Overview

Embedded systems comprise over 99% of all computer systems in operation. They are designed for specific purposes ranging from household appliances, such as microwave ovens and set-top boxes, to sophisticated real-time controllers used in fly-by-wire aircraft and the Large Hadron Collider. The study of embedded systems encompasses the design of both software and hardware and considers important economic factors including cost, performance and reliability.

The Embedded Systems stream in the Computer Science program exposes students to both the underlying hardware technologies and the techniques for controlling hardware programmatically.
<table>
<thead>
<tr>
<th><strong>Faculty</strong></th>
<th>Faculty of Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>School</strong></td>
<td>School of Computer Science and Engineering</td>
</tr>
<tr>
<td><strong>Study Level</strong></td>
<td>Undergraduate</td>
</tr>
<tr>
<td><strong>Minimum Units of Credit</strong></td>
<td>96</td>
</tr>
<tr>
<td><strong>Specialisation Type</strong></td>
<td>Major</td>
</tr>
</tbody>
</table>
Available in Program(s)

Program(s) in which this major is available

Bachelor of Science - BSc
3778 Computer Science
Faculty: Faculty of Engineering
Campus: Kensington
Units of Credit: 144
Typical Duration: 3 Years
Specialisation Structure

Students must complete 96 UOC.

Core Courses

Students must take 78 UOC of the following courses.

COMP1511 | 6 UOC
Programming Fundamentals

COMP1521 | 6 UOC
Computer Systems Fundamentals

COMP1531 | 6 UOC
Software Engineering Fundamentals

COMP2121 | 6 UOC
Microprocessors and Interfacing

COMP2511 | 6 UOC
Object-Oriented Design & Programming

COMP2521 | 6 UOC
Data Structures and Algorithms

COMP3222 | 6 UOC
Digital Circuits and Systems

COMP3900 | 6 UOC
Computer Science Project

COMP4920 | 6 UOC
Management and Ethics
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

One of the following:
COMP3121 | 6 UOC
Algorithms and Programming Techniques

COMP3821 | 6 UOC
Extended Algorithms and Programming Techniques

**Prescribed Electives**

Students must take at least 18 UOC of the following courses.

COMP3211 | 6 UOC
Computer Architecture

COMP3231 | 6 UOC
Operating Systems

COMP3601 | 6 UOC
Design Project A

COMP4601 | 6 UOC
Design Project B

COMP9242 | 6 UOC
Advanced Operating Systems

COMP9517 | 6 UOC
Computer Vision

**Enrolment Disclaimer**

Unless advised otherwise by your program authority, you should follow the rules for the handbook for the year you commenced your program. You are also 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.
Pre-2019 Handbook Editions

Access past handbook editions (2018 and prior)

Pre-2019 Handbook Editions
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Authorised by Deputy Vice-Chancellor (Academic)
CRICOS Provider Code 00098G
ABN: 57 195 873 179