (PG)**

**Credit Points** 10 **Level** 7

**Assumed Knowledge**

Traditional Chinese Medicine 3 (PG)

**Incompatible Units**

400362 - Traditional Chinese Medicine Practice 4

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This unit represents a continuation of the clinical practicum and development of clinical skills. Students will be able to integrate their theoretical knowledge, practice skills and research base to the investigation, diagnosis and supervised treatment of patients in a clinical context. Students will be able to synthesise knowledge and competency in the practice of clinical areas of focus taught in Chinese Medicine I and II, and Specialties in TCM I and II. Students will be expected to demonstrate professional competence in handling patients in a clinical context, diagnosing more complex cases and devising and managing the integrated care of patients using TCM.

**400764.3 Transition to Graduate Practice**

**Credit Points** 10 **Level** 3

**Corequisite**

**400762.1** Mental Health Nursing 2 AND **400761.1** Family Health Care: High Acuity Nursing

**Equivalent Units**

400064 - Nursing Context 7

**Special Requirements**

Students enrolled in course 4642 must have passed the following five units - 400745, 400749, 400753, 400757, 400759. Students enrolled in course 4643 must have passed the following three units - 400753, 400757, 400759. Students enrolled in course 4648 must have passed the following five units - 400745, 400749, 400753, 400759, 400825. Special Requirements are those stipulated by the NSW Health and UWS. At present these include - Prohibited Persons Employment Declaration (PPED) or Working with Children Check Student Declaration, Criminal Record Check (CRC), National Criminal History Record Check (NPC), Adult Vaccination Record, First Aid Certificate

.....

This unit explores the transition to graduate practice from undergraduate nursing student to graduate professional registered nurse focusing on the role, responsibilities, accountabilities and options for the registered nurse.

**101302.2 Translation Technologies**

**Credit Points** 10 **Level** 2

**Equivalent Units**

100199 - Translation Skills

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This unit aims to equip students with the theoretical and practical knowledge needed to effectively apply information and communication technologies to translation and other language related tasks. It focuses on translation memory and terminology management systems, and on the workflow involved in the handling of multilingual content. Emphasis is also put on uses of the Internet as a resource tool, and to the principles of controlled language for text to be processed by machine translation (MT). Tutorials will be conducted in a computer lab where students will familiarize themselves with leading computer-assisted translation (CAT) software applications.

**101848.1 Transnationalism and Migration**

**Credit Points** 10 **Level** 3

**Equivalent Units**

101687 - Transnational Migration

**Special Requirements**

Successful completion of 60 credit points

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This unit discusses theories of migration, transnationalism, globalisation, diaspora and identity. We examine the experience of migration and settlement, and the transnational cultural forms that emerge in this process. We investigate the role of new means of communication such as the internet in connecting migrants and the homeland. We also analyse how religion supports migrants in the process of homebuilding. Finally, this unit also discusses the descendants of migrant who have 'returned' to the homeland after living abroad for generations. Do they become minorities in their ancestral homeland despite their presumed ethnic similarities with the host population?

**101831.2 Transport and the Making of the Modern World**

**Credit Points** 10 **Level** 3

**Special Requirements**

Successful completion of 60 credit points

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The impact of the industrial revolution was felt earliest and most profoundly in many parts of the world through changes in transport and communications. During the mid 19th century the telegraph, postal services, the steamship and the railway diminished distance in ways no innovations ever had before. This unit will examine their social, economic and political impact as well as later innovations such as civil aviation and road motor transport.

### **101798.2 Understanding Freedom**

**Credit Points** 10 **Level** 3

#### **Special Requirements**

Successful completion of 60 credit points

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"Understanding Freedom" consists of a close analysis of major theories of freedom from ancient times to the contemporary world. It explores the relation between freedom and imprisonment, freedom and politics, freedom and the everyday, as well as the way that freedom informs the production of culture.

### **400746.2 Understanding Good Health**

**Credit Points** 10 **Level** 1

#### **Assumed Knowledge**

Knowledge of basic chemistry, physics and bioscience.

#### **Equivalent Units**

400047 - Nursing Science 2

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This unit introduces the student to concepts and mechanisms involved in normal body functions and the maintenance of normal activities of living that inform professional nursing practice.

### **101462.2 Understanding Islam and Muslim Societies**

**Credit Points** 10 **Level** 1

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This is an introductory subject/unit that exposes students to the basic and fundamental beliefs and practices that constitute the fabric of the Islamic world. Students will be able to explore relationships and differences between the key teachings of Islam and the customary practices of Muslims. In doing so, students will study both unity and diversity in various regions of the Muslim world. Historical and anthropological approaches to studying a number of key institutions and discourses in Muslim societies will also be introduced.

### **300812.1 Understanding Landscape**

**Credit Points** 10 **Level** 1

#### **Equivalent Units**

300642 - Understanding Landscape, HT103A - Understanding Landscape

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In 2012 this unit replaced by 300812 - Understanding Landscape. This unit explores the historical and cultural perceptions and perspectives of the term 'landscape' and the sustainability and management of landscapes. Students become familiar with the terminology and concepts surrounding the natural landscape experientially through a series of field trips and develop an awareness and appreciation of both of the conceptual and actual landscape issues. Skills in mapping and spatial awareness skills and technologies will be developed through field trips and

workshop sessions including GIS. Such skills will assist in developing a capacity to comprehensively describe and analyse the landscape.

### **101731.2 Understanding Power**

**Credit Points** 10 **Level** 3

#### **Equivalent Units**

100970 - Understanding Power

#### **Special Requirements**

Successful completion of 60 credit points at Level 1.

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This unit aims to explore contemporary understandings of power and its various manifestations in the modern world. Numerous themes are considered including informal and formal mechanisms of power, the uses and abuses of power, resistance, plus various examples of "powered" sites. The unit examines the relation between power, violence and the state. The unit concentrates on a few, influential theorists of power. Particular attention is paid to how power has an impact on the production of culture.

### **101866.1 United States Government and Politics**

**Credit Points** 10 **Level** 3

#### **Special Requirements**

Successful completion of 60 credit points.

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This unit provides an overview of the major institutions and branches of the United States government. It draws attention to the interaction between the ideas that have been articulated by American social and political movements, and the institutions and goals of the American government as they have unfolded over time.

### **400183.2 Upper Limb Rehabilitation Following Stroke**

**Credit Points** 10 **Level** 3

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People with neurological conditions commonly lose the ability to use their hand and arm. The impairments and resulting disability can impact on a person's occupational performance, and their participation in chosen activities and life roles. In this unit, students will learn how to analyse and retrain components of upper limb performance, particularly reach, grasp and in-hand manipulation. A movement science approach will be used, requiring students to read and critique motor control, motor learning, and muscle biology literature, as well as current best evidence in rehabilitation.

### **300860.1 Urban Environment**

**Credit Points** 10 **Level** 3

#### **Equivalent Units**

300789 - Urban Environment

**Incompatible Units**

LW212A - Environmental Health Law; 300471 - Urban Development Systems; 300704 - Healthy Built Environments

**Special Requirements**

Students must have completed 120 credit points

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This unit explores the relationships between community, the natural environment and government within an urban context through considering how housing and urban development can influence population health. Concepts explored include "healthy housing", "active living" "safety by design" and "energy efficiency". Through a combination of case studies and practical field experience, students will develop the skills and knowledge appropriate to assessing the "healthiness" and sustainability of urban environments. The unit examines methods of construction and building regulation aimed at the preservation of health and amenity.

**100291.4 Urban Life/Urban Culture**

**Credit Points** 10 **Level** 2

**Special Requirements**

Successful completion of 40 credit points at level 1

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Big cities can be frantic, difficult, polluted and often dangerous places in which to live. Yet cities also contain possibilities for social and cultural stimulation not available elsewhere. This unit traces the origins and development of modern cities in all of their complexity. It looks at how industrial cities emerged in Europe and Australia, and at the threat that uncontrolled urban growth posed to social order. We examine the conditions of urban life that promote alienation and anonymity, and how people overcome social fragmentation. There is discussion of modern cities - from those that sprawl, like Sydney, to the relatively compact and dense centres of Europe, the north-eastern United States and Asia. We look at the gendered nature of public space, and how class and ethnic tensions are played out in cities. Students read a range of texts on urban culture and society. These include classic works by writers like Friedrich Engels, George Simmel and Walter Benjamin, to the contemporary work of David Harvey, Richard Sennet and Mike Davis.

**300861.1 Vertebrate Biodiversity**

**Credit Points** 10 **Level** 3

**Prerequisite**

**300802.1** Biodiversity

**Equivalent Units**

300217 - Animal Form & Function; 300470 - Vertebrate Biodiversity

**Special Requirements**

Must have completed 80 credit points to enrol in this unit.

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Vertebrates are the most recognisable and likeable of all the animals. The unit will provide students with a theoretical and practical working knowledge of vertebrate species and

their biodiversity, and the adaptation of their many biological functions. Identification of major groups of animals from several different environments will also be incorporated into the learning outcomes. Students will learn to conduct field surveys and assess the techniques used to survey vertebrates, as well as learn basic handling and husbandry techniques required for different vertebrate species.

**300862.1 Video Games Development**

**Credit Points** 10 **Level** 3

**Assumed Knowledge**

Understanding of programming concepts and details of programming. Good programming skills in C#, Java or C++. Knowledge of systems analysis methods including object orientated analysis and design. Basic knowledge of vector algebra, matrixes and fundamentals of mathematics.

**Prerequisite**

**300580.2** Programming Fundamentals AND **300491.2** Games Technology

**Equivalent Units**

300492 - Games Theory and Design

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This unit provides students with an in-depth understanding of the development and structure of game engines. It provides the student with a unifying overview of the many modules that are incorporated in a game engine as well as a detailed examination of game-play and engine programming.

**101871.1 War**

**Credit Points** 10 **Level** 2

**Special Requirements**

Successful completion of 40 credit points at Level 1.

.....

The soldier might almost challenge the prostitute for the title of "world's oldest profession." This course will examine how statespeople have understood the purposes of war throughout history, and in a global perspective. It will evaluate the practices and norms associated with war in different eras as well as the experiences of soldiers/sailors/airmen in different wars. It will assess the role of professional armies and warrior classes throughout history, as well as the role of navies, air forces, nuclear weapons, terrorism, guerrilla warfare, just war theory, and the doctrine of pre-emption over the last century. This unit utilizes history and political science methodologies to address these vital questions.

**101375.3 War and Peace**

**Credit Points** 10 **Level** 3

**Incompatible Units**

63088 - War and Peace

**Special Requirements**

Successful completion of 60 credit points

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This unit examines problems and issues in international politics. In particular the unit critically assesses the major theoretical paradigms associated with attempts to explain international behaviour of key individuals, nations and the international system. Major issues and key problems in world affairs since the end of World War Two (such as justice and equality, human rights and terrorism) are examined.

### **100293.3 War and Society: 20th Century Australia**

**Credit Points** 10 **Level** 2

#### **Special Requirements**

Successful completion of 40 credit points at level 1

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What has been the effect of war on Australian society? How has war influenced political, social and cultural structures and practices, and how has this changed over time? Beginning with the Boer War and ending with the present 'War on Terror', we will examine the context and consequences of Australia's involvement in the major conflicts of the twentieth century. We will also consider three key themes of the history of modern warfare: the mobilisation of the economy and the role of technology; the role of gender in structuring individual and communal experiences of war; and the politics of commemorating conflicts and mourning the war dead. Finally, we will explore some of the historiographical debates over the meaning of war in Australian society and the problems and challenges of thinking about war historically.

### **100294.3 Warlords, Artists and Emperors: Power and Authority in Premodern Japan**

**Credit Points** 10 **Level** 3

#### **Special Requirements**

Successful completion of 60 credit points

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This unit will look at the historical heritage of Japan that is central to contemporary Japanese identity and culture. The historical heritage considered includes Zen, samurai culture, Japanese artistic achievement, the Emperor, who still pays respect to 'the Divine ancestors' on ceremonial occasions, "great" Buddhist temples, Shinto, Shogun, the court, religion, military lords and warlords. The unit explores Japan's historical heritage in relation to industries and institutions, such as the tourist industry and investigates how power, authority, and art are linked?

### **MG309A.2 Water and Waste Management**

**Credit Points** 10 **Level** 3

#### **Assumed Knowledge**

This unit will build upon knowledge and skills gained in Year 1 and Year 2 Microbiology and Chemistry units

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Water is arguably the most important natural resource in the world, since without it life cannot exist and industry cannot operate. Unfortunately, the liquid and solid wastes from anthropogenic activities continually jeopardise water

quality and the environment. This unit will develop and integrate physical, chemical and biological process understanding of water pollution and waste management. The biotechnology of nutrient transformation in waste treatment, waste minimisation and value-added opportunities will be emphasised.

### **300740.1 Water Engineering**

**Credit Points** 10 **Level** 2

#### **Assumed Knowledge**

200238: Mathematics for Engineers 2

#### **Prerequisite**

**200237.1** Mathematics for Engineers 1 AND **300464.1** Physics and Materials

#### **Equivalent Units**

85009 - Water Engineering

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The unit provides a working knowledge on the basic principles of fluid flow and covers the general principles of engineering hydraulics. The theories learned in classes will be reinforced in laboratory sessions

### **300870.1 Water in the Landscape**

**Credit Points** 10 **Level** 3

#### **Equivalent Units**

300779 - Water in the Landscape

#### **Special Requirements**

Successful completion of 120 credit points.

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Many land and water use activities in both urban and rural landscape result in hydrologic changes that have environmental, economic and social consequences. These activities require appropriate management strategies for sustainable water use in catchment. In this unit, the hydrologic cycle will be explored at varying spatial scales in urban and rural contexts. Hydrologic, environmental, economic and social perspectives will be used in the examination of the demand and the use of water.

### **300814.1 Water Quality Assessment and Management**

**Credit Points** 10 **Level** 1

#### **Equivalent Units**

300635 - Water Quality Assessment and Management

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Water is essential for all life on earth. This unit will equip students with skills in biological, chemical and physical water quality assessment for a sustainable water future. The unit introduces students to healthy natural waterways and contrasting degraded waters impacted by disturbance from human activities. A broad range of pollutants, their sources and the consequences for human health and the ecology of water ways will be investigated. Management strategies will also be examined based on the sound scientific assessment of water quality. Students in this unit will cover water quality legislation, regulation, policy,

guidelines and develop competencies in water monitoring, regulation, treatment and management.

### 300734.1 Water Resources Engineering (UG)

**Credit Points** 10 **Level** 4

#### Assumed Knowledge

300479 - Drainage Engineering

#### Prerequisite

300740.1 Water Engineering

#### Equivalent Units

85020 - Water Resources Engineering (UG)

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This unit introduces aspects of engineering that relate to water as a resource. It builds on the knowledge gained in Water Engineering and Drainage Engineering. This unit will enable students (a) to appreciate major water resource issues around the globe, (b) to understand the social, physical and economic issues involved in distribution, supply and use of water to industry, agriculture and private households; and (c) to understand the need for holistic approaches in planning of water resources projects

### 101180.2 Web and Time Based Design

**Credit Points** 10 **Level** 2

#### Assumed Knowledge

Introductory level understanding of and skills in design principles particularly basic layout, colour and typographic knowledge. Digital basics including working in a networked environment on a Macintosh computer. Ability to manage, transport and store digital information.

#### Equivalent Units

100605 - Web and Time Based Production Technology

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Through lectures students develop an understanding of fundamental concepts and processes inherent in designing for an online environment. Students also develop fundamental computer software skills and design understandings appropriate to that medium using the major web software packages and develop a working understanding of production literacies for online design. Students will engage in practical studies of web authoring using HTML, Dreamweaver, image optimisation using Fireworks or Imageready. Emphasis will be placed on understanding the roles, functions and features of each software package in the design production context of online delivery, integrated use, and a working understanding of the responsibilities inherent in the digital production process.

### 300583.2 Web Systems Development

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Principles of systems analysis and design including the specification of end-user requirements and a good knowledge of the SDLC and its application to solving computer system related problems (equivalent to successful completion of 300585 SAD or similar). Principles of data analysis, relational database design and

development, practical skills in SQL (equivalent to successful completion of 300104 DDD or similar).

#### Prerequisite

300582.2 Technologies for Web Applications

#### Equivalent Units

300085 - Advanced Web Site Development

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In this unit students further develop their theoretical and practical skills in designing and developing web based information systems using systems analysis, programming, database, human computer interaction and web technologies skills that they have learnt in previous units. Current web development technologies and/or frameworks will be utilised to build a complex web information system in a collaborative web development team. Techniques of porting web systems to mobile platforms will also be explored.

### 300902.1 Web Systems Development (Advanced)

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Principles of systems analysis and design including the specification of end-user requirements and a good knowledge of the SDLC and its application to solving computer system related problems (equivalent to successful completion of 300585 SAD or similar). Principles of data analysis, relational database design and development, practical skills in SQL (equivalent to successful completion of 300104 DDD or similar).

#### Prerequisite

300582.2 Technologies for Web Applications

#### Incompatible Units

300583 - Web Systems Development

#### Special Requirements

Students must be enrolled in course 3684 - Bachelor of Information and Communications Technology (Advanced) or 3685 - Bachelor of Computing (Information Systems) Advanced

.....

Students will further develop their theoretical and practical skills in designing and developing web based information systems using systems analysis, programming, database, human computer interaction and web technologies skills that they have learnt in previous units. Current web development technologies and/or frameworks will be utilised to build a complex web information system in a collaborative web development team. Techniques of porting web systems to mobile platforms will also be explored. Students in this advanced unit will also investigate and apply advanced techniques such as creating custom controls and components, creating ASP. NET MVC applications, and working with the HTTP runtime within the .NET framework.

### 101010.3 What is the Human?

**Credit Points** 10 **Level** 3

#### **Equivalent Units**

SS216A - What is the Human?

#### **Special Requirements**

Successful completion of 60 credit points

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This unit examines theories of human nature from a variety of historical and disciplinary perspectives. It engages with, and encourages the student to evaluate, conceptions of the human - some of which have had wide currency in the broader culture and some which have not. The unit also engages the idea of whether a unified conception of human nature is tenable at all.

### 100971.2 Which New World Order?

**Credit Points** 10 **Level** 3

#### **Equivalent Units**

63089 - Which New World Order? Issues in Contemporary International Politics

#### **Special Requirements**

Successful completion of 60 credit points at Level 1.

.....

This unit will examine a series of topical theoretical issues such as claims concerning the end of sovereignty, the emergence of a borderless world, the triumph of liberalism following the end of the Cold War and the so-called 'War on Terrorism' since the September 11, 2001 attacks on the United States. Finally it will examine the rise in prominence of so-called 'low politics' issues such as human rights, gender and the environment.

### 101762.1 Who do you think you are? (Day Mode)

**Credit Points** 10 **Level** 1

#### **Corequisite**

**101751.2** Contextualising Indigenous Australia (Day Mode)

.....

This unit is available to all Undergraduate students who have open electives. Who do you think you are? will provide students practice in the analysis of historical documents, family narratives, autobiography, political and social issues around a project that will give a context for their own personal story. Students will develop skills in oral history work, locating and retrieving archival documents and compiling their own 'family tree'. Students will also develop skills in practising speaking and writing genre appropriate to their own family history. An introduction to the theory of identity and identification will enable students to appreciate the complexities of becoming.

### 300813.1 Wildlife Studies

**Credit Points** 10 **Level** 1

#### **Equivalent Units**

300425 - Introduction to Wildlife Studies

#### **Special Requirements**

Students are required to wear closed in shoes, long pants and long-sleeved shirts in this unit.

.....

This unit involves the study of basic biology, ecology, conservation and management of selected terrestrial wildlife (amphibian, reptiles, birds and mammals) grouped according to their taxonomic affiliations. It examines the various strategies used in the management of both wild roaming and captive reared animals including those produced for human use. Students will learn the different management systems and research methods used in wildlife research. The use of wildlife as a sustainable resource will also be analysed within the context of ecological sustainable development and animal ethics.

### 300065.4 Wireless Communications

**Credit Points** 10 **Level** 4

#### **Assumed Knowledge**

Students should have a good understanding of signals and systems, probability and random processes and fundamentals of communication systems.

#### **Prerequisite**

**200242.3** Mathematics for Engineers 3 AND **300007.2** Communication Systems OR **300010.3** Data Networks

#### **Equivalent Units**

300017 - Digital Communication Engineering

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The unit covers the analysis, design and operation of modern wireless communication systems. The primary focus is on the physical layer and hardware, emphasizing the fundamentals of coding and modulation, spread spectrum and multiple access techniques. Current wireless architectures and mobile communication systems are also covered.

### 101471.2 Women in Arabic and Islamic Literature

**Credit Points** 10 **Level** 3

#### **Special Requirements**

Successful completion of 60 credit points.

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Beginning with Nisa — the chapter of the holy Quran dedicated to women— and a collection of pertinent ahādīth, this unit focuses on the impact that Islam's philosophy has had on various Muslim and Arab cultures by examining literature from throughout the Arabo-Islamic civilization. Students are introduced to a variety of interpretations of the role of women in Islam and how these interpretations are reflected in literary and non-literary texts. Students learn to detect the tremendous influence that Islam has had on



Arabic texts and cultures, even those which at first appear to be of a secular nature.

### 101879.1 Women with Muslim Identity

**Credit Points** 10 **Level** 2

#### Special Requirements

Completion of 40 credit points at level 1.

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An exploration of perceptions of Muslim women, and of the meaning and significance of Muslim identity for women today. We will analyze ways in which Muslim women are perceived and perceive themselves in the context of the Islamic revival, focussing on differences and relationships among various 'outsider' and 'insider' perceptions. A central focus will be the resurgence of the veil in the context of the Islamic revival; we will explore the meanings of veiling in the context of discussions and debates on the role of women, equality and freedom, cultural diversity, religious values and secularity.

### 400904.1 Work Experience in Sport and Exercise Science

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

It is expected that students have the knowledge and skills associated with the prerequisite units.

#### Prerequisite

**400885.1** Sport and Exercise Physiology AND **400887.1** Clinical Exercise Physiology 1 AND **400902.1** Exercise in Musculo-Skeletal Rehabilitation AND **400903.1** Professional Development and Work Experience

#### Equivalent Units

400331 - Sport and Exercise Science in Practice

#### Special Requirements

Students must be enrolled in course 4658 - Bachelor of Health Science (Sport and Exercise Science). To undertake this unit, students must comply with the following special requirements: Prior to enrolling in this unit students must have: 1) submitted a Criminal Record Check form prior to 1 June 2010 or a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate 2) submitted a Prohibited Employment Declaration prior to 1 June 2010 or a Working with Children Check Student Declaration after 1 June 2010 3) provide evidence of compliance with the occupational screening and immunisation policy of NSW Health 4) possess a current WorkCover Authority approved First Aid Certificate.

.....

The unit Work Experience in Sport and Exercise Science focuses on observation and participation in Sport and Exercise Science activities in the industry setting. Students will develop professionally in Sport and Exercise Science by applying their knowledge and skills developed during previous Sport and Exercise Science course work and practical experiences through supervised practice placements. During these placements students are expected to develop and demonstrate an ability to design, implement and evaluate testing and training programs for a variety of clients in sports, community and clinical settings.

### 200616.3 Workplace Behaviour

**Credit Points** 10 **Level** 3

#### Prerequisite

**200300.2** Managing People at Work

#### Equivalent Units

61441 - Workplace Behaviour

.....

The primary concern of this unit is to equip students with an understanding of how to apply sociology and work psychology to effectively manage human resources. The unit analyses both the individual (psychological) and social (sociological) factors that influence workplace behaviour and relations in the workplace. The structure of the unit is thematic, drawing on the major theoretical frameworks of psychology and sociology, and applying them to the practice of human resource management and to contemporary issues within the workplace.

### 400246.3 Workplace Learning 1 (Therapeutic Recreation)

**Credit Points** 10 **Level** 2

#### Prerequisite

**400783.2** Professional Pathways in Health Science

#### Special Requirements

Students must be enrolled in the Bachelor of Health Science course. Prior to enrolling in this unit students must have: 1) submitted a Criminal Record Check form prior to 1 June 2010 or a Student Undertaking Form after 1 June 2010 and have applied for a National Police Certificate.

.....

This unit provides students with the opportunity to apply theoretical and practical knowledge and skills gained in the course to develop their practice and professional behaviours in a therapeutic recreation workplace setting.

### 400252.2 Workplace Learning 2 (Community Placement)

**Credit Points** 10 **Level** 3

#### Assumed Knowledge

Workplace Learning 1

#### Prerequisite

**400246.3** Workplace Learning 1 (Therapeutic Recreation)

#### Special Requirements

This unit is only available to Therapeutic Recreation students.

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This unit provides students with the opportunity to experience the practice of therapeutic recreation/ diversional therapy through supervised needs assessment, problem identification, program planning, implementation and evaluation in a range of distinct therapeutic service setting. Identify and provide services for people from special populations such as culturally and linguistically diverse (CALD), refugees and trauma victims, indigenous

people, older people, people with learning problems and high risk populations. Students are to explore the advocacy and support needs of the clients receiving services. Students will explore issues related to quality supervision and their own learning styles as they develop learning contracts to be used in the workplace learning setting.

### **101668.2 World Cinema**

**Credit Points 10 Level 3**

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This unit surveys contemporary world cinema in a range of languages in order to address a range of linguistic and cultural issues, including the role of subtitling and dubbing in cross-cultural communication. The unit allows students majoring in a Language other than English to enrol in a language specific tutorial (Arabic, Chinese, Italian, Japanese or Spanish) and other students to enrol in a tutorial conducted in English.

### **101669.2 World Literature in Translation**

**Credit Points 10 Level 3**

.....

This unit examines representative works of world literature written in languages other than English in order to address a range of literary and cultural issues, including the role of translation in cross-cultural communication. The unit allows students majoring in Italian or Japanese to enrol in a language specific tutorial, and other students to enrol in a tutorial conducted in English.

### **101737.2 World Politics: An Introduction**

**Credit Points 10 Level 1**

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Theoretical aspects of international relations and how they apply to the 'real world' of world politics involves understanding of key actors in world politics, from states to international organisations and institutions, to non-state actors, how the international system that regulates international order operates today (and how that system has evolved over recent centuries), and they can produce order and disorder.

### **101670.3 Writing and Society**

**Credit Points 10 Level 3**

#### **Special Requirements**

Successful completion of 60 credit points

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This unit explores the social dimensions of literature, both generally, by considering the role played by tradition, authorship, genre and style in the literary exploration of values, and in specific terms, through a close examination of works which have had an important social impact in their time, including those in translation, from a range of contemporary literatures. The lecturers are members of the Writing and Society Research Group, many of whom are practising authors.

### **100896.3 Writing Fiction**

**Credit Points 10 Level 2**

#### **Equivalent Units**

CT207A - Creative Writing, B2652 - Writing Fiction

#### **Special Requirements**

Completion of 40 credit points at level 1

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In this unit students explore, critically examine and write in a range of fictional forms. They critique a wide variety of published fiction in order to enhance their understanding of approaches, possibilities and techniques, thereby developing a greater capacity to write and critically evaluate their own work. Students create their own fiction in the form of written exercises and assignments, which they will have the opportunity to workshop in a supportive critical environment.

### **100895.4 Writing For Performance**

**Credit Points 10 Level 3**

#### **Special Requirements**

Successful completion of 60 credit points

.....

In this unit students will consider the history and theory of a selection of performance traditions including Greek tragedy, Elizabethan and Jacobean and modern drama and post-modern performance and write scripts for one or a number of media, including screen (film and television), dramatic theatre, performance poetry and song lyrics and contemporary performance.

### **101011.3 Writing Poetry**

**Credit Points 10 Level 3**

#### **Equivalent Units**

B2653 - Writing Poetry

#### **Special Requirements**

Successful completion of 60 credit points

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In this unit students examine the various forms, ways and means of writing poetry and, where appropriate, song lyrics. Students are taught to analyse and write poetry from a writer's rather than a reader's point of view, and how there is graft in the craft of poetry, even if techniques and methods vary. The workshop format will give a greater understanding and motivation in the development of the field of writing poetry.

### **100582.2 Writing Portfolio**

**Credit Points 10 Level 3**

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This is a production unit enabling students to develop a professional portfolio of published writing in a variety of genres. Students are given the opportunity to work in both electronic and print modes, and in collaboration with visual designers.

## 10158.2 Writings on Art

**Credit Points** 10 Level 2

### Special Requirements

Successful completion of 60 credit points at Level 1.

.....

This unit examines selected historical, philosophical and critical writings that have influenced the writing of art history. The unit provides a relevant background to aesthetic and cultural theory, based on visual arts practices, texts, and models. While covering many of the issues and debates raised in literary theory, its emphasis is on the visual arts.

.....

Young people have long been the focus of social fears. Public figures regularly express concern about the disorder created by unruly youths, or the effects of change on young people. This is the case in relation to popular music, 'youth gangs', new technologies and other areas. This unit will consider how young people became defined as a problem by politicians, policy, the media and others. Resulting 'moral panics' represent social anxieties around economic, social and technological change, producing calls for 'solutions' which often entail repressive laws or policing. Students will examine a range of case studies from Australia and elsewhere.

## 101830.2 WWII in Asia and the Pacific

**Credit Points** 10 Level 3

### Special Requirements

Successful completion of 60 credit points

.....

This unit provides inquiry into the origins, course, and aftermath of WWII in Asia and the Pacific. You will ask why Japan and China went to war with each other in the 1930s; you will also seek understanding of why and how that war came to include the United States, Britain, the Soviet Union, the Netherlands, Australia, New Zealand, and practically all of Asia. You will examine the atomic attacks against Hiroshima and Nagasaki: Was the bomb a necessary evil? Or could/should the US have avoided using the bomb? You will also look intensively at post-WWII Asia. How did two wartime allies – the US and the Soviet Union – become bitter enemies within months of the war's end? Why did China descend into civil war? What was the war in Korea all about? Were wars of independence throughout SE Asia unavoidable? How was it that Japan escaped much of this postwar misery?

## 101662.1 Young People, Their Futures and Education

**Credit Points** 10 Level 3

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This unit provides an introduction to the youth studies field. It examines emerging ways of theorising the roles ascribed to 'youth' over the past 50 years and their relationships to the changing contexts in which young people are growing up. These changes include the impact of digital technologies, increases in high-school completion rates, mass tertiary education, increases in student employment, and the effects of labour market deregulation. The unit examines how socio-economic inequality and geographies of exclusion contribute to shaping young people's identities and their life chances. Social and educational challenges affecting immigrant and refugee youth are also examined.

## 100298.2 Youth Cultures and Moral Panics

**Credit Points** 10 Level 2

### Special Requirements

Successful completion of 40 credit points at Level 1.

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