UNIVERSITY OF CANBERRA

Bachelor of Software Engineering (560AA.4)

Please note these are the 2015 details for this course

Domestic students

Selection rank	68.00 **Note:** The selection rank is the minimum ATAR plus adjustment factors required for admission to the program in the previous year. This is an indicative guide only as ranks change each year depending on demand.
Delivery mode	On campus
Location	
Duration	3.0 years
Faculty	Faculty of Science and Technology
Discipline	Academic Program Area - Technology
UAC code	
English language requirements	An IELTS Academic score of 6.0 overall, with no band score below 6.0 (or equivalent). View IELTS equivalences

International students

Academic entry requirements	To study at UC, you'll need to meet our academic entry requirements and any admission requirements specific to your course. Please read your course admission requirements below. To find out whether you meet UC's academic entry requirements, visit our academic entry requirements page.

	View UC's academic entry requirements
Delivery mode	On campus
Location	
Duration	3.0 years
Faculty	Faculty of Science and Technology
Discipline	Academic Program Area - Technology
CRICOS code	054017M
English language requirements	An IELTS Academic score of 6.0 overall, with no band score below 6.0 (or equivalent). View IELTS equivalences

About this course

Design and program your own software system.

If software engineering is your career focus, then there's no better place to study than with a three-year Bachelor of Software Engineering at the University Of Canberra.

This is the degree for students whose interest is specifically on designing and constructing software systems. The course is focused on software engineering rather than the more general Bachelor of Information Technology course.

Students can complete a professional minor in a wide range of disciplines such as computer security, network computing, games development, digital forensics, enterprise computing, intelligent systems or infrastructure management.

Study a Bachelor of Software Engineering at UC and you will:

- achieve comprehensive insight into engineering aspects of computer science
- study the current programming languages at an intensive level
- understand the methodology of software systems engineering using analysis and specification methods such as UML, XML, structured and soft systems methodologies
- learn to design and build systems and software using specialist engineering tools
- work within modern development environments that include Windows, Linux, mobile and cloud computing.

Career opportunities

If your future is computer programming and software engineering with the many companies delivering and maintaining software and IT systems, our Bachelor of Software Engineering will give you:

- focus on computer systems in commercial and business environments
- deliver professional accreditation with the Australian Computer Society.

Other opportunities

- Final year students will produce a team project to address the needs of a business, government or community entity.
- The course prepares and accredits you for a career across a wide range of industries needing and shaping future technologies. It readies you for a career that can take you anywhere in the world

Professional accreditation

This course is accredited by the professional body, the Australian Computer Society, at the Professional level.

Admission requirements

Normal UC requirements for admission to an undergraduate course.

Assumed knowledge

ACT: Mathematical Methods major.NSW: Mathematics.

Periods course is open for new admissions

This course is not open for new admissions.

Credit arrangements

There are currently no formal credit transfer arrangements for entry to this course. Any previous study or work experience will only be considered as part of the application process in accordance with current course rules and university policy.

Course requirements

Bachelor of Software Engineering (560AA) | 72 credit points

Expand All | Collapse All

Required - 51 credit points as follows

Major in Software Engineering (BSE) (Restricted) (MJ0108) | 21 credit points

Required - Must pass 21 credit points as follows

Software Technology 1 (4483) | 3 credit points — Level 1

Introduction to Software Engineering (5531) | 3 credit points — Level 1

Discrete Mathematics (6698) | 3 credit points — Level 1

Object Oriented Software Design (7165) | 3 credit points — Level 3

Software Engineering Practice (7169) | 3 credit points — Level 3

Software Technology 2 (7170) | 3 credit points — Level 2

System Software (7171) | 3 credit points — Level 2

Required Units - Must pass 30 credit points as follows

Database Design (5915) | 3 credit points — Level 1

Systems Analysis and Modelling (6365) | 3 credit points — Level 2

Distributed Systems Technology (7159) | 3 credit points — Level 3

Information Technology Project (7164) | 6 credit points — Level 3

Web Design and Programming (7175) | 3 credit points — Level 2

Professional Practice in IT (7722) | 3 credit points — Level 1

Software Systems Architecture (8745) | 3 credit points — Level 2

Mobile Technologies (8878) | 3 credit points — Level 2

- Note: Students who commenced this course in 2013 or earlier may substitute a Restricted Choice unit for 7722 Professional Practice in IT.

Restricted Choice - Must pass 9 credit points from the following

- Note: Students may choose units from one theme or from multiple themes.

Computer Technologies and Network Security - May select from

Security and Support in IT (7167) | 3 credit points — Level 2

Computer and Network Security (8019) | 3 credit points — Level 3

Introduction to Digital Forensics (9074) | 3 credit points — Level 2

Network Architecture (9428) | 3 credit points — Level 4

Gaming Technologies - May select from

Game Programming Techniques (7160) | 3 credit points — Level 3

Soft Computing (7168) | 3 credit points — Level 3

Visual and Interactive Computing (7174) | 3 credit points — Level 3

Virtual Worlds Technology (8698) | 3 credit points — Level 3

Networked Technologies - May select from

Wireless Networks (8227) | 3 credit points — Level 2

Introduction to Network Engineering (8741) | 3 credit points — Level 2

Enterprise and Cloud Computing (9281) | 3 credit points — Level 3

Network Architecture (9428) | 3 credit points — Level 4

Mathematics - May select from

- Note: To complete this theme students must undertake four branches of Mathematics.

Coding Theory (6539) | 3 credit points — Level 3

Mathematical Structures (6543) | 3 credit points — Level 2

Mathematical Modelling (8103) | 3 credit points — Level 2

Intelligent Systems - May select from

Business Decision Models (6538) | 3 credit points — Level 2

Business Intelligence Systems (7156) | 3 credit points — Level 3

Soft Computing (7168) | 3 credit points — Level 3

Data Analytics and Business Intelligence (8696) | 3 credit points — Level 3

Unspecified/Ungrouped - May select from

Advances in Information Sciences 1 (7897) | 3 credit points — Level 3

Advances in Information Sciences 2 (7898) | 3 credit points — Level 3

Information Sciences Internship (7899) | 3 credit points — Level 3

Open Electives - 12 credit points as follows

- Elective Options: Students may wish to use their Open Electives to complete one of the Restricted Choice themes.

- Unit Levels: In selecting electives students should note that no more than 30 credit points at Level 1 is permitted for the entire course.

Note:

- Must pass 12 credit points from anywhere in the University, as a Minor or as individual units.

In addition to course requirements, in order to successfully complete your course you must meet the inherent requirements. Please refer to the inherent requirements statement applicable to your course

Typical study pattern

UC - Canberra, Bruce

Standard Full Time, Semester 1 Commencing

Year 1

Semester 1

Open Elective Unit

Introduction to Software Engineering (5531)

Professional Practice in IT (7722)

Semester 2

Database Design (5915)

Open Elective Unit

Discrete Mathematics (6698)

Software Technology 1 (4483)

Year 2

Semester 1

Mobile Technologies (8878)

Software Technology 2 (7170)

System Software (7171)

Systems Analysis and Modelling (6365)

Semester 2

Restricted Choice Unit

Open Elective Unit

Software Systems Architecture (8745)

Web Design and Programming (7175)

Year 3

Semester 1

Open Elective Unit

Object Oriented Software Design (7165)

Software Engineering Practice (7169)

Restricted Choice Unit

Semester 2

Distributed Systems Technology (7159)

Information Technology Project (7164)

Restricted Choice Unit

Course information

Course duration

Standard six semesters full-time or equivalent. Maximum twenty semesters.

Learning outcomes

Learning outcomes	Related graduate attributes
Solid foundation of the relevant theories and the basic principles in IT fields, including business, information systems, system analysis and modelling, system administration, security, networking, software development, and artificial intelligence etc.; from the foundation to acquire up-to-date knowledge and skills in the future.	Analysis and enquiry Personal attributes: critical thinking, reflective practice, thriving in an environment of change
Knowledge, skills, understanding and application of the investigation, analysis, and synthesis to IT systems and their business environments, policies, and management with a high level of professional ethics, responsibilities, values and standards.	Analysis and enquiry Problem solving Professionalism and social responsibility Personal attributes: critical thinking, reflective practice, thriving in an environment of change
Knowledge and skills of the cutting edge development in the information technology (IT) industry and application of the knowledge and skills to real life IT systems and their business	Analysis and enquiry

environments, policies, and management, independently and/or work in a team.	Working independently and with others
Communication skills in listening, reading, speaking, explaining, teaching, and writing from and to audiences of different backgrounds and papers of different scops and levels.	Professionalism and social responsibility Communication; Problem solving Working independently and with others
Expertise and skills in research to test established theories against a body of knowledge in IT fields; expertise and skills in designing and testing hypothesis for problem solving and conducting research; expertise and skills in contributing new knowledge and skills to the IT fields.	Analysis and enquiry Problem solving Personal attributes: critical thinking, reflective practice, thriving in an environment of change
Expertise and skills to critique, synthesise and apply new development, skills, knowledge, and standards in the IT fields to real world IT systems, with respect to their business environments, policies, and management.	Analysis and enquiry Problem solving Personal attributes: critical thinking, reflective practice, thriving in an environment of change

Majors

- Major in Software Engineering (BSE) (Restricted) (MJ0108)

Awards

Award	Official abbreviation
Bachelor of Software Engineering	BSE

Honours

High performing students may be eligible to enrol in the Honours in Information Sciences course.

Alternative exits

838AA Bachelor of Software Engineering/Bachelor of Business Informatics

Enquiries

Student category	Contact details
Prospective Domestic Students	Email study@canberra.edu.au or Phone 1800 UNI CAN (1800 864 226)
Prospective International Students	Email international@canberra.edu.au or Phone +61 2 6201 5342
Current and Commencing Students	Please contact the University Student Centre by Email student.centre@canberra.edu.au or Phone 1300 301 727

Download your course guide

Scholarships

Find the scholarship that's the right fit for you

Explore Scholarships

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UC acknowledges the Ngunnawal people, traditional custodians of the lands where Bruce campus is situated. We wish to acknowledge and respect their continuing culture and the contribution they make to the life of Canberra and the region. We also acknowledge all other First Nations Peoples on whose lands we gather.