How to enrol in the Bachelor of Engineering (Honours) and Bachelor of Computer Science
# Quick facts

<table>
<thead>
<tr>
<th><strong>Course Title</strong></th>
<th>Bachelor of Engineering (Honours) and Bachelor of Computer Science</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Short title</strong></td>
<td>BE(Hons)/BCompSc</td>
</tr>
<tr>
<td><strong>Course code</strong></td>
<td>E3010</td>
</tr>
<tr>
<td><strong>Engineering specialisations</strong></td>
<td>Electrical and Computer Systems or Software Engineering</td>
</tr>
</tbody>
</table>
| **You’ll graduate with** | Two awards:  
1. The award title for your engineering specialisation for example: Bachelor of Software Engineering (Honours)  
2. Bachelor of Computer Science |
| **Credit points** | 40 units x 6 credit points = 240 credit points  
41 units x 6 credit points = 246 cps if you need two foundation units |
| **Duration**     | 5 years full time - domestic and international students  
10 years part time - domestic students |
| **Time limit**   | 10 years                                                          |
# Now for the course structure

## Engineering Common first year
Students commence engineering and acquire knowledge in core disciplines, design and teamwork

### Engineering specialisation selection at the end of common first year
Levels 2, 3 and 4 units are taken in your specialisation over the remaining four years

<table>
<thead>
<tr>
<th>Level 2 units</th>
<th>Builds basic theory and further design skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 3 units</td>
<td>Extends theory and design into more complex, professional scenarios</td>
</tr>
<tr>
<td>Level 4 units</td>
<td>Provides specialised electives and an individual project</td>
</tr>
</tbody>
</table>

## Computer Science
Bachelor of Computer Science is a specialist course that develops through the themes of:

- computer science foundation study
- professional skills study
- specialist discipline knowledge
- problem solving and analytic skills study

which come together in applied practice.
Let’s enrol

- Your handbook entry and course map detail the units and other requirements you must meet to complete your degree.
- You’ll need to enrol for semester 2 only:
  - Full-time study (local and international students)
    - 4 units for the year 2018
  - Part-time study (local students only)
    - 2 units per semester
- What you enrol in is dependent on your academic preparation:
  - I am enrolling from Level 1 of the course
  - I have been awarded credit for part of the course eg students transferring from another university
Level 1 - Core engineering units

These five Engineering units are compulsory and must be completed at Level 1

- **ENG1001** Engineering design: Lighter, faster, stronger
- **ENG1002** Engineering design: Cleaner, safer smarter
- **ENG1003** Engineering mobile apps
- **ENG1060** Computing for engineers
- **ENG1005** Engineering mathematics

Tips!
- ✓ Split your design units (ENG1001 and ENG1002) across two semesters
- ✓ If you don’t have a background in physics, put ENG1001 in semester 2
- ✓ Keep ENG1060 and ENG1005 in the same semester
Level 1 - foundation units

These units develop your understanding of the natural and physical sciences and mathematics that underpin all engineering disciplines.

You may have already completed these units in your final year of school or in tertiary study (VCE Year 12, IB, A Levels or Monash College). If you haven’t, these units are compulsory.

- **MTH1020** Analysis of change (equivalent to VCE Specialist Maths units 3 & 4)
  - You don’t need to take Analysis of change if you have completed VCE Specialist Maths (score of ≥30), IB higher level maths, MUFY Adv Maths 1 & 2 ≥ 65%, any higher level maths with calculus or if you have completed Monash College Dip of Eng Pt 2.
  - **However, Maths is the language of engineering so if you are not confident with maths and calculus in particular, we recommend to strengthen your maths foundation.**

- **PHS1001** Foundation physics (equivalent to VCE Physics units 3 & 4)
  - You don’t need to take foundation physics if you have completed VCE, IB or A Level Physics; MUFY Physics 65%; Physics at a tertiary level or if you have completed Monash College Dip of Eng Pt 2.
Your remaining Engineering units will depend on whether you needed to take any foundation units.

| I need to take two foundation units | ➞ You have no remaining engineering units to choose  
|                                    | ➞ To avoid a study load of 9 units in first year, you can move ENG1001 Engineering design: lighter, faster, stronger to Year 2  
|                                    | ➞ [Choose your Computer Science units](#)  |
| I need to take one foundation unit | ➞ You have no remaining engineering units to choose  
|                                    | ➞ [Choose your Computer Science units](#)  |
| I don’t need to take any foundation units | ➞ You have one engineering elective unit to choose |
Level 1 – Engineering electives

You must choose at least one unit from:

- [CHM1011](#) Chemistry I or [CHM1051](#) Chemistry I advanced - Sem 1
- [ECE2041](#) Telecommunications - Sem 1
- [ECE2072](#) Digital systems – Sem 2
- [ENE1621](#) Environmental engineering - Sem 1
- [ENG1021](#) Spatial communication in engineering – Sem 2
- [ENG1051](#) Materials for energy and sustainability – Sem1 & 2
- [FIT2085](#) Introduction to computer science for engineers – Sem1 & 2
- [MAE2405](#) Aircraft performance – Sem 2
- [MAT1830](#) Discrete mathematics for computer science* - Sem 1
- [MEC2404](#) Mechanics of fluids – Sem 2
- [PHS1002](#) Physics for engineering – Sem 2
- [RSE1010](#) Natural resources engineering – Sem 2
- [TRC2001](#) Introduction to systems engineering – Sem 2

Tip!
✓ PHS1002 is a good choice if you’re not too sure which specialisation to choose at the end of Level 1.

* for Software engineers
These Level 2 engineering electives are offered in first year to extend capable students and provide a deeper insight into some of the specialisations:

- **ECE2041** Telecommunications
- **ECE2072** Digital systems
- **MAE2405** Aircraft performance
- **MEC2404** Mechanics of fluids
- **TRC2001** Introduction to systems engineering

**Tips!**

- You must have passed four units to be eligible to undertake these Level 2 electives so you’ll need to enrol in them in semester 1, 2020
- Don’t underestimate the difficulty and level of work involved in these units. Remember, you will be in class with Level 2 students.
The following two foundation computer science units are compulsory at Level 1:

- **FIT1045** Algorithms and programming fundamentals in python
- **FIT1008** Introduction to computer science.

Tip!
✓ If you’ve completed VCE Algorithmics, you are eligible for credit for FIT1045.
**Let’s enrol**

**Here’s what to enrol in if you don’t need any foundation units**

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Name</th>
<th>Notes</th>
</tr>
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<tbody>
<tr>
<td>Sem 2 2019</td>
<td>ENG1001 Engineering design: lighter, faster, stronger</td>
<td>ENG1005 Engineering mathematics</td>
<td>ENG1060 Computing for engineers</td>
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<td>Sem 1 2020</td>
<td>ENG1002 Engineering design: cleaner, safer, smarter</td>
<td>ENG1003 Engineering mobile apps</td>
<td>Engineering elective unit</td>
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<td>Sem 2 2020</td>
<td>ENG2001 Engineering Specialisation selection code (12cp) mid-year entry students</td>
<td>FIT1047 Introduction to computer systems, networks and security</td>
<td>FIT elective</td>
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**Tip!**

 ✓ You can swap the semesters of your S2 2019 engineering elective and S1 2020 FIT1045.
### Let’s enrol

#### Here’s what to enrol in if you need to take Foundation maths and physics

<table>
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<tr>
<th>Sem 2 2019</th>
<th>ENG1002 Engineering design: cleaner, safer, smarter</th>
<th>ENG1003 Engineering mobile apps</th>
<th>MTH1020 Analysis of change</th>
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In October 2019 you will re-enrol in the following units for 2020

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<th>ENG1001 Engineering design: lighter, faster, stronger</th>
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**Tip!**

- ✓ You can take the remaining core unit ENG1001 Engineering design: lighter, faster, stronger in semester one of year two as an overload.
- ✓ You cannot swap the semester of any of the units.
Let’s enrol

Here’s what to enrol in if you need to take Foundation physics

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Tip!
✓ You can swap the semesters of ENG1003 and FIT1045.
Here’s what to enrol in if you need to enrol in the Maths foundation unit

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Tip!
✓ You can swap the semesters of ENG1003 and FIT1008.
What if I have credit?

**Students granted some credit or credit across multiple year levels**
- Your credit has been keyed
- The units you need to enrol in are listed on the course map
- Print off a course map and mark the units you have been granted credit for
- Enrol in eight units, starting from the lowest year level, making sure to check prerequisites have been met.

**Tip!**
✓ Prerequisites are listed against each unit in the specialisation section of the handbook (at the bottom of the course page)

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Credit</th>
<th>Credit</th>
<th>Enrol</th>
<th>Enrol</th>
</tr>
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<tbody>
<tr>
<td>Semester 2</td>
<td>Credit</td>
<td>Credit</td>
<td>Enrol</td>
<td>Enrol</td>
</tr>
<tr>
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<td>Enrol</td>
<td>Credit</td>
<td>Credit</td>
<td>Enrol</td>
</tr>
<tr>
<td>Semester 2</td>
<td>Enrol</td>
<td>Enrol</td>
<td></td>
<td></td>
</tr>
<tr>
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How to apply for credit

• You can apply for credit for completed university level subjects
• You can search online for previous credit decisions to give you an idea of what you may be granted
• You do not need to provide your results or a syllabus for Monash enhancement units or VCE Algorithmics (we have these already!)
• Enrol in a standard enrolment to secure your place in the course. Your enrolment can be changed when your application has been processed.

Tip!
✓ Submit your credit application as quickly as possible to give you plenty of time to change your enrolment if you have to
✓ You will only be awarded credit if you have room in your course structure.
What next?

<table>
<thead>
<tr>
<th>International students</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Enrol on WES</strong></td>
</tr>
<tr>
<td>Don’t forget to go back to complete step 4 “Order your ID Card” after you enrol</td>
</tr>
<tr>
<td><strong>international student checklist</strong></td>
</tr>
<tr>
<td>Attend Orientation Week from <strong>Monday 22 – Friday 26 July 2019</strong> Further information will be provided closer to the date.</td>
</tr>
</tbody>
</table>
Orientation: 22-26 July

Orientation provides critical academic and social preparation for your study in engineering. Your attendance is required. See you in July!

Tip!
✓ We’ll send you a reminder email and further orientation details in early July. Be sure to monitor your student email account.