INFORMATION SYSTEMS (INFS)

INFS 1002 Information Systems in Context (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/infs1002/) Legacy Code: 300573
This subject aims to give students the ability to recognise and explain business information systems with regard to type, function, purpose, and the frameworks within which these systems are used. Topics in this subject include computing fundamentals; computer hardware and software; computers and society; use of business application packages - spreadsheets, word processing, database, graphics; organisational information systems; information systems development and acquisition; data and knowledge management; electronic commerce, internets, extranets; networking; enterprise-wide information systems; the internet and information systems security; privacy, ethics and computer crime.
Level: Undergraduate Level 1 subject
Equivalent Subjects: INFS 1003 Information Systems in Context (WSTC)
Incompatible Subjects: INFS 1004 Introduction to Information Systems
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 1003 Information Systems in Context (WSTC) (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/infs1003/) Legacy Code: 700000
This subject aims to give students the ability to recognise and explain business information systems with regard to type, function, and purpose, and the frameworks within which these systems are used. Topics in this subject include computing fundamentals; computer hardware and software; computers and society; use of business application packages - spreadsheets, word processing, database, graphics; organisational information systems; information systems development and acquisition; data and knowledge management; electronic commerce, internets, extranets; networking; enterprise-wide information systems; the internet and information systems security; privacy, ethics and computer crime.
Level: Undergraduate Level 1 subject
Pre-requisite(s): Students enrolled in 7138 Diploma in Information and Communications Technology Extended - ICT 7139 Diploma in Information and Communications Technology Extended or 7140 Diploma in Information and Communications Technology Extended – Information Systems must pass LANG 0012 Academic and Professional Communication (WSTC Prep) and INFO 0001 Academic Skills for ICT (WSTC Prep)
Equivalent Subjects: INFS 1002 - Information Systems in Context
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 1006 Systems Analysis and Design (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/infs1006/) Legacy Code: 300585
This subject introduces the concepts of System Analysis and Design. The study of methodologies and techniques for problem recognition, requirement analysis, process modelling, solution design and data modelling are essential elements of this subject. The Systems Development Life Cycle model is employed as the prime approach to teach the subject, equipping students with the basic skills required for developing models for analysis, design, implementation and solving information systems problems. This subject introduces students to approaches of system development including structured, object oriented and agile. Students are exposed well to system design activities including UI, data, basic system architecture and system processing. The use of drawing tools will be discussed in practical sessions.
Level: Undergraduate Level 1 subject
Equivalent Subjects: LGYA 5776 Introduction to Analysis and Design INFS 1007 Systems Analysis and Design (WSTC)
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 1007 Systems Analysis and Design (WSTC) (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/infs1007/) Legacy Code: 700013
This subject introduces the concepts of System Analysis and Design. The study of methodologies and techniques for problem recognition, requirement analysis, process modelling and/or data modelling are essential elements of this subject. The Systems Development Life Cycle model is employed as the prime approach to teach the subject, providing students with the basic skills required for analysis and design of logical solutions to information systems problems. The use of Computer Aided System Engineering tools will be discussed in practical sessions.
Level: Undergraduate Level 1 subject
Pre-requisite(s): Students enrolled in 7067 Diploma in Information and Communications Technology Extended must pass LANG 0002 Academic Communication 2 (WSTC Prep) or LANG 0032 English for Tertiary Study 2 (WSTC Prep) or LANG 0039 Introduction to Academic Communication 2 (WSTC Prep) and must pass INFO 0008 Computer Studies (WSTC Prep) before enrolling in this unit

Students enrolled in 7138 Diploma in Information and Communications Technology Extended-ICT 7139 Diploma in Information and Communications Technology Extended 7140 Diploma in Information and Communications Technology Extended–IS and 7141 Diploma in Information and Communications Technology Extended-HIM must pass LANG 0012 Academic Professional Communication (WSTC Prep) and must pass INFO 0001 Academic Skills for ICT (WSTC Prep) and must pass INFO 0010 Information Technology in Business (WSTC Prep) before enrolling in this unit
Equivalent Subjects: LGYA 5776 - Introduction to Analysis and Design INFS 1006 - System Analysis and Design
INFS 1006 - Systems Analysis and Design
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 1013 Information Systems in Context (UG Cert) (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/infs1013/) Legacy Code: 500046
This subject aims to give students the ability to recognise and explain business information systems with regard to type, function, purpose, and the frameworks within which these systems are used. Topics in this subject include computing fundamentals; computer hardware and software; computers and society; use of business application packages - spreadsheets, word processing, database, graphics; organisational information systems; information systems development and acquisition; data and knowledge management; electronic commerce, internets, extranets; networking; enterprise-wide information systems; the internet and information systems security; privacy, ethics and computer crime.
Level: Undergraduate Level 1 subject
Equivalent Subjects: INFS 1002 Information Systems in Context INFS 1003 Information Systems in Context
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 1015 Systems Analysis and Design (Advanced) (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/infs1015/)
Computing graduates must be able to analyse business requirements and propose a design solution to those requirements. This subject equips students with these skills by further developing previously acquired concepts on systems analysis and design. Students are introduced to novel approaches in system development including Structured, Object oriented and Agile. The Systems Development Life Cycle model is employed as the prime approach equipping students with the basic skills required for developing models for analysis, design and implementation approaches to solving information systems problems. Students will engage in authentic real-world projects to understand requirements, analyse, design and develop models and artefacts using several systems development methodologies.
Level: Undergraduate Level 1 subject
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 1017 Database Design and Management (WSTC) (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/infs1017/)
In today's data-driven world, an in-depth understanding of database management is vital for aspiring ICT professionals. In this subject, you will gain a comprehensive grasp of Relational Database Management Systems (RDBMS), emphasising their crucial role in modern business. You will acquire essential skills in database modelling and design, including database security and administration, and related ethical considerations. You will also gain experience using Structured Query Language (SQL). Finally, you will put theory into practice by designing, developing, and evaluating a business application database using a commercial RDBMS. This subject not only equips you with the knowledge to manage databases efficiently but also fosters and continues to build your professional communication and teamwork skills.
Level: Undergraduate Level 1 subject
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 2001 Database Design and Development (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/infs2001/) Legacy Code: 300104
The main purpose of this subject is to provide students with an opportunity to gain a basic knowledge of database design and development including data modelling methods, techniques for database design using a set of business rules that are derived from a case study and finally implementation of the database using a commercial relational database management system. Through group work and tutorial practicals, students examine a number of important database concepts such as database administration, concurrency, backup and recovery and security whilst developing their professional communication and team work skills.
Level: Undergraduate Level 2 subject
Equivalent Subjects: INFS 2003 - Database Design and Development (WSTC)
Incompatible Subjects: LGYA 4371 - Database Management System for Business Information Systems
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 2002 Database Design and Development (Advanced) (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/infs2002/) Legacy Code: 300941
This subject covers the principles, methodologies and technologies for the database design and development, exploring in particular the data modelling methods and the use of the language SQL for the database applications. The subject also examines a number of important database concepts such as database administration, concurrency, backup and recovery, and security. Students in this advanced subject are furthermore required to investigate new technological and theory advances in the database industry and apply them to the solution of concrete database problems.
Level: Undergraduate Level 2 subject
Incompatible Subjects: LGYA 4371 - Database Management System for Business Information Systems INFS 2001 - Database Design and Development
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 2003 Database Design and Development (WSTC) (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/ infs2003/) Legacy Code: 700011
The main purpose of this subject is to provide students with an opportunity to gain a basic knowledge of database design and development including data modeling methods, techniques for database design using a set of business rules that are derived from a case study and finally implementation of the database using a commercial relational database management system. Through group work and tutorial practicals, students examine a number of important database concepts such as database administration, concurrency, backup and recovery and security whilst developing their professional communication and team work skills.
Level: Undergraduate Level 2 subject
Pre-requisite(s): Students enrolled in 7067 Diploma in Information and Communications Technology Extended and 7134 Diploma in Information and Communications Technology Extended – ICT must pass LANG 0002 Academic Communication 2 (WSTC Prep) or LANG 0032 English for Tertiary Study 2 (WSTC Prep) or LANG 0039 Introduction to Academic Communication 2 (WSTC Prep) and must pass INFO 0008 Computer Studies (WSTC Prep) and must pass COMP 0003 Programming Design (WSTC Prep) before enrolling in this unit
Students enrolled in 7138 Diploma in Information and Communications Technology Extended-ICT 7139 Diploma in Information and Communications Technology Extended 7140 Diploma in Information and Communications Technology Extended – IS and 7141 Diploma in Information and Communications Technology Extended-HIM must pass LANG 0012 Academic and Professional Communication (WSTC Prep) and must pass INFO 0010 Information Technology in Business (WSTC Prep) and must pass COMP 0003 Programming Design (WSTC Prep) Students enrolled in 6038 Diploma in Information and Communications Technology Bachelor of Information and Communications Technology (HIM) 6039 Diploma in Information and Communications TechnologyBachelor of Information and Communications Technology 6040 Diploma in Information and Communications TechnologyBachelor of Information Systems 7163 Diploma in Information and Communications Technology and 7164 Diploma in Information and Communications Technology (HIM) must pass COMP 0003 Programming Design (WSTC Prep)
Equivalent Subjects: INFS 2001 - Database Design and Development
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 2004 Introduction to Health Informatics (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/ infs2004/) Legacy Code: 300566
This introductory subject aims to give the student an insight into the key knowledge and skill set required in the emerging domain of Health Informatics. Critical topics include: The Australian healthcare system, health care improvement modelling, health information systems and management, paper-based v's electronic health records, clinical documentation and data quality, health information management, consumer information security, privacy and ethics, decision support and clinical delivery support systems, healthcare data representation and interchange standards, telehealth and Information Communication technologies (ICT). This will be complemented by practical exercises and assessment support sessions. Through these experiences students will gain an understanding of the application of ICT to the healthcare domain and the skills necessary to play a pivotal role in the design and delivery of healthcare systems and health information management.
Level: Undergraduate Level 2 subject
Equivalent Subjects: INFS 2005 - Introduction to Health Informatics (WSTC)
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 2005 Introduction to Health Informatics (WSTC) (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/ infs2005/) Legacy Code: 700258
This introductory subject aims to give the student an insight into the key knowledge and skill set required in the emerging domain of Health Informatics. Critical topics include: The Australian healthcare system, health care improvement modelling, health information systems and management, paper-based v's electronic health records, clinical documentation and data quality, health information management, consumer information security, privacy and ethics, decision support and clinical delivery support systems, healthcare data representation and interchange standards, telehealth and ICT technologies. This will be complemented by practical exercises and assessment support sessions. Through these experiences students will gain an understanding of the application of ICT to the healthcare domain and the skills necessary to play a pivotal role in the design and delivery of healthcare systems and health information management.
Level: Undergraduate Level 2 subject
Equivalent Subjects: INFS 2004 - Introduction to Health Informatics
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 2006 Object Oriented Analysis (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/ infs2006/) Legacy Code: 300144
The core strength of this subject is to analyse and model business objectives and critical requirements of software systems to be developed using object-oriented (OO) approaches. The system analysis is taken to greater depths within the context of Object Orientation. The Unified Modelling Language version 2.0 (notably use cases, user case diagrams, activity diagrams, class diagrams and sequence diagrams) is used as the modelling standard for creating OO models in the problem space. The subject also covers the rational unified process methodology and applications of design patterns for software development through practical case studies.
Level: Undergraduate Level 2 subject
Pre-requisite(s): INFS 1006
Equivalent Subjects: MATH 2013 Object Oriented Analysis (WSTC)
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 2007 Object Oriented Analysis (Advanced) (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/infs2007/) Legacy Code: 300888
The core strength of this subject, as the advanced version of 300144 Object Oriented Analysis, is to analyse and model business objectives and critical requirements of software systems to be developed using object-oriented (OO) approaches. The system analysis is taken to greater depths within the context of Object Orientation. The Unified Modelling Language version 2.0 (notably use cases, user case diagrams, activity diagrams, class diagrams and sequence diagrams) is used as the modelling standard for creating OO models in the problem, solution and background modeling spaces. The subject also covers the rational unified process methodology and applications of design patterns for software development through real world case studies.
Level: Undergraduate Level 2 subject
Pre-requisite(s): INFS 1006
Incompatible Subjects: INFS 2006 - Object Oriented Analysis
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 2009 Database Design and Development (UG Cert) (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/infs2009/) Legacy Code: 500048
The main purpose of this subject is to provide students with an opportunity to gain a basic knowledge of database design and development including data modeling methods, techniques for database design using a set of business rules that are derived from a case study and finally implementation of the database using a commercial relational database management system. The subject also examines a number of important database concepts such as database administration, concurrency, backup and recovery and security.
Level: Undergraduate Level 2 subject
Equivalent Subjects: INFS 2001 Database Design and Development INFS 2003 Database Design and Development
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 2010 Work-Integrated Learning in Digital Construction (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/infs2010/) Legacy Code: 301428
The digitalisation of construction industries has grown considerably in the past decade and this subject responds in practical ways by engaging students in project-based learning related to Digital Construction within an industry framework. Students will select a project with an agreed industry partner, which involves simple digital applications in day-to-day construction such as software applications, information systems, digital solutions, apps and fintechs. This subject contributes towards the skills required for a work-ready graduate and allows the student to plan, undertake and report on a specific aspect of practice in the context of work.
Level: Undergraduate Level 2 subject
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 2011 Object Oriented Analysis (WSTC) (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/infs2011/)
The core strength of this subject is to analyse and model business objectives and critical requirements of software systems to be developed using object-oriented (OO) approaches. The system analysis is taken to greater depths within the context of object orientation. The Unified Modelling Language version 2.0 (notably use cases, activity diagrams, class diagrams and sequence diagrams) is used as a modelling standard for creating OO models in the problem space. The subject also covers the rational unified process methodology and applications of design patterns for software development through practical case studies.
Level: Undergraduate Level 2 subject
Pre-requisite(s): Students enrolled in 7004 Diploma in Information and Communications Technology Fast Track 7005 Diploma in Information and Communications Technology 7067 Diploma in Information and Communications Technology Extended 7134 Diploma in Information and Communications Technology Extended – ICT 7138 Diploma in Information and Communications Technology Extended - ICT 7139 Diploma in Information and Communications Technology Extended 7140 Diploma in Information and Communications Technology Extended - Information Systems 7163 Diploma in Information and Communications Technology 6035 DiplomaBachelor of Information and Communications Technology 6036 Diploma in Information and Communications TechnologyBachelor of Information Systems 6039 DiplomaBachelor of Information and Communications Technology and 6040 Diploma in Information and Communications Technology Bachelor of Information Systems must pass INFS 1007 Systems Analysis and Design before enrolling in this unit
Equivalent Subjects: INFS 2006 Object Oriented Analysis MATH 2013 Object Oriented Analysis (WSTC)
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 3001 Activity Based Funding/Casemix and Data Quality (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/infs3001/) Legacy Code: 300954
This subject will introduce students to Activity Based Funding and Casemix within the Australian healthcare system. It is designed to cover a variety of casemix classification systems for acute, non-admitted, sub-acute and mental health patients. Attention will be given to Diagnosis Related Groups (DRGs) with specific reference to the Australian Refined Diagnosis Related Groups (AR-DRGs) and the relationship to Activity Based Funding and purchasing models. Measuring performance with activity data and clinical costing methods will be explored. Emphasis will be placed on the impact of data quality as a critical component in achieving excellence in clinical costing, casemix and patient safety.
Level: Undergraduate Level 3 subject
Pre-requisite(s): PUBH 2004
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 3002 Advanced Clinical Classification (10 Credit Points)
**Subject Details (https://hbook.westernsydney.edu.au/subject-details/
infs3002/) Legacy Code:** 300953
In this subject, the student will be introduced to disease notification
and registration procedures. Mortality or cause of death coding will
also be examined.Concepts of organising health information in a
logical way to interface with an electronic information system will
be investigated. The design and role of various health classification
systems including the World Health Organizations Family of
International Classifications (WHO FIC), specifically ICD 11 and casemix
classification systems (e.g. AR DRGs, AN SNAP) will also be discussed.
The practical component of this subject will focus on the student
further developing their classification skills in the more complex
areas of clinical coding including endocrine disorders, specifically
diabetes mellitus, circulatory diseases and interventions, genitourinary
disorders, specifically chronic kidney disease, obstetrics, paediatrics
and congenital anomalies and trauma and procedural complications.
The ACS will be applied in detail when classifying from complex
discharge summaries and full clinical episodes of care. The student will
also be exposed to electronic clinical coding tools that can be used in
the classification process.
Level: Undergraduate Level 3 subject
Pre-requisite(s): PUBH 2004
Restrictions: Please see the Subject Details page for any restrictions
for this subject

INFS 3003 Artificial Intelligence (10 Credit Points)
**Subject Details (https://hbook.westernsydney.edu.au/subject-details/
infs3003/) Legacy Code:** 301174
This subject provides basic studies in the major areas of artificial
intelligence: search, knowledge representation, logic programming,
machine learning and knowledge based systems, agent planning and
learning. The first part of this subject will focus on the foundation of
artificial intelligence: search algorithms and their implementations,
game playing, logics and knowledge representation, and inference
in reasoning systems. The second part will cover the principles of
knowledge based systems (intelligent systems), planning, and machine
learning. The subject plays an important part in preparing students
for career paths as AI engineers, Machine Learning engineers and
intelligent software engineers.
Level: Undergraduate Level 3 subject
Pre-requisite(s): MATH 1006 AND
COMP 2009
Equivalent Subjects: LGYA 5740 Artificial Intelligence LGYA 5781
Knowledge Based Systems INFS 3013 Intelligent Systems
Restrictions: Please see the Subject Details page for any restrictions
for this subject

INFS 3005 Developing Web Applications with XML (10 Credit Points)
**Subject Details (https://hbook.westernsydney.edu.au/subject-details/
infs3005/) Legacy Code:** 300111
This third year subject provides a comprehensive coverage of XML,
related emerging technologies and their use in web applications.
Students will be given opportunities to develop web based information
systems which rely upon these technologies. This subject is heavily
oriented to practical based work.
Level: Undergraduate Level 3 subject
Restrictions: Please see the Subject Details page for any restrictions
for this subject

**INFS 3006 Emerging Trends in Information Systems (10 Credit
Points)**
**Subject Details (https://hbook.westernsydney.edu.au/subject-details/
infs3006/) Legacy Code:** 300584
This subject provides a means for students to self-reflect on their
future career and their possible involvement in the field of Information
Systems and explore the changing nature of information systems
in organisations via one of the following: engagements with local
businesses, specifically crafted study tours or focused internships. In
this subject students will study the role that emerging technologies
play in selection, design and development of information systems.
Students will be able to research and assess new technologies
while networking and engaging with real life businesses, as well as
develop and introduce effective strategies for achieving change and
improvement that can be delivered by successfully implementing
emerging technologies.
Level: Undergraduate Level 3 subject
Pre-requisite(s): INFS 1002 AND
COMP 2020
Restrictions: Please see the Subject Details page for any restrictions
for this subject

**INFS 3007 Emerging Trends in Information Systems (Advanced) (10
Credit Points)**
**Subject Details (https://hbook.westernsydney.edu.au/subject-details/
infs3007/) Legacy Code:** 300942
This subject provides a means for students to self-reflect on their
future career and their possible involvement in the field of Information
Systems. In this advanced subject students will be required to
undertake an individual but closely supervised research project.
Students will explore the changing nature of information systems
in organisations via one of the following: engagements with local
businesses, specifically crafted study tours or focused internships. In
this subject students will study the role that emerging technologies
play in selection, design and development of information systems.
Students will be able to research and assess new technologies
while networking and engaging with real life businesses, as well as
develop and introduce effective strategies for achieving change and
improvement that can be delivered by successfully implementing
emerging technologies. In addition, students in this subject will be
required to present their findings in a form of an academic paper with a
possibility of publishing.
Level: Undergraduate Level 3 subject
Pre-requisite(s): INFS 1002 AND
COMP 2020
Incompatible Subjects: INFS 3006 - Emerging Trends in Information
Systems
Restrictions: Please see the Subject Details page for any restrictions
for this subject

INFS 3008 Formal Software Engineering (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/infs3008/) Legacy Code: 300404
This subject is concerned with the design, development and maintenance of computer software systems. The subject focuses on current formal specification and system verification technologies and methodologies. Foundations of model checking such as Linear Temporal Logic and Computation Tree Logic, as well as a particular practical model checker SPIN will be thoroughly studied in this subject. The SPIN model checker with programming language PROMELA will be used for all software development and verification practices throughout this subject. The subject plays an important part in preparing students for career paths as software engineers and IT developers.
Level: Undergraduate Level 3 subject
Pre-requisite(s): MATH 1006 AND
COMP 2009
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 3010 Healthcare Data Environments (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/infs3010/) Legacy Code: 300955
This subject extends the student's knowledge of Health Informatics by introducing concepts relating to electronic communications within the health industry. It exposes students to a variety of environments used to create, store, transfer and deliver healthcare data. Areas include minimum data sets, data linkage, messaging concepts/standards, terminologies, healthcare evaluation, electronic health records and related standards, security, privacy and trust, medico legal, epidemiology and population health together with TeleHealth/TeleMedicine approaches, methodologies, tools and techniques.
Level: Undergraduate Level 3 subject
Pre-requisite(s): INFS 2004
Equivalent Subjects: INFS 3019 - e-Health
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 3011 Healthcare Software and Systems (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/infs3011/) Legacy Code: 300956
In this subject students will learn the concepts underpinning the services computing paradigm of "bridging the gap between Business Services and IT Services". Services Computing technology includes Web services and serviceoriented architecture (SOA), business consulting methodology and utilities, business process modelling, transformation and integration. Students will learn, through the development of practical examples, how to utilise these technologies within a healthcare context
Level: Undergraduate Level 3 subject
Pre-requisite(s): INFS 2004
Equivalent Subjects: INFO 3009 Services Computing in Healthcare
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 3012 Information Systems Deployment and Management (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/infs3012/) Legacy Code: 300572
This subject provides a detailed overview of system implementation and deployment stages taking into consideration the steps that are necessary to place a newly developed system into production. In this subject students learn the skills required for accurate requirements gathering, timely and effective system development, and successful implementation that would result in effective system performance. For this to be achieved successfully this subject also addresses the importance of project management skills. The subject also highlights the issues of transition processes after the development phase, the activities required in systems support and maintenance in the system's operational stage.
Level: Undergraduate Level 3 subject
Pre-requisite(s): COMP 1005 AND
INFS 1006 OR
COMP 1005 AND
DESN 1021
Equivalent Subjects: LGYA 5900 Enterprise Information Management
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 3017 Web Systems Development (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/infs3017/) Legacy Code: 300583
In this subject students further develop their theoretical and practical skills in designing and developing web based information systems using systems analysis, programming, database, human computer interaction and web technologies skills that they have learnt in previous subjects. Current web development technologies and/or frameworks will be utilised to build a complex web information system in a collaborative web development team. Techniques of porting web systems to mobile platforms will also be explored.
Level: Undergraduate Level 3 subject
Pre-requisite(s): COMP 2020
Equivalent Subjects: LGYA 5737 Advanced Web Site Development
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 3018 Web Systems Development (Advanced) (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/infs3018/) Legacy Code: 300902
This subject teaches state-of-the-art web frameworks for developing complex web systems. This subject utilises the skills of basic web programming, database design, and systems analysis that students have learnt in previous subjects. Major topics in this subject include Cascading Style Sheet (CSS) framework, Razor pages, Model-View-Controller (MVC) programming, object to relational database mapping, and authentication and authorization. Moreover, this subject trains students' collaborative skills by asking students to build a complex website in a small team. As an advanced subject, deeper topics such as custom data validation and error handling will be discussed.
Level: Undergraduate Level 3 subject
Pre-requisite(s): COMP 2020
Incompatible Subjects: INFS 3017 Web Systems Development
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 3020 Artificial Intelligence (Advanced) (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/infs3020/)
Artificial Intelligence (AI) comprises the areas of: search, knowledge representation, logic programming, machine learning and knowledge based systems, agent planning and learning. This subject provides the students with the solid foundations on those areas. The first part will focus on the foundation of artificial intelligence: search algorithms and their implementations, game playing, logics and knowledge representation, and inference in reasoning systems. The second part will cover the principles of knowledge based systems (intelligent systems), planning, and machine learning. This subject also introduces students to current state-of-the-art AI systems for difficult (primarily NP-hard) search problems.
Level: Undergraduate Level 3 subject
Pre-requisite(s): MATH1006
COMP2030
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 3021 Formal Software Engineering (Advanced) (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/infs3021/)
This subject introduces the theory and practice of formal software engineering. It is concerned with the design, development, and maintenance of computer software systems. The subject teaches complex software system modelling and verification, it covers most fundamental and important topics in this area, such as currency system modelling, Linear Temporal Logic (LTL) and Computation Tree Logic (CTL) model checking algorithms, as well as the practical model checker system SPIN. Students will be also trained for practical problem solving by applying the theories, methodologies and tools taught from this subject.
Level: Undergraduate Level 3 subject
Pre-requisite(s): MATH1006
COMP2030
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 7001 Advanced Healthcare Data Environments (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/infs7001/) Legacy Code: 301028
This subject extends the students knowledge of Health Informatics by introducing concepts relating to electronic communications within the health industry. It exposes students to a variety of environments used to create, store, transfer and deliver healthcare data. Areas include minimum data sets, data linkage, messaging concepts/standards, terminologies, healthcare evaluation, electronic health records and related standards, security, privacy and trust, medico legal, epidemiology and population health together with TeleHealth/TeleMedicine approaches, methodologies, tools and techniques. Advanced skills and knowledge on researching into recent developments in specific sub-topics will be acquired through assessment components in the subject.
Level: Postgraduate Coursework Level 7 subject
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 7002 Advanced Healthcare Software and Systems (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/infs7002/) Legacy Code: 301029
In this subject students will learn the concepts underpinning the services computing paradigm of "bridging the gap between Business Services and IT Services". Services Computing technology includes Web services and service-oriented architecture (SOA), business consulting methodology and utilities, business process modelling, transformation and integration. Students will learn, through the development of practical examples, how to utilise these technologies within a healthcare context. Advanced knowledge and knowledge of recent developments in specific sub-topics will also be acquired through practical components in the subject.
Level: Postgraduate Coursework Level 7 subject
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 7003 Advanced Topics in ICT (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/infs7003/) Legacy Code: 300694
In the ever-changing landscape of Information and Communications Technologies (ICT), this subject places a strong emphasis on computer simulation as an essential tool for understanding and influencing complex systems in various domains, from Social Sciences, Innovation and Entrepreneurship, Management, Networking to Space Science. The subject unfolds over three topics with a primary focus on the practical and theoretical aspects of computer simulation. Students are equipped with the skills needed to develop, analyse, and apply simulations to real-world scenarios. Supplementing the core curriculum, guest lectures cover additional ICT trends in specialisation domains of individual students. Assessment methods comprise of a group simulation project portfolio, a report on state-of-the-art literature review and a report on societal perspective and application to specific domain area, where students demonstrate both simulation expertise and a grasp of broader ICT topics.
Level: Postgraduate Coursework Level 7 subject
Pre-requisite(s): COMP 7015
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 7004 Content Management Systems and Web Analytics (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/infs7004/) Legacy Code: 300697
Content management systems (CMS) is a collective name for a wide range of web applications used by organisations/institutions/enterprises and social communities in establishing a continuing web presence. They may connect to backend systems and can provide complete web application services. This subject builds on both the conceptual and practical skills/knowledge to develop and utilise CMS's; in their management; in technical, legal, ethical and security issues; and in utilising web analytics to obtain business intelligence of their operation and impact.
Level: Postgraduate Coursework Level 7 subject
Equivalent Subjects: LGYA 5891 Web Site Management and Security
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 7005 Smart Construction (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/ infs7005/) Legacy Code: 301189
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

INFS 7006 Software Testing and Automation (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/ infs7006/) Legacy Code: 300770
Software Testing and Automation will cover topics in two sections - Fundamentals of Software Testing and Test Automation. Section 1 will enable students to get a good understanding of different types of testing, the entire life cycle of Testing; how to design and prepare Test Cases, Test Data, execute these Test Cases and manage the defects. Students will also learn the importance of exclusive Test Environment for Testing and how to create a Traceability Matrix relating Requirements to Test Cases. Since approaches to testing software have also evolved with rigorous systematic approaches and advanced tools to automate some of the testing tasks. Section 2 will expose students to Test Automation using an automation tool, Object mapping and repository creation, Exception handling, logging and reporting, and Creation and Execution of Automation scripts.
Level: Postgraduate Coursework Level 7 subject
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 7007 Systems Analysis and Database Management Systems (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/ infs7007/) Legacy Code: 300977
The main purpose of this subject is to provide students with an opportunity to gain knowledge and experience of developing a business information system in a systematic way. This subject examines the general methodology of systems development life cycle, including different phases and various modeling techniques. The subject specialises in the development of a full systems analysis and design documentation by using system development methodologies, including data analysis and modeling methods. It extensively covers database design techniques where students will use a set of business rules obtained from requirements and use case analysis, and database implementation using a commercial database management system. At the same time, student learning, intercommunication and collaborative working skills are enhanced by student participation in tutorial presentations and group assignments.
Level: Postgraduate Coursework Level 7 subject
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 7008 Systems and Network Security (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/ infs7008/) Legacy Code: 300696
This subject is concerned with the protection of information in computing systems and when transferred over networks. It addresses techniques for securing networking applications and their security arrangements. Students gain an understanding of the fundamentals of the provision of security in networks and systems, as well as an appreciation of some of the problems that arise in devising practical security solutions.
Level: Postgraduate Coursework Level 7 subject
Equivalent Subjects: LGYA 5882 - Distributed Systems and Network Security
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 7009 Web Technologies (10 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/ infs7009/) Legacy Code: 300693
This subject covers the technologies required for the construction and maintenance of web pages and web sites. It focuses on the web page and site design, markup languages, client-side technologies such as Cascading Style Sheets and Javascript, as well as server-side technologies such as web servers, database connectivity, and server side scripting. It also includes the use of multi-media, security, access rights, and the exploration of some of the latest technological wonders populated on the Internet. This subject is heavily orientated towards practical experience based on amplifying the theoretical concepts.
Level: Postgraduate Coursework Level 7 subject
Restrictions: Please see the Subject Details page for any restrictions for this subject

INFS 9001 Higher Degree Research Thesis - Information Systems (80 Credit Points)
Subject Details (https://hbook.westernsydney.edu.au/subject-details/ infs9001/) Legacy Code: 800222
Level: PhD and Research Masters Level 9 subject
Restrictions: Please see the Subject Details page for any restrictions for this subject