# Bachelor of Computer Science

## APPLIED COMPUTING MAJOR

**Commenced in 2015 and 2016**  
**Studying at Callaghan**

This Program Plan is an enrolment guide to ensure you are on track to graduate. The courses in coloured boxes have changed for your program. Further details on the teach-out arrangements can be found in your Program Handbook. If at any time you wish to vary from this program plan seek prior advice from your Academic Program Advisor to ensure you remain on track.

### Program Plan Key:
- ■ = Core  
- ▲ = Major  
- □ = Elective  
- ▼ = Changes from 2017 to 2021

### Year 1

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Semester 2</th>
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| **COMP1010**  
Computing Fundamentals  
Replaces GENG1803 | **SENG1050**  
Web Technologies  
Replaces COMP1050 |
| **SENG1110**  
Object Orientated Programming  
Replaces option of MATH1110 OR MATH1210 | **ELEC1710**  
Digital and Computer Electronics 1  
Replaces ELEC1700 |
| **MATH1110**  
Mathematics for Engineering, Science and Technology 1  
From 2017, Replaces option of MATH1110 OR MATH1210 | **MATH1510**  
Discrete Mathematics |
| **ELECTIVE** | **MATH1120**  
Mathematics for Engineering, Science and Technology 2  
From 2019, MATH3800 Replaced MATH2730 |

### Year 2

| **COMP2270**  
Theory of Computation |
| **SENG2130**  
Systems Analysis and Design |
| **SENG2200**  
Programming Languages and Paradigms |
| **STAT3800**  
Deterministic and Stochastic Optimisation  
From 2021, Replaced MATH3800  
From 2019, MATH3800 Replaced MATH2730 |
| **SENG1120**  
Data Structures  
Replaces INFT2040 |
| **COMP1140**  
Database and Information Management |
| **COMP2230**  
Algorithms |
| **DIRECTED**  
2000 level |

### Year 3

| **DIRECTED**  
3000 level |
| **DIRECTED**  
3000 level |
| **DIRECTED**  
3000 level |
| **DIRECTED**  
3000 level |

| **ELEC3500**  
Telecommunication Networks  
Replaces SENG3400 |
| **COMP2240**  
Operating Systems |
| **COMP3850**  
Computer Science Work Integrated Learning |
| **MATH3840**  
Optimisation in Business and Industry  
No longer offered  
*Refer to teach out document* |

Information correct as of 26 November 2020 and subject to change  
Program Code: 10177  
CRICOS Code: 001604G  
CRICOS Provider: 00109J
To be eligible to graduate make sure you have completed 240 units (10 units = 1 course unless otherwise specified) which meet the following criteria:

- Core courses – 150 units.

Prior to 2021, students choose to complete either MATH1110 and MATH1120, OR MATH1210 and MATH1220. Choice of maths courses is based on your assumed knowledge. To find out which MATH course you should enrol in please see the Enrolling in Maths information. More information in your Program Handbook.

After 2021, the option to do MATH1210 and MATH1220 has been removed from the program. From 2021 onwards: 1) if you have not yet completed MATH1210 you must complete MATH1110; and 2) if you haven’t completed MATH1220 then you must complete MATH1120.

* Refer to the teach-out document in the Program Handbook for further information. If you require further enrolment advice please contact your Program Convenor.

- Major Compulsory courses – 30 units.
- Major Directed courses – 50 units (10 units at 2000 level and 40 units at 3000 level). Note: TWO of these courses need to be chosen from COMP3260; COMP3290; COMP3320; OR COMP3330).

- Electives – 10 units. Visit the Course Handbook to see a list of available Electives.
- Students who perform well during the program with a credit average of (GPA of 5.0 or greater, may apply for a further year of full time (or equivalent part time) study to obtain an honours degree.
- The duration of this program is three years full time (40 units per semester) or part time equivalent.
- The maximum time to complete this program is 8 years.
- Please note that courses marked in coloured boxes are changing for your program.

Some courses have assumed knowledge and/or requisites, please refer to the individual Course Handbook.

The Program Handbook has valuable information on program structure and requirements, if you are intending on studying part time or varying from this program plan please seek prior advice from your Academic Program Advisor.
# Bachelor of Computer Science – Applied Computing Major

## Directed Courses

Subject to change - Please refer to the program handbook for up to date information.

### Choose 10 units from these 2000 level Directed courses.

- **MATH2310** Calculus of Science and Engineering
- **MATH2340** Linearity and Continuity 1 *(replaces MATH2320 Linear Algebra)*
- **MATH2420** Engineering Mathematics *(no longer offered)*
- **MATH2600** Introduction to Modern Mathematical Computation *(no longer offered)*
- **SENG2050** Web Engineering
- **STAT2000** Applied Statistics and Research Methods

### Choose 40 units from these 3000 Level directed courses.

*(Note: 20 units must be from the following COMP3260; COMP3290; COMP3320; OR COMP3330).*

- **MATH3170** Number Theory
- **MATH3510** Combinatorics and Graph Theory *(no longer offered)*
- **MATH3830** Operations Research 2 *(no longer offered)*
- **SENG4430** Software Quality *(replaces SENG3130 Software Architecture and Quality Management)*
- **SENG2260** Human-Computer Interaction *(replaces SENG3300 User Interface Design)*
- **COMP3260** Data Security
- **COMP3290** Compiler Design
- **COMP3320** Computer Graphics
- **COMP3330** Machine Intelligence