School of Medicine

Electronic Undergraduate Handbook 2021

Western Sydney University

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Units, courses, and arrangements for courses as stated in the postgraduate and undergraduate electronic handbooks (and any other Western Sydney University publications or announcements) are an expression of intent only and are not to be taken as a firm offer or undertaking.

The University reserves the right to discontinue or vary its units, courses and announcements at any time without notice.

Information contained in this electronic handbook is correct at the time of production (November 2021), unless otherwise noted.

CRICOS Provider Code 00917K

In accordance with the Education Services for Overseas Students (ESOS) Act 2000, the University of Western Sydney is registered on the Commonwealth Register of Institutions and Courses for Overseas Students (CRICOS), Provider Code 00917K.

Overseas students studying in Australia must comply with the requirements of the ESOS Act and the National Code. They should consult the Federal Government's Australian International Education webpage for the description of the ESOS legislation and other relevant information. The University's International Postgraduate and Undergraduate Prospectuses, and other promotional material specifically prepared for overseas students, also provide information about CRICOS registered courses and conditions relating to study in Australia.

About the School of Medicine Electronic Undergraduate Handbook

Sessions and dates

There are two main sessions in 2021: Autumn and Spring. Weeks shown in the dateline refer to the session weeks for these main sessions.

The dateline is available at: https://www.westernsydney.edu.au/currentstudents/current_students/dates/2021_academic_year_dateline.

Unit outlines

Brief outlines of the units listed in the course section are provided 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 Western Sydney University website for more recent information. Details of textbooks, assessment methods, tutorial, group work and practical requirements are in the Learning Guide.

Current information on unit (subject) offerings can be found at: https://hbook.westernsydney.edu.au/.

Unit not listed?

If the unit you are looking for is not in the alphabetical units section, consult your course coordinator for details or search the Handbook for updated details on all units offered in the current year at https://hbook.westernsydney.edu.au/.

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.

Electives and cross-discipline study

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

Western Sydney University also 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 and continuing courses offered by the School of Medicine and the Graduate Research School. The next part contains details on current and continuing postgraduate specialisations in these courses, and the final part has details of all units within in the courses and specialisations.

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

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 the 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 curriculum offerings can be found at: https://hbook.westernsydney.edu.au/./

Terminology changes

The University has had terminology changes from October 2021, for example:

- Course is now Program
- Unit is now Subject
- Specialisation is now Field of Study

For more information about the new terminology, please refer to https://wsu.service-now.com/staff?id=kb_article&sysparm_article=KB0017552

Contents

SCHOOL OF MEDICINE

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.

Units may be revised or replaced to ensure students are provided with up to date curriculum throughout their studies, and this may result in a new course version. Refer to the Check My Course Progress page in MySR for the most up to date information for your course.

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. The Sri Lankan Medical Council has accredited this course until August 2018. This approval allows Sri Lankan students to study at Western Sydney University.

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 (who must apply via the University's International Office) to be considered for admission to the medical course are:

Achieve an academic rank of 95.5 or more (derived on submission of academic results) Meet English proficiency requirements.

- for those who have completed a 3 year or longer Bachelors degree, the grade point average in the degree must be at least 5.6 on the 7 point scale,
- For students commencing in 2015 - 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.
- Have completed IELTS or equivalent examination (Academic Module) and achieve a minimum score of 7.0 in each of the four components, and an overall score of at least 7.0
- For more information on entry requirements and how to apply please see the School of Medicine web page.

For Honours Students:

Completion of Year 3 of Western Sydney University 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 the University should also use the information provided on the UAC website.

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

International students applying to The University through the International Office can find details of minimum English proficiency requirements and acceptable proof on their 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 Western Sydney University.

Special Requirements

To be enrolled in this course students must comply with the current occupational screening and vaccination policy of NSW Health and meet NSW Clinconnect requirements at course commencement. Student details will be registered with the Australian Health Practitioner Regulation Agency , and must successfully complete a Work Cover Authority approved First Aid Certificate prior to the completion of the first semester of the course. Also see inherent requirements section above. Travel Requirements: The main hospitals outside of the Sydney Metropolitan Area are Lismore and Bathurst, although clinical training at other rural hospitals may be required. The School will consider special circumstances of students when allocating them to hospitals on rotation. However, the School reserves the right to allocate students to hospitals that are not their first preference to ensure that students receive the highest possible quality of teaching. Applicants for entry into UWS Medicine must take this into consideration and be willing to undertake their training in a range of hospital and health care facilities.

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

400861.3 Foundations of Medicine 1

2H Session

400861.3 Foundations of Medicine 1

Year 2

1H Session

400862.5 Foundations of Medicine 2

2H Session

400862.5 Foundations of Medicine 2

Year 3

1H Session

400810.3 Integrated Clinical Rotations 1

2H Session

400810.3 Integrated Clinical Rotations 1

Year 4 (Non-Honours stream)

1H Session

400811.2 Integrated Clinical Rotations 2

2H Session

400811.2 Integrated Clinical Rotations 2

Year 4 (Honours stream)

Honours stream students will complete the following units:

1H Session

400811.2 Integrated Clinical Rotations 2
400959.1 Honours Research Project 1

2H Session

400811.2 Integrated Clinical Rotations 2
400959.1 Honours Research Project 1

Year 5 (Non-Honours stream)

1H Session

400977.2 Integrated Clinical Rotations 3

2H session

400978.2 Integrated Clinical Rotations 4

Year 5 (Honours stream)

Honours stream students will complete the following units:

1H Session

400977.2 Integrated Clinical Rotations 3
400960.2 Honours Research Project 2

2H session

400978.2 Integrated Clinical Rotations 4
400960.2 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 Guidelines for the admission criteria.

Bachelor of Medicine, Bachelor of Surgery

4641.5

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 is 2015 or later.

Units may be revised or replaced to ensure students are provided with up to date curriculum throughout their studies, and this may result in a new course version. Refer to the Check My Course Progress page in MySR for the most up to date information for your course.

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. The Sri Lankan Medical Council has accredited this course until August 2018. This approval allows Sri Lankan students to study at Western Sydney University.

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 (who must apply via the University's International Office) to be considered for admission to the medical course are:

Achieve an academic rank of 95.5 or more (derived on submission of academic results) Meet English proficiency requirements.

- for those who have completed a 3 year or longer Bachelors degree, the grade point average in the degree must be at least 5.6 on the 7 point scale,
- For students commencing in 2015 - 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.
- Have completed IELTS or equivalent examination (Academic Module) and achieve a minimum score of 7.0 in each of the four components, and an overall score of at least 7.0
- For more information on entry requirements and how to apply please see the School of Medicine web page.

For Honours Students:

Completion of Year 3 of Western Sydney University 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 the University should also use the information provided on the UAC website.

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

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

Special Requirements

To be enrolled in this course students must comply with the current occupational screening and vaccination policy of NSW Health and meet NSW Clinconnect requirements at

course commencement. Student details will be registered with the Australian Health Practitioner Regulation Agency , and must successfully complete a Work Cover Authority approved First Aid Certificate prior to the completion of the first semester of the course. Also see inherent requirements section above. Travel Requirements: The main hospitals outside of the Sydney Metropolitan Area are Lismore and Bathurst, although clinical training at other rural hospitals may be required. The School will consider special circumstances of students when allocating them to hospitals on rotation. However, the School reserves the right to allocate students to hospitals that are not their first preference to ensure that students receive the highest possible quality of teaching. Applicants for entry into Western Sydney University Medicine must take this into consideration and be willing to undertake their training in a range of hospital and health care facilities.

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

400861.3 Foundations of Medicine 1

2H Session

400861.3 Foundations of Medicine 1

Year 2

1H Session

400862.5 Foundations of Medicine 2

2H Session

400862.5 Foundations of Medicine 2

Year 3

1H Session

400810.3 Integrated Clinical Rotations 1

2H Session

400810.3 Integrated Clinical Rotations 1

Year 4

1H Session

400811.2 Integrated Clinical Rotations 2

2H Session

400811.2 Integrated Clinical Rotations 2

Year 5 (Non-Honours stream)

1H Session

400977.2 Integrated Clinical Rotations 3

2H session

400978.2 Integrated Clinical Rotations 4

Year 5 (Honours stream)

Honours Coordinator: Professor Phillipa Hay, e-mail MBBSHons@Western Sydney University.edu.au

Honours stream students will complete the following units

1H Session

400977.2 Integrated Clinical Rotations 3

2H session

400978.2 Integrated Clinical Rotations 4
401172.3 Honours Project (Medicine)

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 in 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 Guidelines for the admission criteria.

Bachelor of Medicine, Bachelor of Surgery

4641.6

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 2017 or later.

Units may be revised or replaced to ensure students are provided with up to date curriculum throughout their studies, and this may result in a new course version. Refer to the Check My Course Progress page in MySR for the most up to date information for your course.

This course prepares graduates to be eligible for registration as a medical practitioner in Australia or New Zealand. It is an integrated program where the foundational sciences, and the knowledge, skills and attitudes underpinning medical practice are acquired through active learning with authentic clinical scenarios. Patient contact and teaching of clinical skills begins in the first weeks of first year, and continues throughout the program. In the last three years of the course, students undertake full time clinical placements in a wide range of settings across

Greater Western Sydney and beyond. All students undertake research skills training and a group research project during the program. Students who undertake the embedded Honours program conduct an additional research project.

Study Mode

Five years full-time. In the first two years of the course, students will be based at the Campbelltown campus of the University with weekly clinical skills sessions at Campbelltown or Blacktown Hospitals. In the later years, students will be required to spend a period of time in one or more clinical rotations outside the Sydney metropolitan area, and rotate through a substantial number of different locations within Sydney.

Location

Campus	Attendance	Mode
Campbelltown Campus	Full Time	Internal

Advanced Standing

The course is horizontally integrated, and as a result it is not 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. The Sri Lankan Medical Council has accredited this course until August 2018. This approval allows Sri Lankan students to study at Western Sydney University.

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.

Special Requirements Prerequisites

All students in this course will be registered with the Australian Health Practitioner Regulation Agency.

The following requirements must be met in order to complete the course and graduate.

Inherent requirements

As noted above.

Occupational screening and vaccination, and mandatory training

At course commencement, and prior to any patient contact, students must comply with the current occupational screening, mandatory training and vaccination policies of NSW Health and meet all NSW Health ClinConnect requirements.

First Aid Certificate

Prior to completion of the first semester of the course, students must successfully complete a Work Cover Authority approved First Aid Certificate.

Travel Requirements

Core clinical and community placements are located outside the Sydney Metropolitan Area. Rural hospital placements are located in Lismore and Bathurst, and clinical training at other rural hospitals may be required. The School of Medicine will consider special circumstances when allocating students to placement locations. However, the School reserves the right to allocate students to locations which are not their first preference to ensure that students receive the highest possible quality of teaching. Applicants must take this into consideration and be willing to undertake their training in a range of hospital and health care facilities.

Admission

Detailed information about entry requirements and how to apply can be found on the School of Medicine website

Local applicants

Applicants who are Australian and New Zealand citizens, or hold permanent resident visas, should apply through the Universities Admissions 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)
- Performance at an interview.

Evidence of connection to Greater Western Sydney and Australian rural areas will be taken into account when allocating interviews. Applicants who are able to demonstrate a connection to Greater Western Sydney or Australian rural areas are also required to reach a minimum ATAR of 93.5 (International Baccalaureate 36). Other applicants are required to reach a minimum ATAR of 95.50 (International Baccalaureate 37) or higher.

Applicants who are able to demonstrate proof of Aboriginality are strongly encouraged to apply through the Indigenous student pathway. Alternative academic achievements will be considered for this pathway.

International applicants

Applicants who are not Australian and New Zealand citizens, or do not hold permanent resident visas, should apply directly to the

- Western Sydney University International Office, if they have completed their prior studies overseas
- Universities Admissions Centre (UAC), if they are completing secondary school studies in Australia

Minimum requirements for international applicants to be considered for admission to the medical course are

1. An academic rank (derived on submission of academic results) of

- Performance in the final year of secondary school equivalent to a New South Wales ATAR of 95.50 (International Baccalaureate 37) or higher, or

- Completion of a 3 year (or longer) degree, equivalent to an Australian Bachelors degree, achieving a grade point average of at least 5.6 on a 7 point scale

2. An academic rank (derived on submission of academic results) of

- Completed IELTS (Academic Module) or equivalent English language examination with a minimum score of 7.0 in each of the four components, and an overall score of at least 7.0, OR have successfully completed five consecutive years of secondary education, including all assessable items, in English only OR have completed the Higher School Certificate within Australia

Applicants who have undertaken studies overseas may be required to provide proof of proficiency in English. More information on minimum academic and English proficiency requirements and acceptable proof can be found on the UAC and International Office websites.

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

Special Requirements

All students in this course will be registered with the Australian Health Practitioner Regulation Agency. The Inherent Requirements and Special Requirements Prerequisites noted above must be met in order to complete the course and graduate.

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

400861.3 Foundations of Medicine 1

2H Session

400861.3 Foundations of Medicine 1

Year 2

1H Session

400862.5 Foundations of Medicine 2

2H Session

400862.5 Foundations of Medicine 2

Year 3

1H Session

400810.3 Integrated Clinical Rotations 1

2H Session

400810.3 Integrated Clinical Rotations 1

Year 4

1H Session

400811.2 Integrated Clinical Rotations 2

2H Session

400811.2 Integrated Clinical Rotations 2

Year 5 (Non-Honours stream)

1H Session

400977.2 Integrated Clinical Rotations 3

2H session

400978.2 Integrated Clinical Rotations 4

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 in and complete the unit 401201 Integrated Clinical Rotations General (ICR General). Such students should immediately seek academic advice regarding their progression and pattern of enrolment in this unit, which may need to be varied to meet unit and course requirements

401201.1 Integrated Clinical Rotations General (ICR General)

Honours Stream

To be considered for graduation with Honours, students who meet requirements will enrol in an additional Honours unit in the final year of study. Requirements for enrolment in this unit include a grade point average of 5.5 or above, and submission of a portfolio of research work.

Honours Coordinator: Professor Phillipa Hay, e-mail: mbbshons@westernsydney.edu.au

Honours stream students will complete the following units in Year 5 of the course

1H Session

400977.2 Integrated Clinical Rotations 3

2H session

400978.2 Integrated Clinical Rotations 4
401172.3 Honours Project (Medicine)

See the Honours in Bachelors Awards Policy and associated Guidelines for further information.

Bachelor of Medicine, Bachelor of Surgery

4641.7

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 2018 or later.

Units may be revised or replaced to ensure students are provided with up to date curriculum throughout their studies, and this may result in a new course version. Refer to the Check My Course Progress page in MySR for the most up to date information for your course.

This course prepares graduates for eligibility for registration as a medical practitioner in Australia or New Zealand following successful completion of a period of supervised graduate training as required by the Medical Board (AHPRA). It is an integrated program where learning in the basic sciences is applied to clinical scenarios through problem based and experiential learning. Following preparation and teaching of clinical skills in the first two years, students undertake clinical and community placements in a wide range of settings in Greater Western Sydney, and other urban, rural and remote areas. The course is organised around 4 vertical themes: Patient Care, Health in the Community, Professional and Personal Development, and Scientific Basis of Medicine. Students who are eligible to undertake the embedded Honours program in the final year of the course will carry out an additional program of research.

Study Mode

Five years full-time. In the first two years of the course, students will be based at the Campbelltown campus of the University with weekly clinical skills sessions at Campbelltown or Blacktown Hospitals. In the later years, students will be required to spend a period of time in one or more clinical rotations outside the Sydney metropolitan area, and rotate through a substantial number of different locations within Sydney.

Location

Campus	Attendance	Mode
Campbelltown Campus	Full Time	Internal

Accreditation

On completion of this Course graduates will be eligible for registration by the Medical Board (AHPRA) in all Australian states and territories in Australia, following successful completion of a period of required supervised graduate training. Graduates will also be able to apply for registration in a number of overseas countries.

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

There are multiple entry pathways to the MBBS course. Prospective applicants are directed to the School of Medicine webpage for current detailed requirements.

The requirements for domestic students are detailed below

MBBS Admission Criteria

To be eligible for a place in MBBS, applicants must meet three criteria

- Academic threshold
- UMAT threshold
- Interview performance

The School does not consider any other criteria.

Meeting the academic threshold

Applicants with current or previous university study

Where a degree has not been completed the applicant will be assessed on their GPA. Where an applicant has completed a degree, only the most recent GPA of all study attempted will be considered.

Qualifications that are more than 10 year old prior to the year of entry will not be considered.

Criteria 1 – Academic Rank

Note: The below GPAs are on a 7 scale. If your GPA is calculated on a 4 scale, simply multiply your GPA mark by 1.75.

Non Greater Western Sydney applicants - ATAR (or equivalent) of 95.5

Equivalency: IB 37 or higher; OP1 to 3; GCE of A*A*AA or higher

1 semester full time GPA = 6.2

1 year full time GPA = 6.0

Between 1 year and 3 years GPA = 6.0

Completed degree GPA = 5.6

Greater Western Sydney applicants - ATAR (or equivalent) of 93.5

Equivalency: IB 35 or higher; OP 1 to 4

1 semester full time GPA = 6.0

1 year full time GPA = 5.5

Between 1 year and 3 years GPA = 5.5

Completed degree GPA = 5.1

Criteria 2 - UMAT

Applicants must register to sit the UMAT at a time determined by ACER. For details about registration and dates for the UMAT please see the ACER web page or contact ACER directly via

Phone: (03) 9277 5746 International: (+61 3) 9277 5746

Fax: (03) 9277 5757 International: (+61 3) 9277 5757

Email: umat@acer.edu.au

The threshold level of achievement the University requires in UMAT changes each year and is determined by the performance of all applicants competing for a place in the MBBS course and will not be disclosed. GWS applicants may have a slightly lower threshold than non-GWS applicants.

Applicants who meet both academic and UMAT thresholds are subsequently invited to interview. Final rankings for offers for the MBBS will be based on interview performance, plus UMAT scores (with a greater emphasis being on the interviews).

Criteria 3 - Interview (MMI)

The interview will take the format of a Multistation Mini Interview (MMI). This involves the applicant being asked a series of questions; each question is asked by a separate interviewer in a separate interview station. Applicants will have approximately eight minutes to respond to the

question before being asked to move to the next interview station.

No deferrals will be accepted for this course

Additional information

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC). Use the links below to apply via UAC or Western Sydney University. Applications made directly to Western Sydney do not have an application fee.

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 the University should also use the information provided on the UAC website.

International applicants must apply directly to the University via the International Office.

International students applying to the University through the International Office can find details of minimum English proficiency requirements and acceptable proof on their 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 Western Sydney University.

Special Requirements

Students are required to have obtained all the necessary documentation to be verified by NSW ClinConnect. This verification is a requirement of NSW Health for all students enrolled in medical programs. If a student fails to produce this documentation to ClinConnect they will be unable to attend their hospital tutorials and placements. Attendance at the hospital is a mandatory requirement of the Unit and failure to attend will result in a 'CF' (Compulsory Fail) of the unit. The documents that are to be provided to ClinConnect are 1. National Police Certificate 2. Adult Health Immunisation Schedule 3. Code of Conduct Agreement Essential Equipment 1. Stethoscope 2. Pencil torch 3. White laboratory coat 4. Watch (with a second hand or display)

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

400861.3 Foundations of Medicine 1

2H Session

400861.3 Foundations of Medicine 1

Year 2

1H Session

400862.5 Foundations of Medicine 2

2H Session

400862.5 Foundations of Medicine 2

Year 3

1H Session

400810.3 Integrated Clinical Rotations 1

2H Session

400810.3 Integrated Clinical Rotations 1

Year 4

1H Session

400811.2 Integrated Clinical Rotations 2

2H Session

400811.2 Integrated Clinical Rotations 2

Year 5 (Non-Honours stream)

1H Session

400977.2 Integrated Clinical Rotations 3

2H session

400978.2 Integrated Clinical Rotations 4

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 in and complete the unit 401201 Integrated Clinical Rotations General (ICR General). Such students should immediately seek academic advice regarding their progression and pattern of enrolment in this unit, which may need to be varied to meet unit and course requirements

401201.1 Integrated Clinical Rotations General (ICR General)

Honours Stream

To be considered for graduation with Honours, students who meet requirements will enrol in an additional Honours unit in the final year of study. Requirements for enrolment in this unit include a grade point average of 5.5 or above, and submission of a portfolio of research work.

Honours Coordinator: Professor Phillipa Hay, e-mail: mbbshons@westernsydney.edu.au

Honours stream students will complete the following units in Year 5 of the course

1H Session

400977.2 Integrated Clinical Rotations 3

2H session

400978.2 Integrated Clinical Rotations 4
401172.3 Honours Project (Medicine)

See the Honours in Bachelors Awards Policy and associated Guidelines for further information.

Doctor of Medicine

4758.1

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year for this course is 2019 or later.

The Doctor of Medicine (MD) prepares you to be a doctor who can work safely, competently and effectively across the continuum of medical practice and to enter training in any medical specialty. You will learn through experience and immersion in a broad range of hospital and community-based services throughout the five-year program. From the first weeks, you will learn from real patients, supported by small group collaborative learning at the bedside and on campus. In the first two years, you will learn to apply the biomedical sciences to clinical problems, acquire and practice clinical and research skills. With guidance, you will build your personal learning journey by creating a portfolio of evidence of your learning. After second year, students with a passion for research may choose to do an additional year to gain the Bachelor of Medical Research. In the third year, you will extend and apply your knowledge and practical skills in full-time clinical and community placements and commence a significant project, and complete the requirements for the Bachelor of Clinical Science (Medicine). In the fourth and final years, you will build your clinical experience through placements in speciality and subspecialty medicine, ranging from major metropolitan hospitals to general practices and Aboriginal medical services in rural and remote areas. During this final phase, you will complete your project and portfolio to graduate with Doctor of Medicine and a Bachelor of Clinical Science (Medicine).

Study Mode
Five years full-time.

Location

Campus	Attendance	Mode
Campbelltown Campus	Full Time	Internal

Accreditation
The Western Sydney University medical program is fully accredited by the 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
There are multiple entry pathways to the MD course.

Prospective applicants are directed to the School of Medicine webpage to determine appropriate entry category and pathway.

Requirements for local (domestic) applicants are below

MD Admission Criteria

To be eligible for a place in MD, applicants must meet three criteria

Criteria 1 – Academic Rank

Non Greater Western Sydney applicants - ATAR (or equivalent) of 95.5

Equivalency: IB 38 or higher; OP1 to 3; GCE of A*A*AA or higher (3 or less A2 subjects)

1 semester or more but less than 1 year undergraduate (4-7 units) GPA = 6.4

1 year or more but uncompleted undergraduate (8-23 units) GPA = 6.2

3 years or more but uncompleted undergraduate (24 units or more) GPA = 5.5

Completed undergraduate degree GPA = 5.5

Completed undergraduate degree with Honours (Class 1, 2A, 2B and 2d) = no minimum GPA required

Completed Graduate Certificate = 6.5

Completed Graduate Diploma = 6.2

Completed Coursework Masters = 5.4

Completed Research Masters = no minimum GPA required

Greater Western Sydney applicants - ATAR (or equivalent) of 93.5

Equivalency: IB 36 or higher; OP 1 to 4, GCE of A A A* or higher (3 or less A2 subjects)

1 semester or more but less than 1 year undergraduate (4-7 units) GPA = 6.1

1 year or more but uncompleted undergraduate (8-23 units) GPA = 5.9

3 years or more but uncompleted undergraduate (24 units or more) GPA = 5.2

Completed undergraduate degree GPA = 5.2

Completed undergraduate degree with Honours (Class 1, 2A, 2B and 2d) = no minimum GPA required

Completed Graduate Certificate = 6.0

Completed Graduate Diploma = 5.7

Completed Coursework Masters = 4.9

Completed Research Masters = no minimum GPA required

Criteria 2 – Aptitude Test

Applicants must sit the allocated aptitude test. The level of achievement the University requires will vary each year, determined by the performance of all applicants competing for a place in the MD course and will not be disclosed.

Criteria 3 - Interview

The interview will take the format of a Multi-station Mini Interview (MMI). Applicants invited to interview are asked a series of questions; each question is asked by a separate interviewer in a separate interview station. Interview places are reserved for Western Sydney and Rural background applicants.

Applicants with current or previous university study:

The applicant will be assessed on their GPA. Where an applicant has completed a degree, only the most recent GPA of all study attempted will be considered. Qualifications that are more than 10 year old prior to the year of entry will not be considered. No deferrals will be accepted for this course

Additional information

Applications from Australian and New Zealand citizens and holders of permanent resident visas must be made via the Universities Admissions Centre (UAC). Use the links below to apply via UAC or Western Sydney University. Applications made directly to Western Sydney do not have an application fee.

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 the University should also use the information provided on the UAC website.

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

International students applying to The University through the International Office can find details of minimum English proficiency requirements and acceptable proof on their 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 Western Sydney University.

Special Requirements

Students are required to obtain and provide all necessary documentation to be verified by NSW ClinConnect. This verification is a requirement of the NSW Health Department for all students enrolled in medical programs. If a student fails to produce this documentation to ClinConnect they will not be able to attend hospital and health service teaching sessions, and placements. Attendance is a mandatory requirement of the course to ensure that professional competencies are met. Failure to attend will result in a 'CF' (Compulsory Fail) of the unit. Documents that must be provided to ClinConnect are: 1. National Police Certificate; 2. Adult Health Immunisation Schedule; 3. Code of Conduct Agreement. Students must also meet the inherent requirements of the course as outlined in the University of Western Sydney Inherent Requirements for Medicine: (www.uws.edu.au/ir/inherent_requirements/inherent_requirements_for_medicine_courses). Inherent requirements are personal capabilities which are essential for achieving the learning outcomes of the Course or Unit in a way that will preserve the integrity of the University's teaching, learning and assessment standards and the accreditation requirements for the course. The Disability Education Standard, Section 3.4 (3) states: "In assessing whether an adjustment to the Course, Unit of the Course or program in which the student is enrolled, or proposes to be enrolled, is reasonable, the provider is entitled to maintain the academic requirements of the Course or program, and other requirements or components that are inherent in or essential to its nature. Note: In providing for students with disabilities, a provider may continue to ensure the integrity of its Courses or programs and assessment requirements and processes, so that those on whom it confers an award can present themselves as having the appropriate knowledge, experience and expertise implicit in the holding of that particular award." Essential Equipment: 1. Stethoscope; 2. Pencil torch; 3. White laboratory coat; 4. Watch (with a second hand or display).

Course Structure

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

Year 1

Autumn

401276.1 Clinical Sciences 1

Spring

401276.1 Clinical Sciences 1

Year 2

Autumn

401277.2 Clinical Sciences 2

Spring

401277.2 Clinical Sciences 2

Year 3

Autumn

401278.1 Applied Clinical Sciences 1

Spring

401278.1 Applied Clinical Sciences 1

Note: Students are able to exit at this point with a Bachelor of Clinical Science (Medicine)

Year 4

Autumn

401279.1 Applied Clinical Sciences 2

Spring

401279.1 Applied Clinical Sciences 2

Year 5

Autumn

401280.1 Applied Clinical Sciences 3

Spring

401281.1 Medicine in Practice

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 commencment year in this course is 2012 or later.

Units may be revised or replaced to ensure students are provided with up to date curriculum throughout their studies, and this may result in a new course version. Refer to the Check My Course Progress page in MySR for the most up to date information for your course.

The Bachelor of Medical Research is not a stand-alone degree, but is designed to be undertaken in combination with the Bachelor of Medicine / Bachelor of Surgery (MBBS) or the Doctor of Medicine (MD). Students must have completed at least 160 credit points of their primary medicine degree in order to enrol in the Bachelor of Medical Research. The Bachelor of Medical Research gives students the opportunity to develop their critical thinking and gain a more detailed experience in medical research than is provided in their medical course. Students undertake a medical research project while developing skills in identifying relevant literature, scientific research methods, and the correct protocols for developing and conducting a research project with the assistance of a supervisor. Students are expected to participate in research seminars and present the results of their research as a dissertation.

Study Mode
Three years full-time or four years part-time.

Location

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

Admission
Students must be currently enrolled in Bachelor of Medicine and Bachelor of Surgery (MBBS) or Doctor of Medicine (MD) at Western Sydney University, and have successfully completed at least 160 credit points of that course, with a Grade Point Average (GPA) of 5 (credit average), before being admitted to Year 3 of the intercalated Bachelor Medical Research.

Special Requirements
Students must be compliant with NSW Health Legislation requirements and have the following. 1. National Police Certificate (verified by NSW Health) and submitted to Student Central 2. Working with Children Check 3. Student Undertaking 4. First Aid Certificate (including Cardiopulmonary Resuscitation –updated yearly) 5. Completed Adult Immunisation Card (verified by NSW Health) Completed documentation of compliance with NSW Health Records and Information Privacy Act

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

Year 1 and 2 of the Bachelor of Medical Research are Advanced Standing, comprising of 160 credit points of the Bachelor of Medicine / Bachelor of Surgery (MBBS) program or the Doctor of Medicine (MD) program

The Bachelor of Medical research is an 80 credit point intercalated program, which can be taken following the 2nd, 3rd or 4th year of the MBBS or MD program, comprised of a compulsory 60 credit point yearlong unit, 400813 - Medical Research Project, and two existing course work combinations, totalling 20 credit points over two semesters, as shown below

1H session

400813.2 Medical Research Project

Autumn session

400864.4 Research Methods (Quantitative and Qualitative)

2H session

400813.2 Medical Research Project

Spring session

401383.1 Evidence in Health

Note: 401383 Evidence in Health replaces 400863 Foundations of Research and Evidence-Based Practice from Spring 2021

Note: This program is available only to students who are selected into the University`s Bachelor of Medicine and Bachelor of Surgery (MBBS) or Doctor of Medicine (MD) programs.

Note: Students may apply for leave of absence from MBBS or MD (for one year full-time or two years part-time) and admission to the B Med Res once they have completed 160 credit points of MBBS or MD, and will normally be required to have a credit average in MBBS or MD 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 or MD. It will not normally be possible to enrol for the Bachelor of Medical Research once Year 5 of MBBS or MD has been completed, because of the need for current clinical skills as the graduates progress into the following Intern year.

Bachelor of Clinical Science (Medicine) (exit only)

4759.1

This is an exit award only. Students may choose to exit the Doctor of Medicine after completing 240 Credit Points with the degree of Bachelor of Clinical Science (Medicine).

Location

Campus	Attendance	Mode
Campbelltown Campus	Full Time	Internal

Admission

The Bachelor of Clinical Science (Medicine) will not be offered to commencing students. It will be made available only as an exit point for Doctor of Medicine students.

Prospective applicants are directed to the School of Medicine webpage to determine appropriate entry category and pathway.

GRADUATE RESEARCH SCHOOL

Bachelor of Applied Leadership and Critical Thinking

3725.1

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 2015 or later.

The Bachelor of Applied Leadership and Critical Thinking (BALCT) is not a stand-alone degree, but is designed to be undertaken in combination with any Western Sydney bachelor degree. It focuses on ethical leadership, creativity, entrepreneurship and innovation, capacity to deal with complexities, relationship and critical thinking skills. The Academy's three pillars of academic rigour, professional and personal development and community engagement provide the perfect base upon which to offer this innovative degree. These characteristics and aptitudes are what the employer of tomorrow will be seeking in a graduate. Students enrolled in this degree will think from multiple perspectives, see and create opportunities, and bring creative, cooperative, empathetic and ethical leadership to his or her future role in the workplace – even if that role is, as yet, unimagined.

Study Mode

Three years full-time or the equivalent part-time. Note: This includes two years equivalent Advanced Standing for prior undergraduate degree.

Location

Campus	Attendance	Mode
Parramatta Campus - Victoria Road	Full Time	Multi Modal
Parramatta Campus - Victoria Road	Part Time	Multi Modal

Advanced Standing

Advanced Standing will be granted for a maximum of 160 credit points. At least 80 credit points must be completed while enrolled in the Bachelor of Applied Leadership and Critical Thinking.

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

Assumed knowledge: two units of HSC English.

This course is made available to high-achieving students only. To be eligible for admission to the BALCT, a student must attain a minimum ATAR of 85, or the minimum ATAR for their primary undergraduate degree, whichever is the higher.

Students must also maintain a grade point average of 5 or above throughout the duration of their study.

Current Western Sydney University students wishing to enrol must have a minimum GPA for 5 or above.

Non-school leavers must have completed an undergraduate degree with a minimum GPA of 5.

For current Western Sydney University students wishing to enrol please complete the Concurrent Degree Form. Link below:

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

International students applying to The University through the International Office can find details of minimum English proficiency requirements and acceptable proof on their 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 Western Sydney University.

Special Requirements

Students must have completed all requirements for another bachelor degree in order to graduate with the Bachelor of Applied Leadership and Critical Thinking.

Course Structure

The Bachelor of Applied Leadership and Critical Thinking (BALCT) is not a stand-alone degree, but is designed to be undertaken in combination with any Western Sydney bachelor degree.

Qualification for this award requires the successful completion of 240 credit points which include the units listed in the recommended sequence below and 160 credit points of Advanced Standing.

Recommended Sequence

Standard Pathway

Year 1

1H session

200855.3	Leadership in a Complex World
301071.3	Introduction to Critical Thinking
301069.3	Research Stories
102211.3	Creativity, Innovation and Design Thinking

2H Session

301072.4	Innovation Lab
102212.3	Internship and Community Engagement
102250.3	Ethical Leadership
301070.3	Logic, Rhetoric and Argumentation

Four Year Accelerated Pathway for Concurrent Enrolment in a Four Year Degree

Year 1

Summer session

200855.3	Leadership in a Complex World

Year 2

Summer session

102211.3 Creativity, Innovation and Design Thinking
301071.3 Introduction to Critical Thinking

Year 3

Summer session

102250.3 Ethical Leadership
301069.3 Research Stories

Year 4

Summer session

301070.3 Logic, Rhetoric and Argumentation
102212.3 Internship and Community Engagement
301072.4 Innovation Lab

Five Year Accelerated Pathway for Concurrent Enrolment in a Five Year Degree

Year 1

Summer session

200855.3 Leadership in a Complex World

Year 2

Summer session

102211.3 Creativity, Innovation and Design Thinking
301071.3 Introduction to Critical Thinking

Year 3

Summer session

102250.3 Ethical Leadership
301069.3 Research Stories

Year 4

Summer session

301070.3 Logic, Rhetoric and Argumentation

Year 5

Summer session

102212.3 Internship and Community Engagement
301072.4 Innovation Lab

Bachelor of Research Studies

8083.2

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 2H 2017 or later.

Units may be revised or replaced to ensure students are provided with up to date curriculum throughout their studies, and this may result in a new course version. Refer to the Check My Course Progress page in MySR for the most up to date information for your course.

The Master of Research is an internationally recognised qualification which will allow students to be globally mobile in advancing their research education, employment opportunities and pathways to further study. It is designed to increase students' preparedness for PhD studies and ultimately for research-orientated careers.

The first year is comprised of advanced Bachelor level studies exposing students to comprehensive research methodology and advanced disciplinary coursework. Students will develop a research proposal, improve their academic literacy skills and engage with issues associated with research ethics and integrity. In the second year students will undertake a supervised year of higher degree research and produce a Masters thesis. The second year also includes a series of workshops and seminars designed to enhance students' research and professional capabilities.

For domestic students, this program attracts Australian Government funding, packaged as a Bachelor of Research Studies/Master of Research to meet regulations.

In Year 1, domestic students are enrolled in the Bachelor of Research Studies as a Commonwealth supported student and are liable for student contribution amounts which can be deferred through the HECS-HELP scheme if they are eligible. In Year 2, domestic students are enrolled in the Master of Research.

Further information about the Master of Research can be found on the Future Students Research Studies pages.

Study Mode

Two years full-time or four years part-time

Location

Campus	Attendance	Mode
Parramatta Campus - Victoria Road	Full Time	Internal
Parramatta Campus - Victoria Road	Part Time	Internal

Admission

Admission is determined by the following criteria being met

- A Bachelor's degree or a Master's degree;
- Achievement of a threshold Admission Average Mark (AAM) equal to or above the minimum of 65;
- Applicants who do not meet the AAM equal to or above the minimum of 65 will be considered in exceptional circumstances, and applicants whose most recent qualification is 5+ years old shall provide additional evidence of relevant work experience or professional training, or evidence of seniority and standing in an area of endeavor and provide written support from the potential supervisor. Examples of evidence may include; work as a research assistant or laboratory technician, the writing of policy, consultancy involving the writing of reports, production of creative output, and publication of peer reviewed journal articles. Applications will be reviewed and approved by the relevant HDR Director and the Dean of the GRS;

- A statement that outlines a tentative research area.

Additionally for International students an English proficiency requirement of IELTS 6.5 overall (minimum 6.0 in each band) or equivalent.

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 the University.

Course Structure

Year 1 of this course will also be studied by International students enrolled in 8084 Master of Research (High Cost) and 8085 Master of Research (Low Cost).

After completion of Year 1, domestic students will be transferred to either 8084 Master of Research (High Cost) or 8085 Master of Research (Low Cost), depending on their research discipline area.

Qualification for the award of Master of Research requires the successful completion of 160 credit points. All students will complete 80 credit points of coursework units and 80 credit points of higher degree by research.

All students must enrol in and complete the 30 credit points of prescribed Core units.

Core units

800218.2	Researcher Development 1: Reading, Writing, and the Business of Research
800219.2	Writing Beyond the Academy: Knowledge Translation and Public Audience Communication
800220.3	Researcher Development 2: Proposing and Justifying Research

Equivalent Core Units

The core units listed below count towards completion of this course for students who passed these units in 2019 or earlier.

800166 - Research Design 1: Theories of Enquiry

800167 - Research Literacies

800169 - Research Design 2: Practices of Research

Students must also complete

- 50 credit points of specialisation cluster units. Students will choose 40 credit points of discipline-specific units from within their cluster and are encouraged to choose 10 credit points from an alternate cluster, however this is not mandatory. Students are required to complete 50 credit points of cluster units in total. The three cluster discipline areas are Humanities, Arts and Social Sciences (HASS), Science, Technology, Engineering and Mathematics (STEM), and Health and Medicine, as shown below.

- 80 credit points of higher degree research.

Students may exit with the Bachelor of Research Studies (exit only) after Year 1 and the successful completion of 80 credit points, with advanced standing of 160 credit points from their previous undergraduate qualification being granted.

Humanities, Arts and Social Sciences (HASS) Cluster

Please note: units will be offered subject to demand and availability

Graduate Research School

800228.1	Research Internship and Engagement

School of Humanities and Communication Arts

Research Methods based Units

102426.1	Digital Humanities Research Methods (PG)

Disciplinary Content Units

102582.1	Philosophy of History and Politics
102584.1	The Image of Thought: Art, Film and Philosophy
102601.1	Understanding Race
102602.1	Gender and Genre

Hybrid - Disciplinary Content and Research Methods

102661.1	How to Write History
102662.1	New Genres in Research Writing
102412.1	Global Digital Futures
102298.1	The Cutting Edge: Advanced Studies in Humanities and Communication Arts
102339.3	Environmental Humanities
102340.1	Engaging Discursive Fields
102342.1	In the Realms of the Sensory: Ecologies of Word, Sound and Image
102341.1	Debates in Global History
102581.1	Literary Theory
102583.1	History of Ideas
102585.1	What is Islam?

Creative Writing

Disciplinary Content Units

102499.1	Writing Process
102500.2	Writing and Form

Hybrid - Disciplinary Content and Research Methods

102497.2	Writing and Ideas
102498.2	Writing Practice and Tradition
102501.2	Writing, Sounds, Images, Texts

Convergent Media

Hybrid - Disciplinary Content and Research Methods

101962.1	Researching Convergent Media

Continental Philosophy

Disciplinary Content Units

102381.1	Ethics
102384.1	Political Philosophy
102616.1	Philosophy and Literature

Hybrid - Disciplinary Content and Research Methods

102380.1	Philosophical Aesthetics
102383.1	Topics in the History of Philosophy
102379.1	Special Topics in Philosophy
102615.1	Theoretical Philosophy
102618.1	Practical Philosophy
102619.1	Philosophy of Nature
102620.1	Philosophy, History and Interpretation

Creative Arts

Disciplinary Content Units

102376.1	Creativity: Theory and Practice

Hybrid - Disciplinary Content and Research Methods

102375.1	Research Methods in the Creative Arts
102728.1	Research into Practice: bridging the clinician-researcher divide in applied and creative therapies

Linquistics and TESOL

Research Methods based Units

101854.1	Language and Linguistics Research Methods
102621.2	Formal and Functional Grammar

Hybrid - Disciplinary Content and Research Methods

101825.3	English Linguistics for TESOL
102325.1	Advanced Academic English Skills
100919.3	Investigating Second Language Acquisition
102525.1	Bilingualism and Education

Social Sciences and Psychology

Research Methods based Units

102253.2	Digital Social Research in Action

Hybrid - Disciplinary Content and Research Methods

102180.3	Translation from Theory and Research to Policy
102176.2	Theories of Difference and Diversity
102194.3	Social Research in the Digital World
102853.1	Cool Green Cities

Urban Studies

Hybrid - Disciplinary Content and Research Methods

101633.3	Managing Cities: History and Theory
102069.2	Heritage and Planning
101315.4	Financing Cities in the Global Economy
101634.5	Planning and Environmental Regulation

Development, Security and Sustainability

Hybrid - Disciplinary Content and Research Methods

101895.2	Political Economy of Development
101896.2	Development and Security
101636.3	Developing Sustainable Places
102577.2	Humanitarian and Development Agendas and Progress

Criminology

Hybrid - Disciplinary Content and Research Methods

102198.2	Transnational Crime
102200.2	Global Criminology and Human Rights
102199.2	Violence, Culture and Criminal Justice

Religion and Society

Hybrid - Disciplinary Content and Research Methods

102201.2	Contemporary Theories of Religion and Society
102202.2	Religion and Law in Contemporary Public Discourse

Humanitarian and Development Studies

Hybrid - Disciplinary Content and Research Methods

101896.2	Development and Security
102576.2	Global Health, Migration and Development
102577.2	Humanitarian and Development Agendas and Progress
102574.2	Public Health in Complex Emergencies (Advanced)
102575.2	Emergency and Disaster Management

Institute for Culture and Society

Hybrid - Disciplinary Content and Research Methods

800216.1	Researching Post-Capitalist Possibilities (PhD Summer School)
102295.2	Space, Place and the Field
800196.1	Rethinking Culture and Society

School of Education

Research Methods/Disciplinary Content

102152.3	Social Ecology
102160.1	Education Policy, Practice and Global Knowledge Co-construction
102166.1	Person-Centred Practice
102158.2	Learning and Teaching in Challenging Contexts
102159.2	Designing Curriculum Futures
102165.1	At the cultural interface - learning two ways
101658.1	Transformative Learning
100701.1	Leadership, Mentoring and Professional Growth
102148.1	Engaging Communities
102156.1	Disability in Context
102509.2	Computational Thinking across the STEM Curriculum
102161.2	Leading Change

Hybrid - Disciplinary Content and Research Methods

102168.1	Principles and Practices of Evaluation

School of Business

Business students are required to undertake 30 credit points of research methods electives

Research Methods based Units

200897.2	Advanced Analysis and Interpretation
200898.3	Seminal Papers in Business
200896.3	Business Analysis Seminars

Business students may then select up to 20 credit points of cluster elective units

Disciplinary Content Units

200848.4	Governance, Ethics and Social Entrepreneurship
200828.1	Diversity, Labour Markets and Workforce Planning
200845.2	Innovation Through Digital Technology
200719.2	Industrial Relations and Workplace Change
51211.3	International Finance
200852.3	Innovation, Creativity and Foresight
200849.2	New Venture Finance
200894.1	Property Development
200722.2	Strategic Employment Relations
200401.4	Accounting Theory and Applications

Hybrid - Disciplinary Content and Research Methods

51054.4	Financial Modelling
51212.4	Security Analysis and Portfolio Theory
200329.5	Supply Chain Management

School of Law

200957.3	Bioethics in Perspective
200907.4	International Environmental Law and Policy
200948.1	International Banking and Finance Law
200949.1	International Climate Change Law
200980.1	Security of Ideas
200953.1	Human Rights in Practice and Theory
200951.1	International Law of Ocean Governance
200961.2	International Human Rights Law
200962.2	International Criminal Law and Justice
200963.2	International Space Law - Commercial Aspects
200964.1	Principles of International Law

Science, Technology, Engineering & Mathematics (STEM) Cluster

Please note: units will be offered subject to demand and availability

School of Computer, Data and Mathematical Sciences

Research Methods/Disciplinary Content - Computing

301363.1	Advanced Cloud Computing
301196.2	Advanced Topics in Artificial Intelligence
300694.4	Advanced Topics in ICT
300252.4	Advanced Topics in Networking
301042.2	Cloud Computing
301175.2	Internet of Things
300599.5	Advanced Robotics
301038.3	Programming Proficiency
301312.1	Applied Machine Learning

Research Methods/Disciplinary Content - Data Science

301044.2	Data Science

Research Methods/Disciplinary Content - Mathematics

301177.2	Mathematical Proof and Reasoning
301106.2	Mathematical Investigations
301176.2	Advanced Mathematical Investigations

Research Methods based Units

301387.1	Research Preparation in Post Graduate Studies

Hybrid - Disciplinary Content and Research Methods

301236.2	Advanced Topics in Cybersecurity
301365.1	Probabilistic Graphical Models

School of Engineering, Design and Built Environment

Disciplinary Content Units

301002.3	Specialised Software Applications
301003.3	Sustainable Systems
300197.5	Power System Planning and Economics
301024.3	Advanced Numerical Methods in Engineering
300594.6	Advanced Structural Analysis
300595.5	Advanced Water Engineering
300604.5	Advanced Geotechnical Engineering
300939.4	Sustainability and Risk Engineering (PG)
301008.3	Advanced Composite Structures
301009.3	Advanced Timber Structures
301010.3	Advanced Applied Mechanics
301011.4	Advanced Highway Infrastructure
301012.3	Water Resources Systems Analysis
300515.6	Instrumentation and Measurement (PG)
301013.3	Advanced Statistical Hydrology
301015.3	Deep Foundations
301012.3	Water Resources Systems Analysis
300939.4	Sustainability and Risk Engineering (PG)
301018.3	Mechanical System Design
301017.3	Advanced Waste Management
300599.5	Advanced Robotics
301019.3	Advanced Dynamic Systems
300600.5	Mechatronic System Design
301020.3	Advanced Mobile Robotics
301021.3	Advanced Thermal and Fluid Engineering
301022.3	Advanced Computer Aided Engineering
301023.3	Advanced Computational Fluid Dynamics
301024.3	Advanced Numerical Methods in Engineering
300196.5	Personal Communication Systems
300197.5	Power System Planning and Economics
301025.3	Advanced Power Quality
301026.3	Advanced Smart Grids and Distributed Generation
300515.6	Instrumentation and Measurement (PG)
300601.5	Advanced Electrical Machines and Drives
300596.5	Advanced Signal Processing
300603.5	Advanced Control Systems
301019.3	Advanced Dynamic Systems
300173.5	Advanced Data Networks

School of Science

Hybrid - Disciplinary Content and Research Methods

401266.2	Experimental Design and Analysis PG A
401267.2	Experimental Design and Analysis PG B
401203.2	Applications of Magnetic Resonance from Cancer to Neuroanatomy
301247.3	A Cosmic Perspective
301248.3	Space Instrumentation, Technology and Communication
301249.2	Space Science, Planetary Science and Meteorology

The MARCS Institute for Brain, Behaviour and Development

Hybrid - Disciplinary Content and Research Methods

800192.1	Neuroscience Methods
800173.1	Cognitive Science: Research and Application
800171.1	Learning and Processing Human Language

Hawkesbury Institute for the Environment

Research Methods based Units

800186.1	Emerging Technologies for Biological Science

Hybrid - Disciplinary Content and Research Methods

800170.1	Ecosystems in a Changing World
800195.2	Researching our Changing Environment

Health and Medicine Cluster

Please note: units will be offered subject to demand and availability

School of Nursing and Midwifery

Nursing and Midwifery

Research Methods based Units

401168.1	Evidence Based Health Care
401085.2	Scholarship for Practice Change in Health Care
401086.1	Writing for Publication

Disciplinary Content Units

400220.2	Contemporary Professional Practice in Mental Health Nursing
400238.3	Policy, Power and Politics in Health Care Provision
400777.5	Leadership for Quality and Safety in Health Care
400774.2	Perspectives on Nursing
400210.2	Health Promotion and the Nurse

School of Health Sciences

Research Methods based Units

401077.2	Introduction to Biostatistics

Disciplinary Content Units

401414.1	Advanced Sport and Exercise Science

Hybrid - Disciplinary Content and Research Methods

401076.2	Introduction to Epidemiology

School of Medicine

Research Methods based Units

401075.2	Major Incident Management

Disciplinary Content Units

401175.1	Analytic Approaches in Epidemiology
401174.1	Epidemiology of Non-Communicable Diseases
401173.2	Introduction to Clinical Epidemiology
401179.2	Data Management and Programming for Epidemiology

Hybrid - Disciplinary Content and Research Methods

401176.1	Statistical Methods in Epidemiology
401178.1	Controversies in Epidemiology

Translational Health Research Institute (THRI)

Research Methods

800215.1	Applied research with marginalised populations and sensitive health topics

NICM Health Research Institute

800225.1	Clinical Research in Health Science

Specialisation Units

The specialisation units listed below count towards completion of this course for students who passed these units in 2021 or earlier.

401291 - Advanced Sport and Exercise Science

301016 - Advanced Water and Wastewater Treatment

102220 - Applied Methods in Literary Studies and Creative Writing

102222 - Applied Practice in Literary Studies and Creative Writing

401167 - Applied Research in Health Care

101897 - Development for Equality

400975 - Ethics in Health Research

401162 - Experimental Design and Analysis (PG)

800213 - Fieldwork in Complex and Hostile Places

102336 - Functional Grammar

301118 - Genomic Data Science

102698 - Green Urbanscapes: Bio-Physical Functions and Services

800176 - Internship and Community Engagement (PG)

102181 - Nation, Power and Difference

301037 - Scientific Informatics

401164 - Transferable Research Skills

Bachelor of Research Studies (exit only)

8087.2

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 2H 2017 or later.

This course is an exit point from course 8083 Bachelor of Research Studies. Students may exit with this award after Year 1 and the successful completion of 80 credit points, with advanced standing of 160 credit points from their previous undergraduate qualification being granted.

Study Mode
One year full-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
Hawkesbury Campus	Full Time	Internal
Hawkesbury Campus	Part Time	Internal
Parramatta Campus - Victoria Road	Full Time	Internal
Parramatta Campus - Victoria Road	Part Time	Internal
Penrith Campus	Full Time	Internal
Penrith Campus	Part Time	Internal

Admission
This course is an exit point only from 8083 Bachelor of Research Studies.

Please refer to the course entry for 8083 Bachelor of Research Studies for details of the course structure.

Bachelor of Research Studies (Planning)

8119.1

Students should follow the course structure for the course version relevant to the year they commenced. This version applies to students whose commencement year for this course is 1H 2019 or later.

The Master of Research (Planning) is an internationally recognised qualification that provides graduates of this degree with the professional and scholarly education to take a leadership role in urban and regional planning and policy development.

The first year combines coursework training in comprehensive research methodology with an advanced specialisation in urban and regional planning. In the second-year students will undertake a supervised year of higher degree research and produce a Master's thesis. The second year also includes a series of workshops and seminars designed to enhance students' research and professional capabilities.

For domestic students, this program attracts Australian Government funding, packaged as a Bachelor of Research Studies (Planning)/Master of Research (Planning) to meet regulations.

In Year 1, domestic students are enrolled in the Bachelor of Research Studies (Planning) as a Commonwealth supported student and are liable for student contribution amounts which can be deferred through the HECS-HELP scheme if they are eligible. In Year 2, domestic students are enrolled in the Master of Research (Planning).

Further information about the Master of Research (Planning) can be found on the Future Students Research Studies pages.

Study Mode
Two years full-time or four years part-time.

Location

Campus	Attendance	Mode
Parramatta Campus - Victoria Road	Full Time	Internal
Parramatta Campus - Victoria Road	Part Time	Internal
Parramatta City Campus-Macquarie Street	Full Time	Internal
Parramatta City Campus-Macquarie Street	Part Time	Internal

Admission
Admission is determined by the following criteria being met

- A Bachelor's degree or a Master's degree in a cognate discipline such as Planning, Architecture, Engineering, property, Urban Studies, landscape Architecture, Geography, Environmental Management.
- Achievement of a threshold Admission Average Mark (AAM) equal to or above the minimum of 65.
- Demonstrated professional experience in a related discipline to be considered at the discretion of the Dean, Graduate Studies for applicants whose most recent qualification is 5+ years old and
- A statement that outlines a tentative research area.

Additionally for International students and for domestic students who have a qualification in a medium other than English, an English proficiency requirement of IELTS 6.5 overall (minimum 6.0 in each band) or equivalent.

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 the University.

Course Structure
Year 1 of this course will also be studied by International students enrolled in 8120 - Master of Research (Planning).

After completion of Year 1, domestic students will be transferred to 8120 - Master of Research (Planning).

Qualification for the award of Master of Research (Planning) requires the successful completion of 160 credit points. All students will complete 80 credit points of coursework units and 80 credit points of higher degree by research.

All students must enrol in and complete the 80 credit points of prescribed core units.

Core units

101636.3	Developing Sustainable Places
101315.4	Financing Cities in the Global Economy
101633.3	Managing Cities: History and Theory
101634.5	Planning and Environmental Regulation
101314.4	Urban Management Practice: Governance and Power in the City
800218.2	Researcher Development 1: Reading, Writing, and the Business of Research
800219.2	Writing Beyond the Academy: Knowledge Translation and Public Audience Communication
800220.3	Researcher Development 2: Proposing and Justifying Research

Recommended Sequence

Students must undertake the following sequence of units according to whether they begin the course at the start or middle of the year

Full-time

Start Year

1H session

800218.2	Researcher Development 1: Reading, Writing, and the Business of Research
800219.2	Writing Beyond the Academy: Knowledge Translation and Public Audience Communication
101633.3	Managing Cities: History and Theory
101634.5	Planning and Environmental Regulation

2H session

800220.3	Researcher Development 2: Proposing and Justifying Research
101315.4	Financing Cities in the Global Economy
101636.3	Developing Sustainable Places
101314.4	Urban Management Practice: Governance and Power in the City

Mid Year

2H session

800218.2	Researcher Development 1: Reading, Writing, and the Business of Research
101315.4	Financing Cities in the Global Economy
101636.3	Developing Sustainable Places
101314.4	Urban Management Practice: Governance and Power in the City

1H session

800220.3	Researcher Development 2: Proposing and Justifying Research
800219.2	Writing Beyond the Academy: Knowledge Translation and Public Audience Communication
101633.3	Managing Cities: History and Theory
101634.5	Planning and Environmental Regulation

Part-time

Start Year

Year 1

1H session

800218.2	Researcher Development 1: Reading, Writing, and the Business of Research
101633.3	Managing Cities: History and Theory

2H session

101315.4	Financing Cities in the Global Economy
101636.3	Developing Sustainable Places

Year 2

1H session

800219.2	Writing Beyond the Academy: Knowledge Translation and Public Audience Communication
101634.5	Planning and Environmental Regulation

2H session

800220.3	Researcher Development 2: Proposing and Justifying Research
101314.4	Urban Management Practice: Governance and Power in the City

Mid Year

Year 1

2H session

800218.2	Researcher Development 1: Reading, Writing, and the Business of Research
101636.3	Developing Sustainable Places

1H session

800219.2	Writing Beyond the Academy: Knowledge Translation and Public Audience Communication
101633.3	Managing Cities: History and Theory

Year 2

2H session

101315.4	Financing Cities in the Global Economy
101314.4	Urban Management Practice: Governance and Power in the City

1H session

800220.3	Researcher Development 2: Proposing and Justifying Research

101634.5 Planning and Environmental Regulation

Students may exit with the Bachelor of Research Studies (exit only) after Year 1 and the successful completion of 80 credit points, with advanced standing of 160 credit points from their previous undergraduate qualification being granted.

Equivalent Core Units

The core units listed below count towards completion of this course for students who passed these units in 2019 or earlier.

800166 - Research Design 1: Theories of Enquiry

800167 - Research Literacies

800169 - Research Design 2: Practices of Research

Units

301247.3 A Cosmic Perspective

Credit Points 10 **Level** 7

Assumed Knowledge

Knowledge of Mathematics equivalent to 2-unit HSC, and experience with the use of computer software such as Excel or Word would be beneficial. Previous experience of statistics or computer programming will be an advantage but is not essential.

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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The unit explores and challenges scientific as well as cultural perspectives on the cosmos, from its composition, expansion and the development and endings of the stars and planets, to life, its limits, evolution and mass extinctions on Earth. The unit also considers the development of consciousness, astrology vs astronomy, expanding horizons, space travel and space exploration.

200897.2 Advanced Analysis and Interpretation

Credit Points 10 **Level** 4

Corequisite

800166.1 Research Design 1: Theories of Enquiry

Unit Enrolment Restrictions

Students must be enrolled in course 8083 Bachelor of Research Studies/Master of Research.

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Building on the introduction to the analysis of qualitative data presented in the core unit Research Design 1: Theories of Enquiry this unit, Advanced Analysis and Interpretation, will provide candidates with the techniques necessary to use, analyse and interpret qualitative data in business research. Presented as a series of seminar-workshops, candidates consider the theories that underpin the employed analytical methods, and then move to employ introduced qualitative software tools to analyse and interpret research data.

301010.3 Advanced Applied Mechanics

Credit Points 10 **Level** 7

Assumed Knowledge

Students should have prior knowledge of strain, stress and deflection analysis of simple structures as well as knowledge of energy principle for structural analysis.

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course

.....

Applied mechanics deals with the mechanical responses of structural components under various loading and support conditions. This unit will introduce the theory of elasticity and study the bending, buckling and vibration behaviours of beams, plates and shells and their associated applications in engineering practices.

301363.1 Advanced Cloud Computing

Credit Points 10 **Level** 7

Prerequisite

301042.2 Cloud Computing

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This unit offers the Amazon Web Services (AWS) Academy "Academy Cloud Architecting" (ACA) curriculum and provides deeper understanding of advanced cloud computing services and how to architect cloud solutions. Students will learn advanced cloud computing concepts including notification and messaging, serverless computing, API gateways, NoSQL databases, and content delivery networks. The unit also explores strategies to enable high scalability, reliability, cost-efficiency, performance, and operational excellence in a cloud-based system. All these aspects are explored in practice with AWS services. Upon completion of this unit, students will be prepared for the AWS Certified Solutions Architect – Associate exam.

301008.3 Advanced Composite Structures

Credit Points 10 **Level** 7

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course

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This unit enables students to gain an in-depth knowledge into composite structures based on Australian Standards and International Standards. Recent advances in the design of composite beams, slabs, columns and connections will be introduced.

301023.3 Advanced Computational Fluid Dynamics

Credit Points 10 **Level** 7

Assumed Knowledge

Finite element methods, Thermal dynamics and Fluid mechanics.

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course

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This unit introduces students to commonly used numerical methods used in computational fluid dynamics (CFD). The unit covers the theory and the application of CFD for solving engineering problems. The numerical methods for solving the in viscid flow and the viscous flow problems will be introduced. The students learn the application of the engineering software in the engineering problems.

301022.3 Advanced Computer Aided Engineering

Credit Points 10 **Level** 7

Assumed Knowledge

Students are assumed to have a good understanding on basics of finite element method and analysis, fundamentals and advanced topics in mechanics of materials, fundamentals on fluid mechanics and heat transfer and thermal dynamics.

Unit Enrolment Restrictions

Students must be enrolled in 3693 Master of Engineering, 3695 Graduate Certificate in Engineering, or the Master of Research.

Special Requirements - Essential Equipment

Finite element analysis packages - Abaqus, ANSYS and SolidWorks

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This unit focuses on advanced topics in computer aided engineering and their applications in mechanical engineering in analysing a wide range of engineering problems. The objective of this unit is to advance students' knowledge and skill level on the finite element method (FEM)-based computer aided engineering (CAE) and its advanced applications in the fields of solid mechanics, fluid mechanics, thermodynamics and heat transfer and product design and development as well. Academic skills on research and communication are ensured to be achieved through conducting FEM-based CAE projects.

300603.5 Advanced Control Systems

Credit Points 10 **Level** 7

Assumed Knowledge

Knowledge is assumed in Continuous time control systems, the use of Laplace and Z-transforms, Analog to digital, digital to analog conversion, Vector matrix difference equations, State variable models and familiarity with Matlab or similar software Knowledge is assumed in: Continuous time control systems; The use of Laplace and Z-transforms; Analog to digital, digital to analog conversion; Vector matrix difference equations; State variable models; Introductory Classical Control Systems Theory; Familiarity with MATLAB.

Incompatible Units

300211 - Digital Control, 300172 - Advanced Control Systems

Unit Enrolment Restrictions

Students must have competence in the use of test equipment, components and data sheets. Students must be enrolled in a postgraduate course.

.....

This unit covers continuous and discrete control systems. It reviews and builds on the fundamental concepts of the theory of feedback in continuous and discrete time to examine the analysis and design of advanced continuous and discrete time linear control systems. Transfer function and state variable methods are employed. Instruction makes use of extensive experimental tasks. There is also considerable use of Matlab simulations.

300173.5 Advanced Data Networks

Credit Points 10 **Level** 7

Assumed Knowledge

Communication Systems / Digital Communication

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course

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This unit covers all major network technologies: asynchronous transfer mode (ATM), Internet, and telephony. Essential networking topics such as protocol layering, multiple access, switching, scheduling, routing, congestion control, error and flow control, and network security are covered in detail. An engineering approach is taken to provide insight into network design.

301019.3 Advanced Dynamic Systems

Credit Points 10 **Level** 7

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course

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This unit covers three-dimensional kinematics and kinetics of a rigid body. The principles of virtual work are used to investigate the equilibrium and dynamics of mechanisms. Some key aspects of mechanical vibrations are introduced, including vibration response, vibration isolation and vibration measurement.

300601.5 Advanced Electrical Machines and Drives

Credit Points 10 **Level** 7

Assumed Knowledge

Electric Circuits and Basic Electro magnetics.

Incompatible Units

300208 - Variable Speed Electric Drives, 300204 - Special Electrical Machines

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course

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The subject covers various types of electrical motors and drive systems, their applications and control. The unit aims to introduce an advanced study of electrical machines and drives. It also covers application considerations and modern developments in high performance drive systems. This course covers various types of the speed control, the starting, the braking and the dynamics of different electrical machines and drives.

300604.5 Advanced Geotechnical Engineering

Credit Points 10 **Level** 7

Assumed Knowledge

Fundamental knowledge of soil mechanics.

Equivalent Units

300520 - Foundation Engineering (PG)

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course

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This unit will provide an overview of soil mechanics concepts required for the solution of practical geotechnical engineering problems. Students will be taught soil and foundation analysis including design techniques. The topics will cover shallow foundations, pile foundations, the stability of earth retaining structures, excavations, soft soils, groundwater flow and stability of slopes. Practical engineering cases will be emphasized.

301011.4 Advanced Highway Infrastructure

Credit Points 10 **Level** 7

Assumed Knowledge

Soil mechanics at undergraduate level.

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

.....

This unit teaches pavement design and ground engineering design as part of construction of the highway. The aim is to provide students with advanced knowledge in designing pavement structures and ground improvement techniques to deal with soft and weak grounds for construction of highway and highway embankments. These aspects will be taught in relation to Australian practices.

301176.2 Advanced Mathematical Investigations

Credit Points 20 **Level** 7

Assumed Knowledge

Undergraduate level of knowledge in mathematics or statistics

Unit Enrolment Restrictions

Students must be enrolled in 8086 Master of Research.

.....

Advanced Mathematical Investigations is an integral part of the Master of Research for students planning a future in mathematical and/or statistical research. Students will carry out extensive investigations under the supervision of an academic staff member that will allow the development of skills, knowledge and a way of thinking that will assist in the learning of mathematics and/or statistics needed for research in their chosen field of mathematics. They will also develop their written and oral communication skills, culminating in a paper which will be written as though it is to be submitted to a mathematics/statistics journal for publication (including following the journal's requirements for presentation) and an oral presentation of the style expected at a mathematics/statistics conference.

301020.3 Advanced Mobile Robotics

Credit Points 10 **Level** 7

Assumed Knowledge

Some basic skills in MATLAB and C/C++ programming.

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course

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This unit is designed to develop an understanding of the concepts involved in Mobile Robotics. The areas of mobile robot mechanics, localisation, map building and path planning will be introduced. Various sensors and their applications in mobile robotics are also to be introduced.

301024.3 Advanced Numerical Methods in Engineering

Credit Points 10 **Level** 7

Assumed Knowledge

Students should have prior knowledge of strain, stress and deflection analysis of simple structures as well as knowledge of energy principle for structural analysis.

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course

.....

The finite element method is an essential tool for the analysis and design of machine parts and civil engineering structures. The objective of this unit is to introduce the principles of finite element method and the applications of one, two and three dimensional elements in solving various engineering problems.

301025.3 Advanced Power Quality

Credit Points 10 **Level** 7

Assumed Knowledge

Students are expected to be familiar with basic power system calculations including balanced and unbalanced three-phase systems.

Unit Enrolment Restrictions

Students must be enrolled in 3693 Master of Engineering, 3695 Graduate Certificate in Engineering or the Master of Research.

.....

This unit is to introduce students to power quality phenomena such as voltage sag/swell, distortions, unbalance, and flicker that occur in power systems. The unit also introduces terms and definitions associated with power quality, following which each phenomenon, that is, voltage sag/swell, transient overvoltage, and harmonics. In addition, flicker is presented and discussed in detail for students to understand the sources and impact of these occurrences on power system as well as typical mitigation techniques. Finally, students are introduced to power quality benchmarking, monitoring, assessment. In addition Advanced knowledge on network frequency responses is presented.

300599.5 Advanced Robotics

Credit Points 10 **Level** 7

Assumed Knowledge

Some Knowledge of MATLAB/Simulink

Incompatible Units

300176 - Advanced Robotics, 300192 - Mobile Robotic Systems

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course

.....

This unit is designed to introduce the engineering concepts involved in Robotics. The kinematics, dynamics, control and sensing aspects in robotics will be introduced. In addition, the concepts of artificial intelligence and their applications in robotics will also be discussed and assessed.

300596.5 Advanced Signal Processing

Credit Points 10 **Level** 7

Assumed Knowledge

Engineering mathematics, circuit theory, signals and systems.

Equivalent Units

300200 - Signal Processing 1

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course

.....

This unit covers the principles and techniques in signal processing. The subject matter includes advanced topics in discrete-time signals and systems, the z-transform and its applications in signal processing, advanced topics in the sampling of continuous-time signals, FIR and IIR filter design, filter structures, and the discrete Fourier transform and its computation. Students develop skills of analysing and designing digital signal processing systems.

301026.3 Advanced Smart Grids and Distributed Generation

Credit Points 10 **Level** 7

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course

.....

This unit is designed to model, analyse and control of newly developing areas of distributed generation and smart grids. The unit will cover modelling, control, simulation and protection of such systems. The unit will also cover the impacts of renewable sources and power electronics on the operation of smart grids and micro-grids. The unit will also cover environmental and economic impacts of such systems.

401414.1 Advanced Sport and Exercise Science

Credit Points 20 **Level** 7

Assumed Knowledge

Students to have completed an undergraduate degree in Sport and Exercise Science or other closely related Health, Allied Health or Medical Science/Medicine undergraduate equivalent.

Unit Enrolment Restrictions

Students must be enrolled in 8083 - Bachelor of Research Studies/ Masters of Research

Special Requirements - Essential Equipment

Students must meet discipline specific requirements, e.g. personal protective clothing.

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Please note, unit 401291.1 Advanced Sport and Exercise Science replaced by 401414.1 Advanced Sport and Exercise Science from 2020.This unit provides Bachelor of Research Studies/Masters of Research candidates with an interest in Sport & Exercise Science with an opportunity to further their knowledge and skill-sets in the field. Working closely with their assigned supervisor(s), students will prepare a work-plan to further enhance their theoretical knowledge through a combination of independent and guided-study. The unit will provide students with an opportunity to strengthen their knowledge and expertise in their selected field of Sport & Exercise Science. The unit is focused on the development of discipline-specific knowledge (theoretical and practical) to prepare students for their research thesis and future career in a Sport & Exercise Science related field.

301013.3 Advanced Statistical Hydrology

Credit Points 10 **Level** 7

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course

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This unit covers at-site flood frequency analysis, regional flood frequency analysis, trend analysis of hydrological data, linear regression analysis and multivariate statistical techniques to solve advanced hydrological problems.

300594.6 Advanced Structural Analysis

Credit Points 10 **Level** 7

Assumed Knowledge

Students must have knowledge in engineering mathematics, engineering mechanics at intermediate level and structural analysis at fundamental level.

Incompatible Units

300205 - Linear and Nonlinear Analysis of Structures, 300367 - Advanced Structural Engineering, 300195 - Numerical and Finite Element Methods

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

.....

This unit will introduce students at postgraduate level to structural analysis of trusses, beams, frames and plates. It covers the slope defection method and matrix method for analysis of beams, trusses and frames, and the bending and buckling analysis of beams and plates under various loading conditions. The theories learned in classes will be reinforced in practical sessions by using computer software packages.

301021.3 Advanced Thermal and Fluid Engineering

Credit Points 10 **Level** 7

Assumed Knowledge

Fundamental knowledge of fluid mechanics, theory of thermodynamics, knowledge of heat transfer including conduction, convection.

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course

.....

This unit covers fundamental principles in the thermal and fluid engineering. While the main focus will remain on incompressible fluids, effects of compressible fluids will also be discussed. The contents of this unit include fluid mechanics, thermodynamics and heat transfer. Students will learn the engineering applications of thermal and fluid principles.

301009.3 Advanced Timber Structures

Credit Points 10 **Level** 7

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course

.....

This unit enables students to gain an in-depth knowledge into timber structures based on Australian Standards. Design of timber beams, floors, columns and connections will be introduced with a focus on the use of plywood, round timbers, glue-laminated timber and structural laminated veneer lumber.

301196.2 Advanced Topics in Artificial Intelligence

Credit Points 10 **Level** 7

Assumed Knowledge

This unit requires basic skills in programming with either JAVA or C++ as the programming language.

Incompatible Units

300245 Intelligent Agents; 300385 Automated Negotiation and e-Trading; 300769 Intelligent Agents for eMarkets

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

.....

This unit introduces the most fundamental techniques of artificial intelligence (AI), including knowledge representation, searching, machine learning and intelligent agents. Students will learn the basic theories and algorithms that are essential in the design and development of intelligent systems. The unit will focus on two typical AI applications: game playing and e-trading. Students will have the chance of using existing multiagent system platforms to design and develop intelligent software for game playing and automated trading in e-markets.

301236.2 Advanced Topics in Cybersecurity

Credit Points 10 **Level** 7

Assumed Knowledge

The students should be familiar with the fundamentals of computer networking and security. It is advisable that the students must have either taken appropriate units in these areas (e.g., 300695 Network Technologies and 300696 Systems and Network Security) or have equivalent knowledge.

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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This unit focuses on the advanced features of Cybersecurity, contemporary views on security, and the solutions that aim to protect the emerging services and technologies. The emphasis is on the development of student skills to enable them to do proficient research and development works and studies in the cybersecurity discipline. On successful completion of this unit, students will be equipped with an in-depth understanding of relevant issues, attacks on massively interconnected systems, and the evolving approaches to improve the reliability of advanced services.

300694.4 Advanced Topics in ICT

Credit Points 10 **Level** 7

Prerequisite

301005.1 Professional Practice and Communication

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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The information and communications technologies are advancing at an ever-increasing rate. The whole world is now interconnected. The World Wide Web community is actively engaged in developing the next generation of the Web. Social networking on the Internet is facilitated by the latest developments such as Facebook, YouTube and MySpace. Artificial Intelligence is increasingly intertwined with the decisions we make every day. Large scale storage technologies are leading to Cloud Computing where data and applications may reside anywhere in the world. Research in how to access meaningful data from the vast amounts on the Web has led to initiatives such as Semantic Web and Linked Data. Mashups mix data from disparate sources to enable users to work more efficiently. Wireless and mobile computing are changing the market place. All of these trends are still in their early stages. To make sense of all these developments, the top echelons of the World Wide Web Consortium are actively engaged in creating a new discipline called Web Science. Advanced Topics in ICT will enable the students to appreciate the scale of new developments and create prototypes of applications in their desired ambit. This unit consists of

three Topics selected each semester. Assessment will be by a series of discussion paper assignments here students will show they have met the unit learning outcomes.

300252.4 Advanced Topics in Networking

Credit Points 10 **Level** 7

Assumed Knowledge

Students should be familiar with the fundamentals of computer networking. In particular, students should have a good understanding of the OSI model, the TCP/IP protocol suite, and current Internet and networking technologies. Therefore, it is strongly advised that students must have either taken an appropriate unit in computer networking (e. g., 300695 Network Technologies), or have equivalent knowledge.

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course

.....

This unit focuses on the advanced features of networked systems and the emerging network technologies and services. The unit provides students with an in-depth understanding of relevant protocols, the emerging standards, and standards organisations. The emphasis of the unit is on development of the student skills to enable them to do proficient research and development works and studies in the computer networking discipline.

301017.3 Advanced Waste Management

Credit Points 10 **Level** 7

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course

.....

This unit covers sources, identification and characterisation of solid and hazardous waste generated from the community. Sustainable management of waste incorporating minimisation, recycle, recovery and disposable options is discussed. Also, atmospheric pollutants and their control, greenhouse gases and their impact on climate change are examined.

300595.5 Advanced Water Engineering

Credit Points 10 **Level** 7

Assumed Knowledge

Exposure to basic hydraulics and engineering hydrologic principles.

Incompatible Units

300766 Hydrology; 300983 Surface Water Hydrology

Unit Enrolment Restrictions

This is a specialised unit in a specialist discipline in Master of Engineering program. Students must be enrolled in a postgraduate engineering program undertaking a Civil Engineering specialisation or in the Master of Research.

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This unit introduces advanced principles of engineering hydrology as it pertains to the surface water component of the hydrologic cycle. Students are exposed to floodplain analysis techniques. The focus is on practical engineering solutions to issues originating from catchment development. Students are exposed to commonly used hydraulic and hydrologic software packages to delineate flooded areas resulting from such developments.

401175.1 Analytic Approaches in Epidemiology

Credit Points 10 **Level** 7

Assumed Knowledge

Introductory skills in epidemiology, including measures of disease frequency and association, epidemiologic study designs, and principles of bias and confounding.

Prerequisite

401076.1 Introduction to Epidemiology OR **401173.1** Introduction to Clinical Epidemiology

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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This unit extends the basic principles of epidemiology introduced in 401076 'Introduction to Epidemiology' and equips students with practical analytical skills to design and conduct epidemiological studies. The unit considers the principle models of causation and analytical approaches to epidemiological study design and analysis. Students will use causal diagrams and evidence from the literature to develop analytic strategies for specific study designs, develop practical skills in calculating and interpreting measures of association and effect modification, and be introduced to principles and strategies for quantitative bias analysis.

301312.1 Applied Machine Learning

Credit Points 10 **Level** 7

Assumed Knowledge

Some probability and statistics knowledge would be advantageous.

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This unit introduces the foundation and concepts underpinning Machine Learning (ML) at a more abstract level, and provides more focus on its practical applications in areas such as: the classification and extraction of text data from various documents and web pages, image processing, Google's PageRank algorithm and relational data mining (RDM). These learning objectives are achieved through various ML software and a series of practicals and projects. The unit covers the concepts and notions of supervised, unsupervised and reinforcement learning, perceptron, neural networks, support vector machines (SVM), knowledge representation (KR) based RDM, and a comprehensive introduction to the Scikit-learn ML Python libraries.

800215.1 Applied research with marginalised populations and sensitive health topics

Credit Points 10 **Level** 7

Assumed Knowledge

Students will need basic knowledge of research design/ approaches e.g. 800166 'Research Design 1: Theories of Enquiry' or 401076 'Introduction to Epidemiology' or 401080 'Research Protocol Design and Practice' or similar.

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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This unit will teach students practical knowledge and skills for conducting research with marginalised populations and on sensitive health topics. Students will learn ethical, methodological, and practical considerations in applied qualitative and mixed method research. Upon completion of the unit students will be able to develop a theoretically coherent qualitative or mixed method research protocol and justify their decision making at every stage of the research process. The skills developed in this unit will enable students to adapt research methods to ensure the integrity of the research process with marginalised populations and sensitive health topics.

102525.1 Bilingualism and Education

Credit Points 10 **Level** 7

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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Bilingualism and Biculturalism are important aspects of life in Australia. Throughout much of the world, bi-multilingualism is the norm for both children and adults. This unit aims to give students an understanding and appreciation of the most important facets and manifestations of bi-multilingualism and bi-multiculturalism, in the linguistic, cognitive, personal, societal and educational spheres. It also aims to show students how this unit relates to broader studies in education, humanities, linguistics, and social sciences. This unit equips students with current research theories and methods in working effectively in early childhood and primary education, language teaching and other workplaces in bi-multilingual and bi-multicultural contexts.

200896.3 Business Analysis Seminars

Credit Points 10 **Level** 4

Unit Enrolment Restrictions

Students must be enrolled in course 8083 Bachelor of Research Studies/Master of Research.

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This unit introduces students to exemplary research in selected contemporary issues in business practice and policy. Presented through a series of seminars by leading business academics, selected issues will be examined in terms of the competing definitions of the problem, the methods of analysis to be used to address the problem, components of the problems and relationships to other contemporary issues. As business research is inherently inter-disciplinary and involves multiple stakeholders, relevant and competing theoretical perspectives explaining selected issues will be examined. Different methods of investigation and analysis of issues will be evaluated.

800225.1 Clinical Research in Health Science

Credit Points 10 **Level** 7

Unit Enrolment Restrictions

Students must be enrolled in a post-graduate course, Masters by Research, PhD or 8083 Bachelor of Research Studies

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This unit will teach students practical knowledge and skills for conducting clinical research within the field of Health Science. Students will learn ethical, methodological and practical considerations in applied quantitative and mixed-method research within the framework of a human clinical trial. Upon completion of the unit students will have an understanding of basic human clinical trial design, novel clinical trial designs, specialisation within various study fields. They will also have consideration of stakeholders and translational importance, trial governance, regulations and the Therapeutic Goods Administration (TGA), intellectual property, commercialisation, recruitment, and advertising and marketing. Finally, they will understand the importance of translational impact via publications and the media, and be able to synthesise trial data via knowing how to conduct systematic reviews and meta-analyses.

301042.2 Cloud Computing

Credit Points 10 **Level** 7

Assumed Knowledge

Basic knowledge of networking and computer systems.

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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Cloud computing has become a driving force for information technology over the past several years, and it is moving towards a future in which we won't rely on local computers, but on centralised facilities operated by third-party compute and storage utilities. Governments, research institutes, and industry leaders are rushing to adopt Cloud Computing to solve their ever-increasing computing and storage problems arising in the Internet Age. This unit offers "Academy Cloud Foundations" (ACF) curriculum as part of Amazon Web Services (AWS) Academy. Students will develop knowledge and skills in the areas of virtualization technologies, cloud architecture, AWS core services and their pricing, security, architecture, and support.

102509.2 Computational Thinking across the STEM Curriculum

Credit Points 10 **Level** 7

Assumed Knowledge

An understanding of at least one STEM (science, technology, engineering or mathematics) school syllabus.

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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This unit will enable students to develop knowledge of computational thinking as it can be applied across the STEM curriculum in schools. Students will learn about the nature of computational thinking as a problem solving approach which can be applied to produce digital solutions. The unit will allow students to undertake a critical examination of innovative, interdisciplinary approaches to the development of computational thinking and relevant pedagogical strategies to maximise student learning and engagement with STEM disciplines.

401178.1 Controversies in Epidemiology

Credit Points 10 **Level** 7

Prerequisite

401076.1 Introduction to Epidemiology OR **401173.1** Introduction to Clinical Epidemiology

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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This unit offers students an opportunity to synthesise theories and methodologies from epidemiology. It highlights current controversies and practices in epidemiology. Students attend weekly presentations on topics related to content area interests, and other relevant seminars. Students will convene with faculty to reflect on and critique components of research presentations relevant to the students' interest and to the contemporaneous topics being covered in the core epidemiology curriculum. Course assignments involve critical appraisal of conceptual and methodological issues presented in the seminars, and related issues relevant to student's own research.

102853.1 Cool Green Cities

Credit Points 10 **Level** 7

Equivalent Units

102698 - Green Urbanscapes: Bio-physical Functions and Services

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Climate change, urban expansion and densification result in hotter microclimates and loss of green infrastructure. The increasing frequency and severity of heatwaves, floods and droughts require changes to how we design and retrofit existing neighbourhoods and build new suburbs. Contemporary urban planning and design principles recognise blue and green infrastructure as a 'must have'. Blue and green infrastructure is key to building cool and resilient cities capable of functioning well within the social, environmental and economic challenges of the 21st century. This unit provides knowledge about what it takes to deliver cool green cities. Focusing on practical applications at precinct or suburb scale, it enables students to implement learned principles in their professional practice.

102211.3 Creativity, Innovation and Design Thinking

Credit Points 10 **Level** 2

Unit Enrolment Restrictions

Students must be enrolled in The Academy @ Western Sydney or at the discretion of the Director of Academic Program and/or Head of The Academy and must have successfully completed 40 credit points of study.

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From 1H 2022 this unit replaced by 800237 Creativity, Design Thinking and Visualisation. The aim of this cross-disciplinary unit is to encourage students to explore their creative potential and broaden their perspectives of innovation through the lens of design thinking. Design thinking offers a range of strategic and practical approaches to both creativity and innovation including an understanding of stages of thinking and reflection; an evaluation of the dynamics of team work; the workings of conversation and dialogue to generate new thinking about complex problems. Students will learn about design thinking methodologies, and apply these towards addressing broader social issues in innovative and creative ways.

401179.2 Data Management and Programming for Epidemiology

Credit Points 10 **Level** 7

Assumed Knowledge

High school mathematics (arithmetic, formulas and algebra, reading graphs). Basic computer competency and basic programming skills.

Corequisite

401077.1 Introduction to Biostatistics

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

Special Requirements - Essential Equipment

Home computer or laptop or access to a machine on which software can be installed. (Necessary for assignments). Software required includes Git (free, open-source, multi-platform) and R (free, open-source, multi-platform).

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Modern epidemiology deals with ever increasing volumes of data and complexity of analysis. This course is aimed at equipping students with effective practices for managing data and programme code and ensuring the security of their data. Students will be taught the fundamentals of managing code and data in a revision control system as well as good programming practices and techniques which can form a basis for a robust, repeatable and test-driven research methodology. Programming instruction and exercises will use the SAS and R languages, and SQL databases.

301015.3 Deep Foundations

Credit Points 10 **Level** 7

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course

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This unit covers advanced analysis and design criteria for deep foundations. Both statically and dynamically loaded deep foundations are covered including the site investigation methods and field testing methods adopted in practice for determining integrity and load carrying capacity. Appropriate computer software will be introduced to carry out the deep foundation design according to the Australian Standards.

102253.2 Digital Social Research in Action

Credit Points 10 **Level** 7

Assumed Knowledge

Knowledge of digital social research

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

Special Requirements - Essential Equipment

Access to a computer or tablet device and internet connection. Access to relevant data analysis software.

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This unit engages students in the practices of digital social research through a simulation of a professional research consultancy. Students will construct and apply a digital social science approach for an internal or external client brief. Students will engage with client and stakeholder needs through their role as a consultant as they carry out the digital social research project for their client. In doing so, students engage with the ethical and moral implications of using digital social data and discover the opportunities to apply and communicate digital social research methods in real world settings.

102575.2 Emergency and Disaster Management

Credit Points 10 **Level** 7

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This unit uses comparative analysis of different emergency responses to humanitarian disasters to provide students with the skills and knowledge required to play a role in future emergency and disaster management. Students will gain knowledge of the geo-political forces and key international frameworks and standards that shape humanitarian responses, and of the motivations and approaches of aid donors and humanitarian NGOs when intervening in states. They will also gain foundational knowledge of assessment of NGO capacities and organisational infrastructure for managing emergencies, for example their organisational structures and cultures, donor priorities, support systems and personnel.

401174.1 Epidemiology of Non-Communicable Diseases

Credit Points 10 **Level** 7

Corequisite

401076.1 Introduction to Epidemiology OR **401173.1** Introduction to Clinical Epidemiology

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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This unit will document the fundamental concepts in epidemiology and control of non-communicable diseases (NCDs), common research methods used in NCD epidemiology, and unique applications of these methods in key NCD areas, including reproductive epidemiology, behavioural epidemiology, epidemiology of ageing and epidemiology of specific NCDs (including cardiovascular disease, diabetes, cancer, chronic respiratory diseases, musculoskeletal problems and mental health problems). The principal goals of this unit are to provide a broad overview of the field, and to develop the knowledge and skills needed to (i) critically evaluate published research in NCD epidemiology and (ii) design an epidemiological study to address an NCD topic.

102250.3 Ethical Leadership

Credit Points 10 **Level** 3

Unit Enrolment Restrictions

Students must have successfully completed 40 credit points of study in their course with a minimum GPA of 5.0 to enrol in this unit. Students who are enrolled in the Bachelor of Creative Leadership (BCL) must enrol in the unit under the BCL. Enrolment in the unit for students enrolled in the BCL is at the discretion of the Academy or the Director of Academic Program.

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This unit focuses on major ethical theories, challenges, and concepts in a cross disciplinary environment. Students' knowledge and understanding of ethics will be further developed through interdisciplinary lenses on critical ethical thinking and decision-making. Students will be required to analyse ethical frameworks and systemic failure to discuss and reflect on various cross disciplinary challenges in diverse settings. By applying ethical concepts to personal journeys as citizen scholars and future professionals, students will develop their own ethical framework and gain skills required for future success as emergent leaders.

401168.1 Evidence Based Health Care

Credit Points 10 **Level** 7

Assumed Knowledge

A basic knowledge of research methods at undergraduate level plus basic nursing knowledge and clinical nursing experience.

Equivalent Units

400206 Evidence Based Nursing

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course

Special Requirements - Essential Equipment

Access to the internet and computer.

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This unit is designed to develop students' knowledge of the principles and processes necessary for evidence-based clinical practice. General concepts associated with evidence-based health care are explored. In addition, students are assisted to formulate focused clinical questions and conduct a comprehensive literature search for research evidence that may assist in answering such questions. Issues and techniques involved in the rigorous appraisal of research reports are addressed. The importance of clinical significance when making clinical judgements about the implementation of research findings are also explored.

401383.1 Evidence in Health

Credit Points 10 **Level** 1

Equivalent Units

400863 - Foundations of Research and Evidence-Based Practice, 700064 - Foundations of Research and Evidence-Based Practice (UWSC)

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This unit will introduce skills for finding and using the best available evidence in health. This begins with understanding thinking systems, biases and why we often don't accept, or respond, to facts, science and evidence. Students will learn the evidence-based practice process to formulate questions and find appropriate and relevant evidence from the unending amount of information available. The unit covers key concepts in how to read and understand a research paper. Students will develop skills for communicating evidence to strengthen arguments in academic writing and professional practice.

401266.2 Experimental Design and Analysis PG A

Credit Points 20 **Level** 7

Corequisite

800166.1 Research Design 1: Theories of Enquiry OR
800169.1 Research Design 2: Practices of Research OR
800167.1 Research Literacies

Incompatible Units

401162 - Experimental Design and Analysis PG NOTE: Co-Requisite units removed from Spring 2021

Special Requirements - Essential Equipment

Students must meet discipline specific requirements, eg. personal protective clothing.

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Experimental Design and Analysis can be taken independently or in combination in Autumn (Experimental Design and Analysis PG A) and/or Spring (Experimental Design and Analysis PG B) semesters. Working closely with their assigned supervisor(s), students in the health, medical, biomedical and natural sciences will enhance their expertise in experimental methodologies and knowledge of advanced discipline-specific concepts in the first year of the Masters of Research. Completion of one these two units will allow students to demonstrate theoretical and practical skills directly relevant to their proposed research project. Completion of both units will allow students to build upon initial results, and to gain experience in additional methodologies and experimental techniques. These units will also complement the Master of Research core units Research Design 1 and 2, providing a foundation for students to formulate their research question and thesis proposal.

401267.2 Experimental Design and Analysis PG B

Credit Points 20 **Level** 7

Corequisite

800166.1 Research Design 1: Theories of Enquiry OR
800169.1 Research Design 2: Practices of Research OR
800167.1 Research Literacies

Incompatible Units

401162 - Experimental Design and Analysis PG NOTE: Co-Requisite units removed from Spring 2021

Special Requirements - Essential Equipment

Students must meet discipline specific requirements, eg. personal protective clothing.

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Experimental Design and Analysis can be taken independently or in combination in Autumn (Experimental Design and Analysis PG A) and/or Spring (Experimental Design and Analysis PG B) semesters. Working closely with their assigned supervisor(s), students in the health, medical, biomedical and natural sciences will enhance their expertise in experimental methodologies and knowledge of advanced discipline-specific concepts in the first year of the Masters of Research. Completion of one these two units will allow students to demonstrate theoretical and practical skills directly relevant to their proposed research project. Completion of both units will allow students to build upon initial results, and to gain experience in additional methodologies and experimental techniques. These units will also complement the Master of Research core units Research Design 1 and 2, providing a foundation for students to formulate their research question and thesis proposal.

102621.2 Formal and Functional Grammar

Credit Points 10 **Level** 7

Equivalent Units

102336 - Functional Grammar, 100722 - Functional Grammar

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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This unit invites students to study the grammar of English from two related perspectives, formal grammar and functional grammar. The unit provides students with skills in

the use of grammar in application to the analysis of a diverse range of texts. Students will develop an understanding of the structures and the functions of English across contexts. This skilled application will enhance their capacities as teachers of English, understanding how English varies in its use and allowing them to support their own students' skilled use of English across contexts.

400861.3 Foundations of Medicine 1

Credit Points 80 **Level** 1

Unit Enrolment Restrictions

Students must be enrolled in 4641 Bachelor of Medicine, Bachelor of Surgery or 4647 Bachelor of Medical Research.

Special Requirements - Essential Equipment

Students must have 1. Stethoscope 2. Pencil torch 3. White laboratory coat 4. Watch (with a second hand or display) 5. Closed in shoes in order to complete this unit.

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This unit integrates the foundational sciences with clinical skills. Students learn the structure and function of the human body, particularly, whole body organisation, basic anatomy, nutrition and metabolism, function and pathology of the gastrointestinal system (including liver), cardiovascular system and respiratory system. In addition, students will gain an understanding of health psychology, patient experience, the medical system, identifying risk, errors in medical practice, managing error and basic procedures such as hand washing. A particular focus will be the communities that make up Greater Western Sydney. Students will also participate in clinical tutorials and will gain skills in history taking and communication in Session 1H and skills in history and examination of the gastrointestinal tract, cardiovascular system and respiratory systems during Session 2H. The unit outline is available from the link on the left-hand menu.

400862.5 Foundations of Medicine 2

Credit Points 80 **Level** 2

Prerequisite

400861.2 Foundations of Medicine 1

Incompatible Units

401277 - Clinical Sciences 2

Unit Enrolment Restrictions

Students must be enrolled in 4641 Bachelor of Medicine, Bachelor of Surgery or 4647 Bachelor of Medical Research.

Special Requirements - Essential Equipment

Students must have 1. Stethoscope 2. Pencil torch 3. White laboratory coat 4. Watch (with a second hand or display) 5. Closed in shoes in order to complete this unit.

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This year long unit integrates the biomedical sciences with clinical skills. Students continue to build their knowledge of the structure and function of the human body, particularly: renal, musculoskeletal, neuroscience, reproduction and development, endocrinology, infectious disease, immunology and cancer. In addition, students will gain an understanding of the human context of health and disease, global health, medical professionalism, the quality and safety of healthcare, evidence based practice and research skills. On clinical days, students will participate in bedside tutorials to further develop their skills in history and examination of body systems and will also learn how to carry out basic clinical procedures. The unit outline is available from the link on the left-hand menu.

102602.1 Gender and Genre

Credit Points 10 **Level** 7

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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This unit considers the intersection of gender and genre in various narrative forms. Through a variety of texts that may include polemic, conduct literature, plays, novels, poetry and film, students will examine the construction of masculinity and femininity within various genres, and consider the ways in which genres themselves may be gendered. Beginning in the seventeenth century, the unit also considers the strategies that women writers, in particular, have used to participate in literary production by adopting and adapting particular generic conventions. A consideration of the ways in which gender and genre may be connected also allows students to consider questions of literary production and circulation, literary value and reputation.

102576.2 Global Health, Migration and Development

Credit Points 10 **Level** 7

Assumed Knowledge

A broad and coherent knowledge, with depth in the underlying principles and concepts in one or more disciplines in Arts or Social Sciences.

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This unit introduces students to the intersection between global health, human migration and economic development. Students are introduced to international efforts to manage and support better health for all populations, particularly those under stress through civil conflict or epidemic. Through the lens of migration theories, the course will examine why and how people migrate, the dynamisms and complexities of migrants' settlement in their new environment, the socio-economic and political dimensions of forced migration and its consequences, and the relationship between voluntary migration and economic and development goals at regional, national and international level.

102583.1 History of Ideas

Credit Points 10 **Level** 7

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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Ideas matter. It has been said that "ideas are what men and women live by, and will occasionally die for." If you want to explore and understand the relationship between ideas and actions across a range periods, places and

perspectives, then this is the unit for you. The history of ideas is concerned with exploring and understanding the lived experience, the reality of ideas. We consider how the history of ideas can help us to interpret key thinkers and their ideas and how these ideas have shaped societies past and present.

401172.3 Honours Project (Medicine)

Credit Points 0 **Level** 4

Assumed Knowledge

MBBS Years 1 to 4 research methodology. Students will be expected to have applied knowledge and skills in designing and conducting research.

Prerequisite

400977.2 Integrated Clinical Rotations 3

Corequisite

400978.2 Integrated Clinical Rotations 4

Unit Enrolment Restrictions

Due to the GPA requirements for the Honours Award, this Unit is restricted to students enrolled in 4641 MBBS who have achieved an overall course GPA ≥ 5.5 (combining grades from 400861 Foundations of Medicine 1, 400862 Foundations of Medicine 2, 400810 Integrated Clinical Rotations 1, 400811 Integrated Clinical Rotations 2 and 400977 Integrated Clinical Rotations 3) in order for the student to have a realistic expectation of achieving and Honours Award of ≥ Class II Division II. Students must be concurrently enrolled in Unit 400978, Integrated Clinical Rotations 4 in Session 2H to be enrolled in the Unit. Prior to enrolment in the Unit, students must have satisfactorily completed both the Seminar Presentation and Research Portfolio requirements. To obtain pre-approval, a structured research proposal, endorsed by a research supervisor, must be submitted to the School of Medicine Research and Higher Degrees Committee (RHDC) for review. The research proposal may be submitted to the RHDC any time between the completion of Unit 400861, Foundations of Medicine 1 and before commencement of Unit 400811, Integrated Clinical Rotations 2. Pre-approval must be obtained prior to collating evidence towards the Research Portfolio. The Research Portfolio will comprise written documentation and evidence of a pre-approved program of research, including a research supervisor endorsement stating that 200 hours was spent on the research.

Special Requirements - Essential Equipment

As this is an individualised Unit with different requirements for each student's research program, students will be required to seek guidance from their supervisor on essential readings and resource materials and online learning requirements.

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Students who meet prerequisite requirements are offered an opportunity in this Unit to undertake enhanced research and scholarship activities while enrolled in the Bachelor of Medicine / Bachelor of Surgery (MBBS) 4641.5. A key objective is to assist students towards the independent application of knowledge and skills in the principles and methods of medical research on a specialist topic of their choice. With supervision, students will further develop their ability to critically evaluate theories and evidence in disciplines relevant to medicine, and to disseminate their work to a range of audiences. Prior to enrolment in the Unit, students must have satisfactorily completed a Research Portfolio and given a 10 minute oral PowerPoint presentation summarising the research program and outcomes. The presentation is to be at a venue approved by the research supervisor and the supervisor must consider the presentation to be of a satisfactory standard.

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

Unit Enrolment Restrictions

Students must be enrolled in 4641 Bachelor of Medicine, Bachelor of Surgery.

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This Unit provides Honours level students with an Embedded Honours program which affords them the opportunity to undertake research on a specialist topic within their undergraduate program - 4641, Bachelor of Medicine / Bachelor of Surgery (MBBS). The program runs over Years 4 & 5 of the MBBS and this Unit is undertaken in Year 4 in conjunction with Integrated Clinical Rotations 2 (Unit 400811). 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. This Unit is a pre-requisite for the companion Unit 400960. The award of MBBS Honours will require satisfactory completion of this Unit plus Honours Research Project 2 (Unit 400960) and the appropriate dissertation grade and GPA across the MBBS course.

400960.2 Honours Research Project 2

Credit Points 0 **Level** 5

Assumed Knowledge

Years 1 to 4 MBBS research methodology

Prerequisite

400811.2 Integrated Clinical Rotations 2 AND **400959.1** Honours Research Project 1

Corequisite

400977.2 Integrated Clinical Rotations 3 AND **400978.2** Integrated Clinical Rotations 4

Unit Enrolment Restrictions

Students must be enrolled in 4641 Bachelor of Medicine, Bachelor of Surgery.

Special Requirements - Essential Equipment

These requirements are specific to the individual student's research project and are determined by student consultation with their research supervisor.

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This Unit provides Honours level students with an Embedded Honours program which affords them the opportunity to undertake research on a specialist topic within their undergraduate program - 4641, Bachelor of Medicine / Bachelor of Surgery (MBBS). The program runs over Years 4 & 5 of the MBBS and this Unit is undertaken in Year 5, in conjunction with Integrated Clinical Rotations 3 (Unit 400977) and Integrated Clinical Rotations 4 (Unit 400978). 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 in September during Session 2H. The award of MBBS Honours will require satisfactory completion of this Unit plus Honours Research Project 1 (Unit 400959) and the appropriate dissertation grade and GPA across the MBBS course.

102661.1 How to Write History

Credit Points 10 **Level** 7

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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This unit introduces students to specific styles of historical methodology, considering how each of these styles alter the kinds of questions historians ask, how they select their sources, and how they account for the differences between past and present. Students undertake an independent, guided Applied Project on a historical methodology relevant to their intended thesis project.

102577.2 Humanitarian and Development Agendas and Progress

Credit Points 10 **Level** 7

Assumed Knowledge

A broad and coherent knowledge, with depth in the underlying principles and concepts in one or more disciplines in Arts or Social Sciences.

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This unit enables students to map the emergence of international humanitarian and development agencies from the mid-20th century to the modern day. Students will consider and asses international efforts to end poverty, such as the United Nations Conference on the Human Environment, the Rome Declaration and Plan of Action on World Food security, the Millennium Development Goals (MDGs) and the post-2015 Sustainable Development Goals (SDGs). A particular emphasis is placed on developing the skills to gauge the accountability and ethical approaches of humanitarian actors and agencies in global development.

301072.4 Innovation Lab

Credit Points 10 **Level** 3

Unit Enrolment Restrictions

This unit is designed for students who are enrolled in the Bachelor of Applied Leadership and Critical Thinking (BALCT) or other advanced courses at Western Sydney University. Students must have a minimum GPA of 5 and must have successfully completed a minimum of 40 credit points. Enrolment in this unit is at the discretion of The Academy or the Dean.

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From2H 2022 this unit replaced by 800243 Changemakers and Entrepreneurship. This unit is designed for high-achieving students who may be enrolled in Advanced degrees or the Bachelor of Applied Leadership and Critical Thinking. Technology is rapidly changing and improving. As such, continuous innovation is essential to ensure applicability into the future. The unit focuses on innovation and entrepreneurship by pushing boundaries, experimenting, learning from mistakes, and adapting to find new ways of approaching technical and social problems. In this unit, students will be empowered to design and develop innovative processes that provide solutions for real-world challenges.

300515.6 Instrumentation and Measurement (PG)

Credit Points 10 **Level** 7

Assumed Knowledge

Assumed knowledge for 300515 Instrumentation and Measurement (PG) is: 1) Basic electronics including amplifier, circuit theory and circuit design; 2) A basic understanding of statistics. Computational skills (SPICE) and a basic understanding of circuit simulation are desirable.

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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This unit covers topics associated with the measurement and presentation of physical parameters. A wide range of transducers are presented in detail, while instrumentation includes a detailed analysis of a multitude of analogue and digital circuits used to amplify, transmit, and display electrical signals. The application of these modules in modern measurement equipment is presented in details.

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

Unit Enrolment Restrictions

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 AHPRA 4. Child protection check. NSW ClinConnect compliance.

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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 or who have not completed Integrated Clinical Rotations 2 and 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 examination assessment will be held in conjunction with Integrated Clinical Rotations 3.

400810.3 Integrated Clinical Rotations 1

Credit Points 80 **Level** 3

Prerequisite

400862.1 Foundations of Medicine 2

Unit Enrolment Restrictions

Students must be enrolled in 4641 Bachelor of Medicine/ Bachelor of Surgery.

Special Requirements - Essential Equipment

Students are required to have Stethescope, Pencil Torch, Analogue Watch.

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Integrated Clinical Rotations 1 is the first major clinical year of the MBBS program. It consists of 10 weeks each in Surgery, Medicine and Medicine in Context (MiC), and 5 weeks in Critical Care. Surgery, Medicine and Critical Care attachments will be at Campbelltown, Blacktown, Mt Druitt, Bankstown, Fairfield and Liverpool hospitals. In Surgery and Medicine students spend 5 weeks in each of two sub-specialities. In Critical Care students spend time in Emergency and Anaesthetics Departments. The 10-week MiC attachment is conducted in two 5-week blocks and involves community-based aspects of the health care system including community organisations and general practice. Students also have 3 Conference Weeks; tutorials in clinical communication skills; and undertake an assignment in Evidence-Based Medicine and 3 online Scientific Streams learning modules. The unit outline is available from the link on the left-hand menu.

400811.2 Integrated Clinical Rotations 2

Credit Points 80 **Level** 4

Prerequisite

400810.2 Integrated Clinical Rotations 1

Unit Enrolment Restrictions

Students must be enrolled in 4641 Bachelor of Medicine/ Bachelor of Surgery.

Special Requirements - Essential Equipment

Students will require Stethoscope, Pencil torch, Watch with a second hand or display.

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Integrated Clinical Rotations 2 is the second major clinical year of the MB BS program. It consists of 9 weeks in each of Paediatrics, Obstetrics & Gynaecology and Mental Health and four weeks in each of Oncology/Palliative Care and Community Research. There will also be 2 weeks of “Year 4 Campus Learning”. These will be one week each and held at either Campbelltown Campus or Blacktown Clinical School. During the year, students will be based at a number of appropriate hospitals throughout Sydney, Bathurst and Lismore. Students will also undertake 3 online learning modules (Scientific Streams). Students will complete a reflective portfolio. Slight variations in the delivery of ICR2 occur in the Rural clinical schools. Learning outcomes & assessment requirements do not differ.The unit outline is available from the link on the left-hand menu.

400977.2 Integrated Clinical Rotations 3

Credit Points 40 **Level** 4

Prerequisite

400811.2 Integrated Clinical Rotations 2

Unit Enrolment Restrictions

Students must be enrolled in 4641 Bachelor of Medicine/ Bachelor of Surgery.

Special Requirements - Essential Equipment

Students are required to have Stethoscope Pencil torch and Watch with a second hand or display.

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The Unit Outline for this unit can be found by clicking on the "Current MBBS, MD Unit Outlines" link in the left-hand menu. Integrated Clinical Rotation 3 is the first session of the third major clinical year of the MB BS program. It consists of five weeks in each Medicine, Surgery, General Practice or Indigenous Health or ICU, ED & Anaesthetics. There will also be two Conference weeks where all students will be based at either Campbelltown Campus, Macarthur Clinical School or Blacktown Clinical School. Students will be based at a number of appropriate hospitals throughout Sydney. Students will also undertake two online learning modules (Scientific Streams). Students will also undertake a reflective portfolio. The unit outline is available from the link on the left-hand menu.

400978.2 Integrated Clinical Rotations 4

Credit Points 40 **Level** 4

Prerequisite

400977.2 Integrated Clinical Rotations 3 OR **400979.1** Integrated Clinical Rotations (General)

Unit Enrolment Restrictions

Students must be enrolled in 4641 Bachelor of Medicine, Bachelor of Surgery.

Special Requirements - Essential Equipment

1. Stethoscope 2. Pencil torch 3. Watch (with a second hand or display)

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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.

401201.1 Integrated Clinical Rotations General (ICR General)

Credit Points 120 **Level** 4

Prerequisite

400810.3 Integrated Clinical Rotations 1

Equivalent Units

400979 - Integrated Clinical Rotations (General)

Unit Enrolment Restrictions

Stuudents must be enrolled in 4641 - Bachelor of Medicine, Bachelor of Surgery.

Special Requirements - Essential Equipment

1. Stethoscope 2. Pencil torch 4. Watch (with a second hand or display)

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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 or who have not completed Integrated Clinical Rotations 2 and 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 examination assessment will be held in conjunction with Integrated Clinical Rotations 3.

200962.2 International Criminal Law and Justice

Credit Points 10 **Level** 7

Assumed Knowledge

Bachelor of Laws or equivalent qualification

Unit Enrolment Restrictions

Students must be enrolled in 8083 Bachelor of Research Studies/Master of Research, 8084/8085 Master of Research, 2824 Master of Laws, 2784 or 2810 Master of Laws (International Governance).

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This unit analyses the state of international criminal law and its place in the modern international legal system in light of important recent developments. It discusses why a State's national criminal laws should accord with international developments. It focuses on substantive and procedural law and examines relevant international legal concepts, general principles of international criminal law, and how international criminal tribunals function. It considers particular international crimes, participation in such crimes, defences, and important recent cases such as those of Augusto Pinochet and Slobodan Milosevic.

200961.2 International Human Rights Law

Credit Points 10 **Level** 7

Unit Enrolment Restrictions

Students must be enrolled in courses 8083 Bachelor of Research Studies/Master of Research, 8084/8085 Master of Research, 2810 Master of Laws (International Governance), 2824 Master of Laws or 2826 Juris Doctor.

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This unit examines the foundations of the concept of human rights under international law, how international law became concerned with the rights of individuals and the development of international measures for the protection of human rights. It examines the extent of compromise of international human rights where sovereignty, cultural relativism and political resistance preclude comprehensive incorporation of some fundamental human rights principles in domestic law. Instruments such as The Charter of the United Nations, The Universal Declaration of Human Rights, The International Covenant on Civil and Political Rights and International Covenant on Economic, Social and Cultural Rights are also examined.

200963.2 International Space Law - Commercial Aspects

Credit Points 10 **Level** 7

Assumed Knowledge

Completed a law degree (Bachelor of Laws or Juris Doctor) or equivalent in any jurisdiction or have a broad understanding of both Australian and International Law. It is recommended that students without a legal qualification should review supplementary materials provided within the Learning Guide providing a summary of the Australian and International Law frameworks.

Incompatible Units

200652 - Space Law – Commercial Aspects

Unit Enrolment Restrictions

Students must be enrolled in 2824 Master of Laws, 2784 or 2810 Master of Laws (International Governance), 3735 Master of Data Science, 3699 Master of Information and Communications Technology, 3698 Master of Information and Communications Technology (Advanced) or Masters of Research courses 8083, 8084 or 8085.

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This unit examines the underlying legal principles that regulate the use, exploration and exploitation of space, and how International Law can and should be applied to the many different State and private commercial uses of outer space. It examines the existing international legal regime - the five United Nations Space Treaties and key Declarations of Principles related to space activities - as well as a number of domestic regulatory systems, including the Australian legal regime. The unit also concentrates on the (many) uses and proposed uses of space for which the legal framework may not be particularly well suited.

301175.2 Internet of Things

Credit Points 10 **Level** 7

Assumed Knowledge

Students should be familiar with the fundamentals of computer networking. In particular, they should have a good understanding of the TCP/IP protocol suite, and current networking and wireless technologies. Therefore, it is strongly advisable that the students must have either taken an appropriate unit in computer networking (e.g., 300695 Network Technologies), or have equivalent knowledge.

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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The Internet of Things (IoT) is drastically changing the way organisations operate and how individuals interact with the world. IoT is an infrastructure consisting of fairly constantly communicating objects, or things, that may be smart and process or act on data. The IoT facilitates detailed and meaningful interactions between humans, digital devices, and many other industrial and household equipment, appliances, and things. The IoT is also the enabler of smart environments, including smart homes, buildings, cities, transport, and healthcare, among many others. This unit discusses IoT technologies and applications in detail. It also introduces the students to trends, challenges, and key research topics in relevant areas.

102212.3 Internship and Community Engagement

Credit Points 10 **Level** 2

Unit Enrolment Restrictions

Students must have a minimum GPA of 5.0 and must have completed 40 credit points of study. Enrolment in this unit is at the discretion of the Director of Academic Program and/ or Head of The Academy.

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From 2H 2022 this unit replaced by 800238 Citizenship and Community Engagement.The aim of this unit is to provide second/third year Academy students with an opportunity to develop professional identity through exposure to workplaces, community settings or research processes related to their chosen field of study. Students will be encouraged to identify, examine and discuss the multiplicity of leadership factors in such environments while providing work experience. This is a cross-disciplinary unit that will employ experiential learning to achieve the learning outcomes. This placement will be chosen by the student in consultation with staff of The Academy and will be undertaken either as an individual or part of a project team.

401077.2 Introduction to Biostatistics

Credit Points 10 **Level** 7

Assumed Knowledge

High school mathematics (arithmetic, formulas and algebra, reading graphs)

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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Most professions in the health sciences need to read and interpret statistics relating to individual health status, interpret health risks in communities, and engage in the evaluation of interventions, or impact of health policies or programs. Many public health practitioners are actively involved in surveillance, quantitative research and/or evaluation. This unit provides students with the fundamental skills they need to analyse and interpret results from quantitative data collections. Content includes descriptive statistics, undertaking comparisons between groups, quantifying associations between variables, and statistical power. The unit is highly applied with the main focus being on interpretation and appraisal of statistical results and conducting analyses using statistical software.

301071.3 Introduction to Critical Thinking

Credit Points 10 **Level** 1

Unit Enrolment Restrictions

Students must have a minimum GPA of 5 and be enrolled in The Academy at Western Sydney University; i.e. students enrolled in the Bachelor of Applied Leadership and Critical Thinking or other advanced courses at the discretion of the Academy or the Dean.

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From 1H 2022 this unit replaced by 800242 Critical and Systems Thinking. This unit is designed for high-achieving students who may be enrolled in Advanced degrees or the Bachelor of Applied Leadership and Critical Thinking. This unit provides students with an opportunity to understand and develop high-level critical thinking skills; skills that are essential for success in occupations now and in the future. Students will engage with theoretical frameworks and concepts using an interdisciplinary approach, inspiring students to think and act outside the silos of their disciplines. Throughout the unit, students will consider how they think as opposed to how they think they think (biases and heuristics). They will also develop an understanding of the importance of critical thinking and ways to suppress a tendency to rationalise.

200855.3 Leadership in a Complex World

Credit Points 10 **Level** 1

Incompatible Units

200857 Leadership and Uncertainty

Unit Enrolment Restrictions

Students must be enrolled in The Academy at Western Sydney University; i.e. students enrolled in advanced degrees or other courses at the discretion of the Academy or the Dean.

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From 1H 2022 this unit replaced by 800239 Leadership in Complexity. This unit is designed for students from Advanced Degrees who are enrolled in The Academy. The focus here is the leadership of groups and teams in a cross-disciplinary environment and its application in various contexts. The unit encourages the examination of leadership through the lens of multiple disciplines thereby broadening perspectives of leadership and inspiring students to think and act outside the silos of their disciplines. Through the unit, students will be challenged to think about preparing for unknown futures and the nature of the skill sets necessary to prepare for and respond to change and innovations.

102161.2 Leading Change

Credit Points 10 **Level** 7

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From 2020 students should note that core units are now taught in semesters rather than half yearly sessions. This

unit explores change and leadership through a range of contexts. In this unit we critically analyse cultural, structural and political dimensions of change in organisations, systems and communities. This unit is grounded in leadership models that feature collaborative and relationship enhancing approaches to enable purposeful change.

102581.1 Literary Theory

Credit Points 10 **Level** 7

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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This unit examines a range of theoretical approaches to literature, the majority of which have proliferated since the beginning of the 20th century. These may include: structuralism, poststructuralism, feminism, postcolonialism, psychoanalysis and posthumanism. In presenting this 'contemporary' mode of engaging with literary texts, 'Literary Theory' asks how we might theorise our approach to reading, and how individual texts allow us to theorise the literary in general.

301070.3 Logic, Rhetoric and Argumentation

Credit Points 10 **Level** 2

Unit Enrolment Restrictions

Students must have a minimum GPA of 5 and be enrolled in The Academy at Western Sydney University; i.e. students enrolled in the Bachelor of Applied Leadership and Critical Thinking or other advanced courses at the discretion of the Academy or the Dean.

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From 2H 2022 this unit replaced by 800241 - Logic, Argumentation and Post-Truth. This unit is designed for high-achieving students who may be enrolled in Advanced degrees or the Bachelor of Applied Leadership and Critical Thinking. This unit provides students with a detailed understanding of logical and rhetorical arguments in order to prepare them for leadership roles in the future. Throughout the unit, students will appraise the structure of logical and rhetorical arguments, evaluate classical arguments and critiques and assess the structure, validity and soundness of philosophical arguments.

401075.2 Major Incident Management

Credit Points 10 **Level** 3

Prerequisite

401069.1 Paramedic Practice 4

Unit Enrolment Restrictions

Students must be enrolled in 4669 Bachelor of Health Science (Paramedicine).

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This unit examines the tactical and strategic issues facing a health response team in a major incident. Students will practice team responses to critical incidents and evaluate the effectiveness of different approaches to response and recovery.

301106.2 Mathematical Investigations

Credit Points 10 **Level** 7

Assumed Knowledge

Undergraduate level of knowledge in mathematics or statistics

Unit Enrolment Restrictions

Students must be enrolled in 8086 Master of Research.

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Mathematical Investigations will prepare Master of Research for students planning a future in mathematical/ statistical research. Students will carry out investigations under the supervision of an academic staff member that will allow development of skills, knowledge and a way of thinking that will assist in the learning of mathematics/ statistics that will prepare them for research in their chosen field of mathematics. They will also develop their written and oral communication skills, culminating in a poster presentation of significant findings as if being submitted at a mathematics/statistics conference, following that conference's directions for submission.

301177.2 Mathematical Proof and Reasoning

Credit Points 10 **Level** 7

Assumed Knowledge

Undergraduate level of knowledge in mathematics or statistics

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Proving and getting a new proposition by careful reasoning from given propositions, is the essence of mathematics. Proof is what makes mathematics special and eternal. This unit looks at the different methods of proof and reasoning that can be employed to verify that statements are true or not. Students will consider propositions and theorems from various areas of mathematics and look at classic, interesting and sometimes novel ways these can be proved. Successful students taking this unit will not only be able to follow and determine if a proof is correct, but become proficient at mathematical reasoning.

301018.3 Mechanical System Design

Credit Points 10 **Level** 7

Assumed Knowledge

The students are assumed to have a good understanding on basics of mechanical design, fundamentals and advanced topics in mechanics of materials, fundamentals on fluid mechanics and heat transfer and thermal dynamics.

Unit Enrolment Restrictions

Students must be enrolled in the Master of Engineering, Graduate Certificate in Engineering or Bachelor of Research Studies / Master of Research.

Special Requirements - Essential Equipment

Engineering analysis package - SolidWorks available in SCEM Computer Labs

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This unit advances students understanding on product design and development of machine components and assemblies using systems engineering approaches. The unit covers a review on the design of main components of machinery to ensure their functionality, strength and durability, which includes drive components - gears, shafts, belt drives, and bearings, and structural components - welds and treaded fasteners. The machine assembly design is delivered based on systems engineering. Academic skills on research and communication are ensured to be achieved through conducting systems engineering approached-based mechanical system design projects.

300600.5 Mechatronic System Design

Credit Points 10 **Level** 7

Assumed Knowledge

Equivalent Bachelor of Engineering degree.

Incompatible Units

300512 - Servo Systems Design (PG), 300191 - Mechatronic System Design

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course

Special Requirements - Essential Equipment

vUWS site SCEM Computer Lab SolidWorks MS Office Suite ANSYS MDSIGN

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This unit will advance the 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 machine elements as well as control systems as applicable to manufacturing and process machinery is the intended outcome of undertaking this unit and project-based tasks will form part of the learning process and team work experience.

400813.2 Medical Research Project

Credit Points 60 **Level** 3

Assumed Knowledge

Knowledge from successful completion of years 1 and 2 of Bachelor of Medicine, Bachelor of Surgery (MBBS).

Prerequisite

400861.1 Foundations of Medicine 1 AND **400862.1** Foundations of Medicine 2

Corequisite

Must pass two of the following- 300786 Methods of Scientific Researching, 400864 - Research Methods (Quantitative and Qualitative), 400863 -Foundations of Research and Evidence-Based Practice.

Unit Enrolment Restrictions

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 Western Sydney University medical students as part of an intercalated year leading into the Bachelor of Medical Research.

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This unit is the principal component in the Bachelor of Medical Research. It aims to give students, enrolled in the Westerrn Sydney University 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. The main learning outcomes are a subset of the 15 Learning Tasks/Outcomes for the medical course as a whole, but will be achieved at a considerably higher level than is expected in the main MBBS program. The task numbers relate to the complete set in the MBBS learning outcomes.

800192.1 Neuroscience Methods

Credit Points 10 **Level** 7

Assumed Knowledge

Students should have at least background/undergraduate knowledge in one or more of the following: mathematics, biology, chemistry, physics, physiology, electronics or similar

Equivalent Units

800172 - Quantiative Methods in Neuroscience

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A multidisciplinary team will provide an introduction to several aspects of neuroscience including cellular, computational, behavioural and biomedical neuroscience. The program will provide a strong foundation in modern neuroscience for those wishing to pursue further independent research in the field. With a focus on real-world neuroscience research, topics include introductory biology, computational modelling, biosignal acquisition, signal processing and data mining. The unit will include lecture and laboratory work.

102662.1 New Genres in Research Writing

Credit Points 10 **Level** 7

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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This unit focuses on new, innovative, interdisciplinary genres of writing arising after the putative end of critique and with the rise of non-representational thought. These new writing practices mix genres and meld theoretical, critical and creative modes. Focusing on fictocriticism, creative nonfiction, documentary fiction and the multi-media essay, we explore the experimental ethos and affective and new materialist methodologies to which these forms lend themselves. Students will develop a body of original creative-critical work in any genre through a series of seminars and writing workshops.

300196.5 Personal Communication Systems

Credit Points 10 **Level** 7

Assumed Knowledge

Communications Systems. Digital Communications.

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course

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This unit covers the design fundamentals of cellular systems, including frequency reuse, channel assignments, radio wave propagation in mobile environments, modulation techniques, coding techniques, spread spectrum and multiple access. It includes topics from emerging wireless technologies, and third-generation mobile communication systems and standards.

102616.1 Philosophy and Literature

Credit Points 10 **Level** 7

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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The relationship between philosophy and literature is as old as philosophy itself. In fact, philosophy begins and defines itself in Ancient Greece by setting itself apart from literature – specifically, epic and tragic writings – and claiming for itself a more original role in the effort to understand what is true, what matters, and how one should be with others. From Ancient Greece, through Hellenism and the Roman world, and into the Medieval and Modern periods there was an enduring concern in philosophical traditions with literature, literary themes, and questions of style. However, at the end of the Modern period the concern with literature became so pronounced that philosophers began to write literary texts and to experiment with new styles of expression. Beginning with Kierkegaard and Nietzsche, and moving up to Sartre and Camus, this question of the relation of philosophy and literature has become a central concern of many contemporary philosophical traditions. This unit will be devoted to exploring both the history of this relation between philosophy and literature, as well as looking more carefully at various moments in that history.

102582.1 Philosophy of History and Politics

Credit Points 10 **Level** 7

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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What is History? What justifies the State? These questions have been an object of inquiry as much for philosophers as for historians and political theorists. Large socio-political forces were at work during the Enlightenment and philosophers like Rousseau and Kant sought to understand these movements philosophically. For Rousseau, the lens was genealogical as he worked to produce a "natural history" of politics and society; for Kant, the historical lens was teleological as he narrated instead a philosophical history full of notions of progress and improvement. In the 19th century, philosophers like Hegel and Marx were concerned to think about history and politics as a dialectical movement, while Nietzsche applied Darwin's new theory of evolution to his understanding of history and morals alike. The great shockwaves wrought by the two World Wars of the 20th century brought new philosophical writers to the problems of history and politics, though now with an eye back toward the seemingly failed vision of inevitable progress so successfully peddled by the Enlightenment. This philosophical tradition and its changing approaches to history and politics will be the focus of this unit.

102619.1 Philosophy of Nature

Credit Points 10 **Level** 7

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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This unit examines questions and problems concerning the concept of nature or ‘naturalness’. What does it mean to call something ‘natural’ and how are natural things to be distinguished from artificial things or things that are human made? How does technology influence our understanding of nature? What are the ethical implications arising from human relations with the natural world? As well learning time-honoured answers to such questions, students will appreciate the practical relevance of philosophical theorising about nature.

102620.1 Philosophy, History and Interpretation

Credit Points 10 **Level** 7

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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The focus of this unit will be a topic, or range of topics, particularly relevant in philosophy, which will be analysed both in their historical context and through subsequent interpretations by other philosophers or philosophical traditions. The unit will combine the hermeneutic interpretation of texts together with conceptual and argumentative analysis. Close attention will be paid to the language and systematic content of the philosophical issues examined. Moreover, students will be guided in factoring in the historical situation both for the philosopher (s) examined and for us as interpreters.

300197.5 Power System Planning and Economics

Credit Points 10 **Level** 7

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course

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This unit covers planning techniques for energy and electrical power systems. It also covers the economics of various options and reliability of electrical power systems.

102618.1 Practical Philosophy

Credit Points 20 **Level** 7

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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The unit Practical Philosophy deals with the application of philosophical understanding to human activity. 'Practical philosophy' in principle encompasses questions of the meaning and appropriateness of various practices, as well as theoretical questions about the nature of practices themselves, questions such as 'What should we do?' and 'What is it that we are doing?' The unit may thus involve considering philosophical perspectives on ethical, political, educational, and legal questions, and more abstract considerations relating to practices such as the philosophy of action.

200964.1 Principles of International Law

Credit Points 10 **Level** 7

Assumed Knowledge

Bachelor of Laws or equivalent qualification

Unit Enrolment Restrictions

Students must be enrolled in courses 8083 Bachelor of Research Studies/Master of Research, 8084/8085 Master of Research, 2824 Master of Laws, 2784 or 2810 Master of Laws (International Governance).

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This unit explores the nature, role and characteristics of international law; the concepts of statehood; sovereignty and jurisdiction; the relationships between domestic and international law; the role of law and treaties; and the role of international organisations such as the United Nations and International Court of Justice. The unit also examines contemporaneous and contentious issues of international law.

301365.1 Probabilistic Graphical Models

Credit Points 10 **Level** 7

Assumed Knowledge

Probability, Linear Algebra, Basic Programming

Prerequisite

301114.2 The Nature of Data

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Modelling data provides us with a method for inference, but there are many occurrences when interest lies in the reasoning behind the decision making. In this unit, students learn to model processes and the reasoning behind the processes using probabilistic graphical models. The unit investigates the construction and application of model-based approaches for complex systems. Students will manually create models based on prior knowledge and investigate methods of learning model structures from data, which can be used to make decisions under uncertainty. Topics covered include Monte Carlo Methods, Decision Theory, Bayesian networks, Markov networks, and the use of information theory.

102574.2 Public Health in Complex Emergencies (Advanced)

Credit Points 10 **Level** 7

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The health, socio-economic, and political aspects of conflicts and disasters are complex and multidimensional, requiring political commitment and coordinated and effective prevention. This unit uses critical analyses to provide students with the skills and knowledge required to understand the politics of public health response in emergency situations. Students will be introduced to rapid health assessment protocols in, and health priorities and the prevention of public health effects of, complex emergencies. They will gain practical skills to evaluate and critically appraise the evidence used to inform public health policy and the effectiveness of different decision-making practices in emergency situations.

800228.1 Research Internship and Engagement

Credit Points 10 **Level** 7

Prerequisite

800218.1 Researcher Development 1: Reading ,Writing, and the Business of Research

Equivalent Units

800176 - Internship and Community Engagement (PG)

Unit Enrolment Restrictions

Students must be enrolled in 8083 Bachelor of Research Studies or 8084/8085 Master of Research. Internship or work placement must be agreed between student and unit coordinator prior to student enrolling in the unit.

Special Requirements - Essential Equipment

Any Internship/work placement site requirements. For example safety gear.

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The aim of this unit is to provide MRes candidates with a research development and training opportunity through a cross disciplinary, supportive, experiential learning environment. Through exposure to workplaces, research institutes, community settings, and research processes, students will have the opportunity to apply their research and technical skills and develop their professional identity in their chosen field of research. The placement will be chosen by the student in consultation with the unit coordinator and will be undertaken either as an individual or part of a project team. If students enrolled in B Research Studies/M Research wish to take this unit before having completed the prerequisite unit 800218 Researcher Development 1: Reading, Writing, and the Business of Research, contact the unit coordinator to obtain permission to complete a rule waiver (this will be on a case by case basis only).

102728.1 Research into Practice: bridging the clinician-researcher divide in applied and creative therapies

Credit Points 10 **Level** 7

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course

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Evidence Based Research (EBR) can inform excellence in clinical practice in order to best meet the needs of our clients and patients. How we choose and use this research is critical, as is the way that we understand ourselves to be a researcher, beyond our practitioner identity. If you are seeking to translate benchtop research (basic laboratory approaches) into applied research practice, and if you are transitioning towards a new identity as a clinician-researcher, this is the unit for you. Our applied research focus considers broad applications relevant to the creative arts therapies, verbal therapies, allied and other health professions, by looking at research processes which ultimately improve practice in the 'real world'.

400864.4 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. Pathways for early-career research are also introduced.

301387.1 Research Preparation in Post Graduate Studies

Credit Points 10 **Level** 7

Equivalent Units

301004 - Research Preparation in Post Graduate Studies

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Life is research! This unit introduces students to the nature of research and why it is essential to today's way of living. What are the current and big questions in research? How to prepare for conducting a research in various areas? What are the differences between study, investigation and research? In this unit, the main emphasis will be on different types of modern research and their methods/ methodologies with special emphasis on Science, Technology, Engineering & Mathematics (STEM). This unit will also encompass various advanced tools that support research, its writing styles, publication channels and research ethics. Key elements of good research design are also introduced as well as the concepts of intellectual property and commercialisation.

301069.3 Research Stories

Credit Points 10 **Level** 2

Unit Enrolment Restrictions

Students must have a minimum GPA of 5 and be enrolled in The Academy at Western Sydney University; i.e. students enrolled in the Bachelor of Applied Leadership and Critical Thinking or other advanced courses at the discretion of the Academy or the Dean.

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From 1H 2022 this unit replaced by 800240 Knowledge Journeys. This unit is designed for high-achieving students who may be enrolled in Advanced degrees, or the Bachelor of Applied Leadership and Critical Thinking. Narrative inquiry and story-telling is growing in popularity across disciplines as a way of collecting, analysing and presenting complex data. Students will be challenged by the complexity of narrative sense-making and the relationship between personal and cultural narratives (as well as counter-narratives). By following the research journey rather than only the 'outcomes' we can learn from mistakes in the research process and find solutions to real world problems. This unit prepares students with the interdisciplinary research skills needed for the careers of tomorrow.

800218.2 Researcher Development 1: Reading, Writing, and the Business of Research

Credit Points 10 **Level** 4

Equivalent Units

800166 - Research Design 1: Theories of Enquiry

Unit Enrolment Restrictions

Students must be enrolled in 8083 Bachelor of Research Studies/Master of Research, 8084 Master of Research (High Cost) or 8085 Master of Research (Low Cost), 8119 Bachelor of Research Studies (Planning), 1712 Master of Planning, 3702 (8112) Master of Information and Communications Technology (Research), 1870 Master of Chinese Cultural Relations, 1883 Master of Cross-cultural Relations or 3761 Master of Architecture (Urban Transformation).

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Research is the process of using knowledge to generate new understandings of the world. Research is also a social enterprise, with communities and norms of behaviour, and is an industry that is shaped by numerous cultural and economic forces. Taking a holistic approach that includes general research skill development, this unit focuses on four main topics: (1) critical reading, (2) effective writing, (3) research as a professional industry, and (4) the ethics of stewardship and personal responsibility. The unit equips students with vital skills that underpin their discipline-specific learning, and lays the ground for their development as professional researchers.

800220.3 Researcher Development 2: Proposing and Justifying Research

Credit Points 10 **Level** 4

Prerequisite

800218.1 Researcher Development 1: Reading ,Writing, and the Business of Research

Equivalent Units

800169 - Research Design 2: Practices of Research

Unit Enrolment Restrictions

Students must be enrolled in 8083 Bachelor of Research Studies/Master of Research, 8084 Master of Research (High Cost) or 8085 Master of Research (Low Cost), 8119 Bachelor of Research Studies (Planning), 1712 Master of Planning, 3702 (& MICTRES/8112) Master of Information and Communications Technology (Research), 1870 Master of Chinese Cultural Relations or 1883 Master of Cross-cultural Relations or 3761 Master of Architecture (Urban Transformation)

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An essential skill required by researchers is the ability to propose research and justify it in a persuasive manner. Through interactive workshops, Researcher Development 2 helps students develop and refine a research proposal. The unit includes workshops on research ethics that will help students articulate the significance and relevance of their work and will assist those requiring ethics clearance. The written proposal is defended through the oral Presentation of Proposal (POP). After successful completion of this unit, students will have demonstrated an ability to design and justify a research project in their discipline.

800195.2 Researching our Changing Environment

Credit Points 10 **Level** 4

Unit Enrolment Restrictions

Students must be enrolled in course 8083 Bachelor of Research Studies/Master of Research

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This unit focuses on learning to critically evaluate current research in topics under study at the Hawkesbury Institute for the Environment and how advanced scholarship in your field of study is conducted. The Hawkesbury Institute for the Environment spans a broad set of fields from soil microbial genomics and microbial ecology to the biogeochemistry, ecology and physiology of plants and microbes, animal ecology and evolution, to ecosystems, landscapes and Australia-wide processes. Teaching sessions are designed around a thematic cross-section of research within HIE, representing many of these areas. The unit also involves enhancing skill in evaluating appropriate research methodologies for asking questions and testing hypotheses, including an introduction to some of the large-scale research facilities within HIE that students may be involved with.

800216.1 Researching Post-Capitalist Possibilities (PhD Summer School)

Credit Points 10 **Level** 7

Assumed Knowledge

Students should have a working understanding of their disciplinary field at graduate level and familiarity with different social theoretical and methodological traditions in order to get maximum course benefit.

Unit Enrolment Restrictions

Students must be enrolled in a Masters by research or PhD and must obtain permission from the Unit Coordinator to enrol in the unit.

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Researching Post-Capitalist Possibilities offers HDR students the opportunity to explore how the humanities and social sciences can play a role in making other worlds possible. It develops the thinking capacities we need as scholars to shape the world and reviews the ethical responsibilities that come with this work. It offers an opportunity to work with scholar members of the Community Economies Collective within the Institute for Culture and Society (ICS) who have been thinking outside or beyond capitalist relations since the publication of J.K. Gibson-Graham's The End of Capitalism (As We Knew It) in 1996.

800196.1 Rethinking Culture and Society

Credit Points 10 **Level** 7

Unit Enrolment Restrictions

This unit is considered mandatory for students supervised within the Institute for Culture and Society

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This unit explores key ideas in social and cultural analysis – such as culture, society, experience, power, nature, local/global, etc – as a way of helping students think through their own research projects. It draws on an approach to cultural and social research, developed at the Institute for Culture and Society, which addresses the contradictions of a world that is increasingly globalised, culturally diverse and technologically mediated. A key aspect of this approach is to revisit the central concepts of social and cultural theory, linked to an overview of existing approaches, developing skills of critical analysis and reflecting on the challenges of interdisciplinarity, methodological pluralism, cultural complexity and engaged research.

401085.2 Scholarship for Practice Change in Health Care

Credit Points 10 **Level** 7

Equivalent Units

400807 - Transforming Nursing Practice

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

Special Requirements - Essential Equipment

Students must have access to the internet and a computer.

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The transformation of practice in healthcare is facilitated when information about creative and innovative practice change and development is documented, disseminated and critiqued through professional channels such as peer reviewed journals, conference papers, discussion papers or project reports. In this unit students will be provided with an opportunity to produce a scholarly piece of work that will disseminate information about transforming practice and improving patient care. The unit aims to enhance scholarly communication skills, provide a vehicle for demonstrating leadership by informing the health professions of innovative solutions for practice change.

200980.1 Security of Ideas

Credit Points 10 **Level** 7

Prerequisite

Students enrolled in 2784/2810 Master of Laws (International Governance) must have successfully completed the prerequisite unit 200901 Legal Philosophy and Methodology.

Corequisite

Students enrolled in 3748 Master of Information Governance must be enrolled in or have successfully completed the corerequisite unit 200432 Commercial Law.

Unit Enrolment Restrictions

Students must be enrolled in 2824 Master of Laws, 2784 or 2810 Master of Laws (International Governance), 3748 Master of Information Governance, Bachelor of Research Studies or Master of Research.

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This unit provides an introduction and overview of the legal principles of intellectual property law, and traces the development of this law in Australia. The modules consider the different forms of intellectual property including copyright (including moral rights and performers protection), designs, patents, plant breeders rights, trade mark law, passing-off and related actions, domain name law, confidentiality, circuit layouts, the historical development of intellectual property, and the international intellectual property framework (including World Intellectual Property Organization (WIPO) and World Trade Organization (WTO)).

200898.3 Seminal Papers in Business

Credit Points 10 **Level** 4

Unit Enrolment Restrictions

Students must be enrolled in course 8083 Bachelor of Research Studies/Master of Research.

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The aim of this unit is to develop skills in applying rigorous analysis and critical assessment to research-debates in business disciplines through an examination of seminal literature in particular business fields which often embrace conflicting theoretical approaches. This will provide candidates with the advanced skills needed to critically analyse debates in a business discipline, while also enabling them to gain more familiarity with theories, issues, and problems in a particular research area. Seminal business papers will be analysed through a balanced and constructive critique of their strengths and weaknesses, providing suggestions for how the work might be extended or improved. From this unit, students will be able to apply the rigorous analytical skills to their own work.

102194.3 Social Research in the Digital World

Credit Points 10 **Level** 7

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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This unit provides a critical introduction to the opportunities and challenges of digital social research as well as the theoretical, methodological, and ethical implications of carrying out research in and on the digital. The social web provides researchers both with a tool and an environment to explore the intricacies of everyday life. In this unit, students will be immersed in online environments to further understand the theoretical, methodological and ethical issues of social research in the digital world. Through such activities, students participate as active digital researchers in online social science spaces to result in a professional online web presence and an in depth understanding of current and future research trends in digital social research.

301248.3 Space Instrumentation, Technology and Communication

Credit Points 10 **Level** 7

Assumed Knowledge

Knowledge of Mathematics equivalent to 2-unit HSC, and experience with the use of computer software such as Excel or Word would be beneficial. Previous experience of statistics or computer programming will be an advantage but is not essential.

Unit Enrolment Restrictions

Student must be enrolled in a postgraduate course.

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The Space Instrumentation, Technology and Communication unit is focussed on the application of space technology in industrial settings. Its main objective is to provide a sound knowledge of the underlying principles which form a thorough basis for careers in space technology, satellite communications and related fields. This unit gives the student grounding in the technologies used in space science. By considering the underlying scientific principles and case studies of the instrumentation used in space, students will not only understand the current state of the art in space science, but also the foundations of the field in order to be able to stay current in this fast-moving field. Content includes but is not limited to: Imaging, Detectors, Principles of Communication, and Principles of Space Technology.

301249.2 Space Science, Planetary Science and Meteorology

Credit Points 10 **Level** 7

Assumed Knowledge

Knowledge of Mathematics equivalent to 2-unit HSC, and experience with the use of computer software such as Excel or Word would be beneficial. Previous experience of statistics or computer programming will be an advantage but is not essential.

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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This unit examines the six key priorities of the Australian Space Agency: communication, space debris monitoring, navigation and positioning, Earth observation, space technology research and development, and remote asset management. Students will examine the Sun and Solar System, planetary science, meteorology, and the physics of rockets and satellites. Students will explore the interconnections between the Earth land, ocean, atmosphere, and life of our planet in the era of modern satellite technologies. These include the critical review of our understanding about the cycles of water, carbon, rock, and other materials that continuously shape, influence, and sustain Earth and its inhabitants. Students will also be able to design new models of the cyclical interactions between the Earth system and the Sun, Moon and will discover the fundamental processes which define our Universe and our planet.

102379.1 Special Topics in Philosophy

Credit Points 20 **Level** 7

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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The Special Topics in Philosophy unit engages with current debates and developments in philosophy. These contemporary debates will be contextualized within the historical and conceptual framework of the continental tradition of philosophical inquiry. Engagement with contemporary topics in philosophy and the most recent developments in the field will enable students to find what is innovative and original in their own thought and field of research.

301002.3 Specialised Software Applications

Credit Points 10 **Level** 7

Equivalent Units

300513 - Engineering Software Applications

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course. Please note: Students enrolled in 3693 Master of Engineering must select the campus offering, not the online mode.

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This unit offers several streams of practical applications in engineering and industrial design software. Students get to choose a software application stream depending on their key program. Lectures and assignments are delivered online and are enhanced by face to face contact with stream coordinators. Emphasis is placed on teaching students practical software applications skills relevant to industry needs.

401176.1 Statistical Methods in Epidemiology

Credit Points 10 **Level** 7

Assumed Knowledge

High school mathematics (arithmetic, formulas and algebra, reading graphs)

Prerequisite

401077.1 Introduction to Biostatistics

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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Statistical ideas are integral to the conceptual basis of epidemiology and provide the tools needed to interpret epidemiological information and conduct epidemiological studies. Most professions in the health sciences need to be able to read and interpret statistics relating to individual and population health status and health risks, and to identify appropriate statistical methods to evaluate interventions, health policies and programs. Many public health practitioners are actively involved in surveillance, quantitative research and/or evaluation. This unit aims to support students to reach a level of proficiency in the selection of appropriate statistical methods to address specific research questions with a given dataset, conduct the selected analysis, interpret the results appropriately and draw valid and insightful conclusions about the research question.

300939.4 Sustainability and Risk Engineering (PG)

Credit Points 10 **Level** 7

Assumed Knowledge

Engineering problem solving skills.

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course

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Analysis of sustainability with engineering perspective is increasingly becoming important in the modern world. Also, in the future sustainability will include risk engineering. Hence, engineers with in-depth understanding of different tools that can be used for both sustainability and risk analysis will have significant competitive edge in their future career. The main objective of this unit is to introduce different tools available for sustainability and risk analysis in various engineering applications. The content includes renewable/alternative energy systems, energy/resource efficiency, sustainable/green buildings, sustainable transport and infrastructure, sustainable water management, environmental management systems,

sustainability reporting, life cycle analysis, probability/ reliability theory, risk assessment models, overall system analysis.

301003.3 Sustainable Systems

Credit Points 10 **Level** 7

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course

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This unit teaches students the essential tools available to achieve environmental sustainability in various engineering/ construction/industrial design professional settings. The focus of the unit is on the application of the tools and exploration of Australian regulatory and sustainable development practices.

102584.1 The Image of Thought: Art, Film and Philosophy

Credit Points 10 **Level** 7

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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Working on the assumption that art is capable of exploring philosophical issues in its own right, the unit considers how various arts from poetry to contemporary film help shape our understanding of things like metaphysics, epistemology, ethics and morality.

102615.1 Theoretical Philosophy

Credit Points 20 **Level** 7

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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Theoretical Philosophy focuses on theories of knowledge, theories of being, and systems of thought. While it is traditionally described under the heading of epistemology and metaphysics, theoretical philosophy should be more broadly understood as devoted to philosophical investigations into the underlying systems, theories, and presuppositions upon which any account of the world, experience, or even truth has been built. This unit will be devoted to an explication of either thematically related theoretical investigations, such as, for example, '17th-century theories of matter,' or 'the nature of language,' or it will focus instead on one central philosophical figure, e.g., 'Plato's metaphysics of the soul,' 'Kant's system of transcendental idealism,' etc.

102383.1 Topics in the History of Philosophy

Credit Points 20 **Level** 7

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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This unit surveys selected philosophers or philosophical movements in the history of philosophy, and of the relevance of such philosophical perspectives for contemporary debates. The unit will include a selection of material that will give students a deeper understanding of the history of philosophy from Ancient Greece to the present day.

102601.1 Understanding Race

Credit Points 10 **Level** 7

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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What is race? What is racism? How are they related? Why do they continue to shape social, political and economic relations well after the biological concept of race was disproven? What are the links between race and colonialism and in Australia particularly, the invasion and settlement of Aboriginal land? How is race related to property? How do ideas of race become embedded in state institutions and why do they continue to shape disadvantage and inequality? Though race develops differently in different contexts, it is best thought about through relational readings that draw out both the differences but also the similarities between places and times. This unit will draw on race critical and decolonial texts to focus on race as a modern idea that is shaped in the contexts of colonialism, slavery, and persists in post-immigration multicultural societies.

101314.4 Urban Management Practice: Governance and Power in the City

Credit Points 10 **Level** 7

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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Governance is a central but often overlooked issue in Urban Management. What is governance? What are the principles of good governance? What are some of the governance challenges in major metropolitan cities that cover multiple jurisdictions? How do statutory local governments engage with specialist state agencies in fields such as economic development, environmental planning, and infrastructure planning? This unit answers these questions, reviews governance practices in major cities across the world and provides students with knowledge of key governance tools. Students will prepare a research report dealing with a significant urban governance challenge, and provide recommendations about how to implement solutions to that challenge. The central objective of the course is to provide students with a sound framework and set of tools with which to address governance issues.

301012.3 Water Resources Systems Analysis

Credit Points 10 **Level** 7

Assumed Knowledge

Discounting techniques, time value of money, equivalence analysis, present worth analysis, annual worth analysis, benefit-cost analysis, net benefit analysis, rate of return. Fluid properties, hydrostatics, open channel flow analysis, pipe network analysis, analysis and design of hydraulic structures, exposure to surface water hydrology and its components, water quality analysis.

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate Engineering program undertaking a Civil Engineering specialisation.

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Water resources projects are large infrastructure projects requiring huge capital expenditure. In addition, multiple options are usually available to meet the project goals but at different costs and under varying constraints. This unit presents the application of optimisation techniques to select the best project from a list of competing projects. Applications of these techniques to optimally allocate available water resources are discussed. These are presented within the context of maximising the return of investment.

102585.1 What is Islam?

Credit Points 10 **Level** 7

Unit Enrolment Restrictions

Students must be enrolled in a postgraduate course.

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The 'Muslim question' has been a topic of interest to Western scholarship for over four hundred years. The unit addresses this question in two ways: firstly, by exploring internal historical conceptualisations of the faith-identity of Islam, and examining how these have shaped modern understandings of Islam from within the faith; secondly, by introducing students to multidisciplinary approaches to the study of Islam and inviting them to consider the construction and deconstruction of Islamic Studies as a field of study at various stages of history. The unit provides students with the opportunity to gain increased awareness of both debates within the field and those that scrutinise the field, that is, becoming comfortable with interrogating the cluster of theoretical and methodological strategies for scholarly inquiry into the study of Islam.

102500.2 Writing and Form

Credit Points 10 **Level** 7

Equivalent Units

102259 - Search (Translation)

Unit Enrolment Restrictions

Students must be enrolled in 1831 Master of Arts in Literature and Creative Writing or 8083 Bachelor of Research Studies

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Literature has always involved playing with language and shaping words into specific forms. The European avant-gardes of the 1910s, 20s and 30s set out to sweep aside traditional forms and valued kinds of playing that many authorities of the day regarded as childish. This unit will examine the interactions of play and form in experimental writing. It will explore the ways in which literary experimentation can be constructive as well as iconoclastic. It will also locate fruitful points of contact between literature and scientific knowledge, using the idea of searching or quest (for meanings and forms) as a guiding metaphor. While focus from year to year might change the unit has focused, for example on the work of the Surrealists and the Oulipo group.

800219.2 Writing Beyond the Academy: Knowledge Translation and Public Audience Communication

Credit Points 10 **Level** 4

Equivalent Units

800167 - Research Literacies

Unit Enrolment Restrictions

Students must be enrolled in 8083 Bachelor of Research Studies/Master of Research or 8119 Bachelor of Research Studies/ Master of Research (Planning) or 4698 Master of Health Science, 4700 GD Health Science or 4702 Master of Public Health.

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It is now more important than ever for researchers to explain their research to the public. Although it can be challenging to translate specialist knowledge for non-specialist readers, this is the skill students will receive training for in Writing Beyond the Academy. By following the model of The Conversation, a widely popular knowledge translation platform, students will learn the principles of public audience writing, how to pitch to an editor and how to work with their feedback, and produce their own public audience essay.

401086.1 Writing for Publication

Credit Points 10 **Level** 7

Unit Enrolment Restrictions

Students must be enrolled in postgraduate course and must have successfully completed 60 credit points at Level 7.

Special Requirements - Essential Equipment

Access to the internet and a computer

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This unit is about writing for publication in the scholarly health and welfare literature. Students will investigate: the range of publications available and the media through which they are delivered; the process of publishing, the key people involved and their roles; the means by which quality is assured in the publishing process and the ways publications are rated for quality and impact; and the influence of social networking media on publishing. Specifically, the influence of online publishing will be investigated. Students will also gain experience of writing for publication under the guidance of an experienced editor and colleagues from the publishing industry. The unit is also available as an elective to all Postgraduate students in the University.

102501.2 Writing, Sounds, Images, Texts

Credit Points 10 **Level** 7

Equivalent Units

102260 - Display (Sounds, Images, Text)

Unit Enrolment Restrictions

Students must be enrolled in 1831 Master of Arts in Literature and Creative Writing or 8083 Bachelor of Research Studies.

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This unit will involve a reflection on practice-based research in the arts. It will involve a consideration of how various art-forms might interact and inform one another. There will, then, be a focus on interdisciplinary interaction in the arts: across music, visual arts, and writing, with a strong interest in the potentials of new media. Throughout we will make comparisons with the relationship between sound and text in film, and in the media more broadly.

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