

OTHER INFORMATION TECHNOLOGY (INFO)

INFO 0001 Academic Skills for Information Communications Technology (WSTC Prep) (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info0001/>) **Legacy Code:** 700205

This unit is designed to assist students to become successful independent reflective learners. It introduces students to a range of theories and concepts to facilitate the development of practical skills and personal attitudes necessary for success in tertiary study. Emphasis is placed on developing the key competencies of scientific inquiry - collecting, analysing, organising and communicating information as well as solving problems, particularly when related to using mathematical ideas and techniques.

Level: Undergraduate Level 0 Preparatory subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 0002 Academic Skills for Information Communications Technology (WSTC) (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info0002/>) **Legacy Code:** 900100

This unit is designed to assist students to become successful independent reflective learners. It introduces students to a range of theories and concepts to facilitate the development of practical skills and personal attitudes necessary for success in tertiary study. Emphasis is placed on developing the key competencies required to be successful in an Information Communications Technology course - research, analysis, problem solving, communication and team work.

Level: Undergraduate Level 0 Preparatory subject

Equivalent Subjects: INFO 0001 - Academic Skills for ICT (UWSCFS)

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 0003 Advanced Computer Studies (WSTC Prep) (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info0003/>) **Legacy Code:** 700259

This unit has been developed to enhance a student's problem solving skills in the context of software development. Students are introduced to more advanced material in computer studies, including advanced features of Microsoft Access, web page development using HTML and CSS, the fundamentals of Systems Analysis and Design, programming and object-oriented analysis.

Level: Undergraduate Level 0 Preparatory subject

Pre-requisite(s): INFO 0008

Equivalent Subjects: INFO 0004 - Advanced Computer Studies (UWSC)

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 0004 Advanced Computer Studies (WSTC) (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info0004/>) **Legacy Code:** 900076

Level: Undergraduate Level 0 Preparatory subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 0005 Computer Competency (WSTC) (5 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info0005/>) **Legacy Code:** 900027
Computer Competency aims to provide students with the computing skills necessary to research information on the Internet and produce documents and presentations at a level suitable for their academic studies.

Level: Undergraduate Level 0 Preparatory subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 0006 Computer Fundamentals (WSTC Prep) (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info0006/>) **Legacy Code:** 700277

The Computer Fundamentals unit aims to develop a solid theoretical foundation to help students prepare for further study in Information and Communications Technology while developing/enhancing students' practical skills in Business Processing Applications. Topics in the unit include the underpinning concepts of Information Technology, Software and Hardware, Computer Networking, Internet, Security of Information Systems, Privacy and Ethics, Use of MS Office applications and HTML.

Level: Undergraduate Level 0 Preparatory subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 0007 Computer Literacy (WSTC) (5 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info0007/>) **Legacy Code:** 900051

This unit is intended to familiarise the University Foundation Studies students with the basic functions of computers and the skills necessary to use the common applications such as Microsoft Word, Microsoft PowerPoint and the Internet. These skills are introduced to students through structured activities that will assist students to complete the research and document preparation requirements of their other units.

Level: Undergraduate Level 0 Preparatory subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 0008 Computer Studies (WSTC Prep) (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info0008/>) **Legacy Code:** 700201

This unit introduces and develops basic competencies in using computers and application software for the Building Design Management and Construction Management industries. The ability to use computers and application software for creating word-processed documents, spreadsheets, as well as understanding the processes involved with creating and analysing designs and managing projects has become an integral part of the required skill set for these industries. This unit has been developed to enhance students' practical ability as well as build a theoretical foundation for further study.

Level: Undergraduate Level 0 Preparatory subject

Equivalent Subjects: INFO 0009 - Computer Studies (UWSC)

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 0009 Computer Studies (WSTC) (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info0009/>) **Legacy Code:** 900028

Computer Studies introduces to the students the new age of information, where computers and communication play an integral part in our lives. The course has been developed to enhance a student's practical ability as well as build a solid theoretical foundation for further study.

Level: Undergraduate Level 0 Preparatory subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 0010 Information Technology in Business (WSTC Prep) (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info0010/>) **Legacy Code:** 700278
This unit introduces basic business concepts and how Information Systems can be used in Business. It also deals with Systems Analysis and Design, and Database Design and Development concepts. These concepts are introduced using a variety of case studies to provide authentic learning opportunities.

Level: Undergraduate Level 0 Preparatory subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 1001 Introduction to Information Technology (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info1001/>) **Legacy Code:** 300134
This introductory unit gives students an insight into the history, structure, operations and uses of computers, and their impact on society. This will be complemented by hands-on use of computers and popular application software packages in a graphical user interface environment. Students gain a basic understanding of the uses of computers, and the skills necessary to use popular applications software, including word processing, spreadsheet and database packages, and Internet tools and services.

Level: Undergraduate Level 1 subject

Equivalent Subjects: LGYB 4133 - Introduction to Computers LGYB 9621 - Computer Fundamentals LGYA 9786 - Information Technology
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 1002 PC Workshop (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info1002/>) **Legacy Code:** 300150
This unit introduces students to the hardware and software components of a stand-alone personal computer (PC). Students become familiar with the CPU, memory, secondary storage, IO peripherals and communications devices commonly found in a PC. They learn to assemble and disassemble a PC and to install hardware and software components according to supplier specifications. Students also learn to use and customise the PC operating system to maintain and optimise PC performance.

Level: Undergraduate Level 1 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 2002 Tangible Interaction Design (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info2002/>) **Legacy Code:** 301088
This unit will provide students with the capacity to create interactive products that can sense environmental stimuli and exhibit an appropriate yet intelligent response. Students will be expected to write script based programs to control hardware circuits connecting various Input/Output peripherals (sensors, actuators). The range of interactive products studied and built by the students will be diverse; ranging from household everyday products to artifacts that can be used in public spaces.

Level: Undergraduate Level 2 subject

Pre-requisite(s): INFO 3003

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 2003 Technologies for Mobile Applications (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info2003/>) **Legacy Code:** 300976
This unit introduces students to the technologies used to develop and deploy mobile applications. The unit covers evaluating organisational needs in the mobile space, responsive web design, web technologies, interface challenges, location awareness, cloud services and data storage.

Level: Undergraduate Level 2 subject

Pre-requisite(s): COMP 1005

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 2004 Cyber Crime and Social Engineering (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info2004/>) **Legacy Code:** 102700
This unit focuses on both the theory and application of cyber crime and cybersecurity. More specifically, it focuses on the intersection between human behaviour, cyber crime, and cyber security with topics ranging from social engineering to organisational security infrastructure. It asks - What outcomes do cyber criminals seek? How can you protect yourself and your business from cyber crime? What methods do cyber criminals typically use to gain their desired outcomes? In this unit, cyber crime and cyber security is covered from both a theory-based and applied understanding of how to reduce the likelihood of or harm caused by cyber crime.

Level: Undergraduate Level 2 subject

Pre-requisite(s): INFS 1002

Equivalent Subjects: INFO 2001 Cyber Crime and Cyber Safety

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 2005 Cyber Security and Behaviour Research Project (20 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info2005/>) **Legacy Code:** 102704
This is a 40 credit point year-long subject taken over two terms (20 credit points in each term). This subject comprises the research pathway of the Bachelor of Cyber Security and Behaviour. Students will undertake a major research project in the field of behavioural cyber security. The specifics of the project will be coordinated between the student and the research supervisor at Western, which is undertaken over two semesters. Students should firstly discuss their proposed research project with the research supervisor, as it may require prior approval by the University's Ethics Committee depending on the research topic chosen. In the first semester, students plan their research, complete a literature review and propose the project plan to a panel of experts. By the end of the second semester students will have completed their thesis by research and will defend that thesis to a panel of experts. As such, students will have contributed to research in the field of cyber security and behaviour which prepares them for further studies towards a Masters or PhD qualification.

Level: Undergraduate Level 2 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 2006 Usable Security (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info2006/>) **Legacy Code:** 102757

This unit will cover the human factors of security and privacy, as well as address emerging issues, challenges and regulations which underpin the need for usable security and privacy. After introducing the fundamental principles of security and privacy, these will be explored while considering how these principles shape the experience of users who are interacting with the designed product. Humans are an essential part of security and privacy, and they also inherently pose significant challenges. Students will be introduced to some of the fundamental security and privacy standards and regulations. They will learn about cognitive and perceptual approaches to usable security as well as how to create systems that are usable and trusted alongside fulfilling the requirements of remaining secure and private. Research topics such as how to design user studies to critically evaluate security, privacy, trust and usability interfaces will be addressed to provide students with an informed view on emerging best practices.

Level: Undergraduate Level 2 subject

Pre-requisite(s): BEHV 1025 AND
COMP 1005

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 2007 Cyber Crime and Social Engineering (Block) (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info2007/>) **Legacy Code:** 500075

This unit focuses on both the theory and application of cyber crime and cybersecurity. More specifically, it focuses on the intersection between human behaviour, cyber crime, and cyber security with topics ranging from social engineering to organisational security infrastructure. It asks - What outcomes do cyber criminals seek? How can you protect yourself and your business from cyber crime? What methods do cyber criminals typically use to gain their desired outcomes? In this unit, cyber crime and cyber security is covered from both a theory-based and applied understanding of how to reduce the likelihood of or harm caused by cyber crime.

Level: Undergraduate Level 2 subject

Pre-requisite(s): INFS 1013

Equivalent Subjects: INFO 2001 - Cyber Crime and Cyber Safety
INFO 2004 - Cyber Crime and Social Engineering

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 2008 Cyber Incident Response and Risk Management (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info2008/>)

Cyber risk management is the process of identifying, analysing, and evaluating how to handle an organisations' cyber security threats. This subject will introduce the fundamental tenets of risk management, and explore cybersecurity risk management frameworks. Cyber incident response is an organised approach to addressing and managing a major security breach, threat or attack. The goal is to handle the incident in a way that limits damage, reduces recovery time and losses, and take pro-active measures in the follow up and recovery phase to prevent future attacks. Students will explore common cyber attacks requiring incident response such as payment diversion fraud (business email compromise), ransomware, data breach, and advanced persistent threats. They will learn about each of these threats and how to manage such threats through the development of incident response plans including people, process, technology and information. This subject is taught with industry partners through case studies and simulations. Due to the sensitive nature of the subject and the requirement of hands on training, it cannot be taught online and is not on offer to WSU Online students. Online students will take an additional elective.

Level: Undergraduate Level 2 subject

Co-requisite(s): INFO3001 - Computer Security

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 2009 Multiliteracies (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info2009/>)

This subject develops students' skills, knowledge and competencies to address a wide range of literacies across multiple technologies, platforms and contexts. In any society there are a range of literacies, and contexts in which those literacies might be deployed. These include the digital, written, visual, aural, spatial, gestural, and tactile dimensions of meaning production. Multiliteracies go beyond the traditional textual models of literacy to describe the rich variety of cognitive and cultural tools we use to make sense of the everyday. Multiliteracy is key to our professional and personal effectiveness, as well as to our functioning as individuals and citizens in a world characterised by increasing dependency on information technologies.

Level: Undergraduate Level 2 subject

Equivalent Subjects: COMM2050 Multiliteracies

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 3001 Computer Security (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info3001/>) **Legacy Code:** 300569

This unit aims in particular at, but is not limited to, the implementation and management of security and privacy policies of organisations within the standards and legal framework that is also applicable to the Australian standards.

Level: Undergraduate Level 3 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 3002 Ethical Hacking Principles and Practice (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info3002/>) **Legacy Code:** 301124
 This unit teaches students ethical hacking principles and skills with the ultimate goal of defence. It covers practical skills in different stages of ethical hacking, including reconnaissance on public information, port and vulnerability scanning, exploitation of vulnerabilities, post exploitation, and writing a comprehensive report to document detected vulnerabilities and proposed solutions. Students will not only practice with major tools in ethical hacking, but also learn the principles of how these tools work and hence how to defend against them.

Level: Undergraduate Level 3 subject

Pre-requisite(s): COMP 2004 OR
 COMP 2005 AND
 COMP 2020

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 3003 Human-Computer Interaction (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info3003/>) **Legacy Code:** 300570
 A key component to the discipline of Information Systems is the understanding and the advocacy of the user in the development of IT applications and systems. IT graduates must develop a mind-set that recognizes the importance of users and organisational contexts. They must employ user centered methodologies in the development, evaluation, and deployment of IT applications and systems. This unit examines human-computer interaction in order to develop and evaluate software, websites and information systems that not only look professional but are usable, functional and accessible.

Level: Undergraduate Level 3 subject

Equivalent Subjects: INFS 3015 - Software Interface Design

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 3004 Human-Computer Interaction (Advanced) (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info3004/>) **Legacy Code:** 300901
 IT graduates must be able to develop and evaluate software, websites and mobile apps that not only look professional but are usable, functional and accessible. However, the study of HCI is often restricted to its use as a tool in the software development process. This advanced unit also examines HCI as a field of research and how to conduct research into human user factors. Students in this advanced unit will be required to complete a research project and produce a final research report, which is of a standard capable of being considered for publication in a HCI conference or journal.

Level: Undergraduate Level 3 subject

Incompatible Subjects: INFO 3003 - Human-Computer Interaction INFS 3015 - Software Interface Design

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 3005 I.T. Support Practicum (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info3005/>) **Legacy Code:** 300136
 This unit provides students real-world experience in the area of Information Technology (IT) support. Students are located with industry partners in the Greater Western Sydney region in IT support positions for 10 hours per week over a 12 week period. In addition, students receive instruction and tuition in aspects of professional practice such as code of ethics.

Level: Undergraduate Level 3 subject

Pre-requisite(s): INFO 1002 AND
 COMP 2013 OR
 LGYA 6157

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 3006 Information Security (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info3006/>) **Legacy Code:** 300128
 Information Security is concerned with the protection and privacy of information in computer systems. The focus is primarily on introducing cryptography concept, algorithm and protocol in information security and applying such knowledge in the design and implementation of secure computer and network systems. The unit also addresses conventional and public key encryption, number theory and algebra and their application in public key encryption and signature. Students will learn the application of cryptography algorithm in current computer systems and information security management. This unit also provides students with the practical experience around security programming.

Level: Undergraduate Level 3 subject

Pre-requisite(s): MATH 1006 AND
 COMP 2009 OR
 COMP 2015 OR
 COMP 2016

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 3007 Network Security (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info3007/>) **Legacy Code:** 300143
 This unit is concerned with the protection of information transferred over computer networks. It includes discussion of techniques for securing data transported over local and wide area networks. At the conclusion of the unit students will have a good understanding of the practical aspects of securing a computer network against internal and external attacks.

Level: Undergraduate Level 3 subject

Pre-requisite(s): COMP 2007 OR
 COMP 2004 OR
 COMP 2005

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 3008 Professional Development (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info3008/>) **Legacy Code:** 300578

This is a final year unit that builds on foundation and intermediate computing units to prepare students for professional experience. The unit covers the content in three modules as 1) Ethics and Professional Code of Conduct, 2) Project Management, and 3) Legal, Social, Environmental issues, Quality Assurance and IT Compliance. The content covered in these three modules are carefully designed to fill in the gaps in knowledge that is not so far covered in previous units in preparing students for the challenging projects units and professional working life ahead. This unit is a pre-requisite to the capstone project, covered in Professional Experience Project unit.

Level: Undergraduate Level 3 subject

Equivalent Subjects: LGYA 5983 - Professional Preparation and Project Management

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 3011 Social Computing (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info3011/>) **Legacy Code:** 300961

Rapid growth of computational devices connected to the internet such as mobile phones, tablets, personal computers have made us into a digitally connected society. This has enabled us to develop a new computing paradigm: Social Computing to enhance ways we can fulfil a range of primary and secondary human needs. Already many new businesses have evolved making use of these possibilities surpassing the number of users in corresponding conventional businesses such as retail, transportation and hotel chains. In this unit you will learn the fundamental concepts of Social Computing, how Social Computing is evolving, explore interaction models of social networks, analyse a few reported cases that relate to social computing in detail to understand the impact on society and businesses, and explore ways to enhance a range of livelihood activities and future possibilities. This unit will also cover underpinning technologies related to social computing such as Web 2.0, knowledge management and related security and privacy issues.

Level: Undergraduate Level 3 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 3012 Cyber Security and Behaviour Placement 1 (20 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info3012/>) **Legacy Code:** 102702

In 2022, this unit replaced by Unit 102904 - Cyber Security and Behaviour Industry Placement. This unit is the initial placement for the work integrated learning embedded in the Bachelor of Cyber Security and Behaviour degree. There are three options: 1. WSU-brokered industry placement on a competitive basis; 2. an approved placement at the student's place of work, or via the student's networks and contacts; 3. an industry project report based on industry-generated case studies and problems. In addition, workshops will be conducted throughout the semester to aid in your learning and to support your professional development during this placement or project. Contact the unit coordinator well in advance to elect your own industry placement (such as your current employer). Only options 2 and 3 are available to WSU Online students.

Level: Undergraduate Level 3 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 3013 Cyber Security and Behaviour Placement 2 (20 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info3013/>) **Legacy Code:** 102703

In 2022, this unit replaced by unit INFO 3016 - Cyber Security and Behaviour Community Placement. This unit is the second placement for the work integrated learning embedded in the Bachelor of Cyber Security and Behaviour degree. There are three options: 1. WSU-brokered industry placement on a competitive basis; 2. an approved placement at the student's place of work, or via the student's networks and contacts; 3. an industry project report based on industry-generated case studies and problems. Students may continue the option chosen for Cyber Security and Behaviour Placement 1, or choose another available option. Workshops will be conducted throughout the semester to aid in your learning and to support your professional development during this placement or project. Contact the unit coordinator well in advance to elect your own industry placement (such as your current employer). Only options 2 and 3 are available to WSU Online students.

Level: Undergraduate Level 3 subject

Pre-requisite(s): INFO 3012

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 3014 Digital Investigations and Forensics (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info3014/>) **Legacy Code:** 102701

This unit focuses on the concepts, theories, and practice of digital investigations and forensics. More specifically, it focuses on using a detailed hands-on approach to the use of computer technology in investigating and demonstrating that particular digital media contains incriminating evidence. With topics ranging from data acquisition, file systems examination, social media, email and network investigations, mobile and cloud forensics, a working knowledge of how to approach digital investigations and utilise various forensic tools to collect, analyse and present digital evidence will be gained. In this unit, digital investigations and forensics is covered from both a theory-based and applied understanding of how to recover admissible legal evidence after an incident, or proactively as a key defence to reduce the likelihood of cyber attacks.

Level: Undergraduate Level 3 subject

Pre-requisite(s): INFS 1002 AND

INFO 2001 OR

INFO 2004

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 3015 Internet of Things and Smart Environments (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info3015/>) **Legacy Code:** 301436

This unit covers the essential components and the dominant and emerging applications of the Internet of Things (IoT) and smart environments. These include the functions of sensors, actuators, and relevant communication networks in collecting, analysing, and acting on smart environment data. The role of machine learning in developing smart environment solutions, such as smart cities, smart transportation, smart healthcare, and other leading applications, are also discussed. The unit additionally covers critical IoT cybersecurity and privacy issues and examines approaches for addressing them. It presents the relevant principles and current practices and explores the trends in IoT and smart environments.

Level: Undergraduate Level 3 subject

Pre-requisite(s): COMP 2004

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 3016 Cyber Security and Behaviour Community Placement (20 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info3016/>) **Legacy Code:** 102905
 This subject is the first placement for the work integrated learning embedded in the Bachelor of Cyber Security and Behaviour degree. Students will do an internal cyber security placement with the new live security operations centre known as the Western centre for Cybersecurity Aid and Community Engagement (Western CACE). Western CACE will provide training for students as well as members of the small business communities with cyber preparedness training. Students will be guided through handling real cyber attacks and assisting small business respond to these attacks. There are a paucity of government services that address and aid small business with live cyber attacks. Western CACE fills this necessary gap where students will exit knowing how to deal with ransomware, payment diversion fraud, data breach, emerging threats, and the security control implementations post-incident. The placement with Western CACE acts as a stepping stone to their next placement which is their external industry placement (INFO 3017 Cyber Security and Behaviour Industry Placement). A two day induction/workshops will be conducted in the week prior to commencing with Western CACE with ongoing professional development onsite within the Centre as directed by the Centre Manager, Director and industry leaders. WSU Online students will not do a face to face placement at Western CACE unless they are able to attend face to face sessions in Sydney for both INFO 2008 Cyber Incident Response and Risk Management and this unit. WSU Online students will have the following options: an approved placement at the student's place of work, or via the student's networks and contacts OR an industry project report based on industry-generated case studies and problems.

Level: Undergraduate Level 3 subject

Equivalent Subjects: INFO 3012 - Cyber Security and Behaviour Placement 1

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 3017 Cyber Security and Behaviour Industry Placement (20 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info3017/>) **Legacy Code:** 102904
 This unit is the industry placement for the work integrated learning embedded in the Bachelor of Cyber Security and Behaviour degree. Students will work with an industry placement or its equivalent. There are four options for industry placement: 1. WSU-brokered industry placement on a competitive basis; 2. an approved placement at the student's place of work, or via the student's networks and contacts; 3. an industry project report based on industry-generated case studies and problems; 4. continuing at WCACE. In addition, workshops will be conducted throughout the semester to aid in your learning and to support your professional development during this placement or project. Contact the unit coordinator well in advance to elect your own industry placement (such as your current employer). Only options 2 and 3 are available to WSU Online students.

Level: Undergraduate Level 3 subject

Equivalent Subjects: INFO 3013 - Cybersecurity Placement 2

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 3018 Computing Practicum (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info3018/>)

This subject provides students with real-world experience in the Computing industry in Australia and other locations around the world. Students undertake 120 hours of full-time or part-time equivalent industry placement as a Work Integrated Learning (WIL) component, carrying out computing related tasks and receive instructions and tuition in aspects of professional practice. Students may nominate an organisation of their choice, in Australia, or within a department/division of Western Sydney University carrying out computing related tasks locally or globally, with the exception of their home country for non-Australian resident students. However, for all cases, students must seek the approval of the Unit Coordinator before the commencement of their industry placement.

Level: Undergraduate Level 3 subject

Pre-requisite(s): Students in 3687 Bachelor of Information Systems and 3639 Bachelor of Information and Communications Technology - COMM 1026 INFS 1006

Students in 3688 Bachelor of Information Systems (Advanced) - COMM 1026 INFS 1015

Students in 3506 Bachelor of Computer Science - COMM 1026

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 3020 Cyber Security and Behaviour Research Project (20 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info3020/>)

This is a 40 credit point year-long subject taken over two terms (20 credit points in each term). This subject comprises the research pathway of the Bachelor of Cyber Security and Behaviour. Students will undertake a major research project in the field of behavioural cyber security. The specifics of the project will be coordinated between the student and the research supervisor at Western, which is undertaken over two semesters. Students should firstly discuss their proposed research project with the research supervisor, as it may require prior approval by the University's Ethics Committee depending on the research topic chosen. In the first semester, students plan their research, complete a literature review and propose the project plan to a panel of experts. By the end of the second semester students will have completed their thesis by research and will defend that thesis to a panel of experts. As such, students will have contributed to research in the field of cyber security and behaviour which prepares them for further studies towards a Masters or PhD qualification.

Level: Undergraduate Level 3 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 5001 Workflow Management for Business Solutions (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info5001/>)

Through project-based learning, students will learn how to configure digital workflows applications and build custom applications with a strong emphasis on human centered design and end-to-end process re/engineering. Mentoring and coaching is provided by the industrial-academic team to allow students to develop real world, work ready skills to fulfil various organisational roles implementing the digital workflows platform. Teaching and learning activities focus on ServiceNow which is a cloud-based platform that delivers cross-enterprise digital workflows, connecting people, functions and systems. At the conclusion of this subject, you will have completed certifications for both the ServiceNow Fundamentals and Application Development Fundamentals, both highly sought after in the current job market.

Level: Postgraduate Coursework Level 5 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 7001 Advanced Machine Learning (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info7001/>) **Legacy Code:** 301119

Advanced Machine Learning explores modern methods of classification, clustering and regression to make predictions and analyse different forms of data. Issues that face all machine learning methods, such as model evaluation, assessment and generalisation will also be analysed.

Level: Postgraduate Coursework Level 7 subject

Pre-requisite(s): COMP 7024

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 7002 Advanced Topics in Artificial Intelligence (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info7002/>) **Legacy Code:** 301196

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.

Level: Postgraduate Coursework Level 7 subject

Incompatible Subjects: LGYA 5875 Intelligent Agents LGYA 5991 Automated Negotiation and e-Trading INFO 7006 Intelligent Agents for eMarkets

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 7003 Advanced Topics in User System Interaction (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info7003/>) **Legacy Code:** 301045

The domain of User System Interaction or also known as Human Computer Interaction (HCI) dictates that IT graduates must be able to develop and evaluate interfaces that not only look professional but are usable, functional and accessible. This post graduate unit also examines HCI as a field of research and discusses novel areas of research in the area. Students in this unit will be required to complete a research project alongside a literature review document both of which comprise of content that is of a standard of being able to be considered for publication and/or presentation in a HCI conference or journal.

Level: Postgraduate Coursework Level 7 subject

Incompatible Subjects: INFO 3003 - Human-Computer Interaction INFO 3004 - Human-Computer Interaction (Advanced)

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 7004 ICT Practicum (0 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info7004/>) **Legacy Code:** 301047

In this unit, students undertake 120 hours of full-time or part-time equivalent industry placement as a Work Integrated Learning (WIL) component required for the successful completion of their course.

Students can nominate an organisation of their choice however, they must seek the approval of the Unit Coordinator before the commencement of the industry placement. Students have the option to work in an organisation in Australia, or within a department/division of Western Sydney University carrying out ICT related tasks or globally, with the exception of their home country for non-Australian resident students. This provides an opportunity for real-world experience in the ICT industry in Australia as well as anywhere in the world. Students with substantial post-qualification work experience in Australia or globally (with the exception of their home country for non-Australian residents) may be eligible for advanced standing for this unit.

Level: Postgraduate Coursework Level 7 subject

Pre-requisite(s): For students enrolled in 3698 Master of Information and Communications Technology (Advanced) or 3699 Master of Information and Communications Technology - ENGR 7017 Professional Practice in Communication

For students enrolled in 3765 Master of Artificial Intelligence - COMP 7020 Artificial Intelligence Ethics and Organisations

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 7005 IT Project Management (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info7005/>) **Legacy Code:** 300260

This unit is designed to provide students with an opportunity to learn and apply the knowledge, values and skills of consultancy, project management, and research by undertaking an IT project. The unit covers preparing and presenting project proposals in various ICT areas, project management, time management, communication skills, and the evolving legal, ethical, and social responsibilities of IT professionals. Students will work in teams under the supervision of a staff member, to plan and investigate their project.

Level: Postgraduate Coursework Level 7 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 7007 Masters Thesis (40 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info7007/>) **Legacy Code:** 301125

This is a 80 credit point year-long subject taken over two terms (40 credit points in each term). This subject provides an opportunity for masters students to carry out a comprehensive investigation and practical work on a cutting edge research topic in the area of Information and Communication Technologies. Students are encouraged to select topics they envisage to be of value to their future careers. Students will undertake individual research-intensive project-based study under the guidance of an academic supervisory panel.

Level: Postgraduate Coursework Level 7 subject

Pre-requisite(s): ENGR 7017 AND

ENGR 7018 AND

HUMN 4009 AND

HUMN 4010

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 7009 Network Security (20 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info7009/>) **Legacy Code:** 301068

With organisations increasingly dependent on their information systems, there is a greater need to ensure that the underlying network infrastructure being used by these systems is secure. Western Sydney University is a leading Cisco Academy and this Cisco Certified Networking Associate (CCNA) Security module will give students a foundation to prepare for the Certified Information Systems Security Professional (CISSP) qualification. This online unit will provide the knowledge, understanding and practical experience to manage secure communication across a large-scale internetwork using Cisco equipment. Students will be expected to undertake individual research to contextualise their Cisco study in the broader security management environment.

Level: Postgraduate Coursework Level 7 subject

Pre-requisite(s): COMP 7001 AND

COMP 7010

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 7010 Research Project A (20 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info7010/>) **Legacy Code:** 301055

This unit is a problem based research unit. Students are expected to conduct individual studies under supervision by academic staff. Students will acquire the basic skills that are essential for completing a research project. They will learn how to identify research topics in the fields relevant to their courses. They will be required to define research objectives and scope, conduct literature survey, establish research methodology, prepare a research plan and present these contents in a final report and through an oral presentation. This unit is a pre-requisite of unit Research Project B in which the research plan will be carried out.

Level: Postgraduate Coursework Level 7 subject

Pre-requisite(s): Students enrolled in 3716 Master of Mathematics student must have successfully completed MATH 7006 Calculus of Variations and Advanced Calculus MATH 7010 Non-linear Ordinary Differential Equations MATH 7004 Applied Complex Variables and MATH 7005 Approximation Theory

Students enrolled in 3752 Master of Project Management must have successfully completed BUSM 7064 Managing Project Teams and Stakeholders MGMT 7003 Financial Management of Projects BUSM 7097 Time and Quality Management BLDG 7009 Project Procurement Systems BUSM 7082 Risk Management and Decision Making and BUSM 7090 Strategic Project Management
Incompatible Subjects: ENGR 7014 Master Project 1 ENGR 7015 Master Project 2

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 7011 Research Project B (20 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info7011/>) **Legacy Code:** 301056

This unit is a continuation of the unit Research Project A and is a problem based project unit. Students are expected to conduct individual studies under supervision by academic staff and deliver the final outcomes/findings on the research topics that are proposed in Research Project A. Students will employ the identified methodologies to carry out the research plans and fulfil the research objectives with the scope defined in the Research Project A. Each individual student is required to produce an oral presentation and a final written report. In this unit, students will acquire research related problem solving skills. Note that students enrolled in the course Master of Project Management (only) must seek permission to enrol in this unit.

Level: Postgraduate Coursework Level 7 subject

Pre-requisite(s): INFO 7010

Incompatible Subjects: ENGR 7014 Master Project 1 ENGR 7015 Master Project 2

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 7012 Strategy for Technological Innovation (20 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info7012/>) **Legacy Code:** 301053

This online unit introduces a range of perspectives on the strategy formation process, recognising that there is no one universal process to fit all needs. A significant part of the teaching centres on an overview of strategic management. This is then placed into the context of technological innovation through six teaching blocks, each block providing a different perspective on the strategy formation process.

Level: Postgraduate Coursework Level 7 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 7013 Web Engineering (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info7013/>) **Legacy Code:** 300443

Today organizations extensively rely on web based information systems to market, sell, manage customer relations, and for most of the internal operations. Users are increasingly using mobile devices to interact with this information. Due to rapidly changing business environment these systems need to be designed in away to accommodate the frequent changes. New technologies and frameworks have been developed to support development of large, complex, mobile based, maintainable and evolutionary web systems. In this unit students will study some of these technologies, design methods and frameworks that can be successfully used to engineer such web systems. They will get hands on experience by developing such a system.

Level: Postgraduate Coursework Level 7 subject

Equivalent Subjects: LGYA 5881 - Web Application Development

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 7014 Advanced Topics in Cybersecurity (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info7014/>) **Legacy Code:** 301236

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.

Level: Postgraduate Coursework Level 7 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 7015 Applied Cybersecurity (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info7015/>) **Legacy Code:** 301235

This unit covers the current approaches, technologies, and applied practices pertinent to cybersecurity and helps the student to understand important related protocols and standards. It describes the features needed for the mitigation of cyber vulnerabilities for improving the reliability of the underlying systems, privacy preservation, and achieving protections against cybercrime and internet fraud. It also examines the basics of ethical hacking, network assurance, cyber risk management, and incident analysis. The unit discusses the trends in applied cybersecurity and introduces some of the relevant current key research issues and features of the field.

Level: Postgraduate Coursework Level 7 subject

Pre-requisite(s): COMP 7013

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 7016 Postgraduate Project A (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info7016/>) **Legacy Code:** 301384

This is a project-based unit for the Master studies in Computers, Data and Mathematical Sciences. The purpose of this unit is to develop research skills and learn how to manage a research project. Students will engage in research investigation and practical work on a topic in a field of current research interest that is of value to the candidate's professional and intellectual development. Students are expected to actively pursue their interest in an individual research area and undertake self-studies under guidance of a project supervisor. Students will identify research topics in consultation with supervisors, carry out a literature review, define research objectives, establish research methodology, and prepare a research plan. Eventually each student is required to produce a research report with preliminary findings.

Level: Postgraduate Coursework Level 7 subject

Equivalent Subjects: ENGR 7014 - Master Project 1

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 7017 Postgraduate Project B (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info7017/>) **Legacy Code:** 301385

This project based unit is a continuation of unit Postgraduate Project A. Students are expected to work individually under the supervision of academic staff to solve a research problem and deliver the final outcomes on the research topics they selected in Postgraduate Project A. Students will carry out the research plans, employ the identified methodologies, and fulfil the research objectives within the defined scope. Students will acquire problem solving skills and research experience necessary to participate in a future research projects.

To complete their project each student is required to deliver an oral presentation and a final written report detailing the outcomes of their research project.

Level: Postgraduate Coursework Level 7 subject

Co-requisite(s): INFO 7016

Equivalent Subjects: ENGR 7015 - Master Project 2

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 7018 Cloud Systems Development (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info7018/>) **Legacy Code:** 301386

The majority of backend systems supporting modern mobile applications as well as commercial applications are built to run on the cloud. This requires a shift of design where reliability, scalability, performance, and security are key considerations in every stage of the software development process. This unit incorporates the AWS Academy Cloud Developing curriculum, to support learning in the areas of designing, developing, deploying, and monitoring applications for the cloud. Through the completion of an applied project, students will implement the techniques they have learned to enable communication and coordination between services, options for data persistence in the cloud, and optimization of applications for, potentially, millions of users.

Level: Postgraduate Coursework Level 7 subject

Equivalent Subjects: INFO 7008 Modern Software Architectures

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 7019 Smart Construction (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info7019/>) **Legacy Code:** 301491
This subject introduces the evolving smart technologies applicable to construction and facilitates critical thinking in how these technologies can be gainfully applied in the construction industry. It builds up understanding of the subject content from baseline principles of management information systems moving towards evolving new technologies such as digital engineering, Building Information Modelling, Blockchain, Artificial Intelligence among others. The modern construction enterprises are critically analysed to determine the application of suitable technologies for their advancement.

Level: Postgraduate Coursework Level 7 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 9001 Higher Degree Research Thesis - Information Technology (20 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info9001/>) **Legacy Code:** 800178
Level: PhD and Research Masters Level 9 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 9002 Higher Degree Research Thesis - Information Technology (20 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info9002/>) **Legacy Code:** 800201
This is a 80 credit point year-long subject.

Level: PhD and Research Masters Level 9 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

INFO 9003 Higher Degree Research Thesis - Mathematics Sciences (20 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/info9003/>) **Legacy Code:** 800223
Level: PhD and Research Masters Level 9 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject