Software Engineering

SENGAH

Software Engineering is an Engineering profession concerned with the processes, methods, and tools for the design and development of high quality, reliable software systems. This involves the study and application of software specification, design, implementation, testing, and documentation of software. Target systems may range from simple software applications to mission-critical real-time systems.

Software Engineering is studied as a stream in the BE(Hons). Day to day administration of this stream is conducted through the Computer Science and Engineering Student Office.

This page outlines the core rules for the Software Engineering stream when taken as part of a single or dual award. The requirements total 168 units of credit, plus 60 days of industrial training. Refer to the program page for full details on the overall program requirements.

Further details on the stream requirements, electives, and advice regarding the order and placement of courses in the stream can be found at the: School website
Faculty
Faculty of Engineering

School
School of Computer Science and Engineering

Study Level
Undergraduate

Minimum Units of Credit
168

Specialisation Type
Honours
Available in Program(s)

Program(s) in which this honours is available

Bachelor of Engineering (Honours) - BE (Hons)
3707 Engineering (Honours)
Faculty: Faculty of Engineering
Campus: Kensington
Units of Credit: 192
Typical Duration: 4 Years

Bachelor of Engineering (Honours) - BE (Hons)
Master of Biomedical Engineering - MBimedE
3768 Engineering (Honours)/Biomedical Engineering
Faculty: Faculty of Engineering
Campus: Kensington
Units of Credit: 240
Typical Duration: 5 Years
Specialisation Structure

Students must complete 168 UOC.

Level 1 Core Courses

Students must take 42 UOC of the following courses.

**COMP1511** | 6 UOC
Programming Fundamentals

**COMP1521** | 6 UOC
Computer Systems Fundamentals

**COMP1531** | 6 UOC
Software Engineering Fundamentals

**ENGG1000** | 6 UOC
Introduction to Engineering Design and Innovation

**MATH1081** | 6 UOC
Discrete Mathematics

One of the following:

**MATH1131** | 6 UOC
Mathematics 1A

**MATH1141** | 6 UOC
Higher Mathematics 1A

One of the following:

**MATH1231** | 6 UOC
Mathematics 1B

**MATH1241** | 6 UOC
Higher Mathematics 1B
Level 2 Core Courses

Students must take 42 UOC of the following courses.

COMP2041  |  6 UOC
Software Construction: Techniques and Tools

COMP2111  |  6 UOC
System Modelling and Design

COMP2511  |  6 UOC
Object-Oriented Design & Programming

COMP2521  |  6 UOC
Data Structures and Algorithms

MATH2400  |  3 UOC
Finite Mathematics

MATH2859  |  3 UOC
Probability, Statistics and Information

SENG2011  |  6 UOC
Workshop on Reasoning about Programs

SENG2021  |  6 UOC
Requirements and Design Workshop

Level 3 Core Courses

Students must take 24 UOC of the following courses.

COMP3141  |  6 UOC
Software System Design and Implementation

COMP3311  |  6 UOC
Database Systems
Level 4 Core Courses

Students must take 18 UOC of the following courses.

COMP4920 | 6 UOC
Management and Ethics

COMP4951 | 4 UOC
Research Thesis A

COMP4952 | 4 UOC
Research Thesis B

COMP4953 | 4 UOC
Research Thesis C

Discipline Electives

Students must take at least 36 UOC of the following courses.

any level 3 Computer Science course

any level 4 Computer Science course

any level 6 Computer Science course

any level 9 Computer Science course

any level 3 Electrical Engineering course

any level 4 Electrical Engineering course
ENGG3060 | 6 UOC
Maker Games

any level 3 Information Systems course

any level 4 Information Systems course

any level 3 Mathematics course

any level 4 Mathematics course

any level 6 Mathematics course

any level 3 Telecommunications course

any level 4 Telecommunications course

**Free Elective**

Students must take at least 6 UOC of the following courses.

any course

**Level 4 (or higher) COMP UOC Minimum**

Students must complete a minimum of 30 UOC of the following courses.

any level 4 Computer Science course

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COMP4920 | 6 UOC
Management and Ethics

COMP4951 | 4 UOC
Research Thesis A
COMP4952  |  4 UOC  
Research Thesis B

COMP4953  |  4 UOC  
Research Thesis C

any level 6 Computer Science course

any level 9 Computer Science course

Enrolment Disclaimer

You are responsible for ensuring you enrol in courses according to your program requirements. myUNSW enrolment checks that you have met enrolment requirements such as pre-requisites for individual courses but not that a course will count towards your program requirements. Do not assume that because you have enrolled in a course that the course will be credited towards your program.
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