How to enrol in the Bachelor of Engineering (Honours) and Bachelor of Information Technology

Mid Year
# Quick facts

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Bachelor of Engineering (Honours) and Bachelor of Information Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short title</td>
<td>BE(Hons)/BInfoTech</td>
</tr>
<tr>
<td>Course code</td>
<td>E3011</td>
</tr>
<tr>
<td>Engineering specialisations</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 Information Technology |
| 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

<table>
<thead>
<tr>
<th>Level 1 units</th>
<th>Engineering Common first year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Students commence engineering and acquire knowledge in core disciplines, design and teamwork</td>
</tr>
</tbody>
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**Information Technology**

The Bachelor of Information Technology is a comprehensive course, structured in three equal parts. In the double degree course you complete two of the three parts:

**Information technology specified study**
- This will provide you with foundation skills and knowledge for your IT education and ensure a breadth of understanding of IT and its applications in organisations and society.

**Information technology listed major**
- (only the computer networks and security major is available in this double degree).

<table>
<thead>
<tr>
<th>Level 2 units</th>
<th>Builds basic theory and further design skills</th>
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<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>
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</table>
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)
    o 4 units for your first semester
  • Part-time study (local students only)
    o 2 units for your first semester

• What you enrol in is dependent on your academic preparation
  o **I am enrolling from Level 1 of the course**
  o **I have been awarded credit for part of the course (Students transferring from another universities)**
Level 1 - Core engineering units

These five 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, don’t do ENG1001 in your first semester
- 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 foundation maths (Analysis of change) if you’ve completed:
- VCE Specialist Maths (score of ≥30)
- IB higher level maths (4 or above)
- A Level mathematics (B or above)
- MUFY Adv Maths 1 & 2 (≥ 65%+)
- or any higher level maths with calculus.

Maths is the language of engineering so if you’re not confident with calculus, strengthen your maths foundation by taking MTH1020. If you have taken Gao Kao Maths you should enrol in MTH1020.

**PHS1001** Foundation physics (equivalent to VCE Physics units 3 & 4). You don’t need to take foundation physics if you’ve completed:
- VCE, IB or A Level Physics (pass grade)
- MUFY Physics (≥ 65%+)
- Physics at a tertiary level (pass grade)
- AP Physics 1 and 2 (if you have only completed Physics 1 or Physics C you must take PHS1001).
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 your first year, you can move ENG1001 Engineering design: lighter, faster, stronger to Year 2  
|                                    | ⇒ Choose your [Information Technology units](#)  

| I need to take one foundation unit | ⇒ You have no remaining engineering units to choose  
|                                    | ⇒ Choose your [Information Technology units](#)  

| I don’t need to take any foundation units | ⇒ You have one [engineering elective](#) unit to choose |
Level 1 – Engineering electives

Examples of electives (Engineering elective list)

- CHE1010 Grand challenges in chemical engineering: Delivering sustainable food, water and energy
- CHM1011 Chemistry 1 or CHM1051 Chemistry 1 advanced
- ECE2072 Digital systems
- ENE1621 Environmental engineering
- ENG1021 Spatial communication in engineering
- ENG1051 Materials for energy and sustainability
- ENG1811 Engineering design C: Automated, integrated and connected world
- ENG2801 Leadership and innovation
- FIT2085 Introduction to computer science for engineers
- MAE2405 Aircraft performance
- MAT1830 Discrete mathematics for computer science *
- MEC2404 Mechanics of fluids
- PHS1002 Physics for engineering
- RSE1010 Natural resources engineering
- TRC2001 Introduction to systems engineering

Tip!
✓ PHS1002 is a good choice if you’re not too sure which specialisation to choose at the end of Level 1.
These Level 2 engineering electives are offered in first year to extend capable students and provide a deeper insight into some of the specialisations:

- [CHE2161](#) Mechanics of fluids
- [ECE2041](#) Telecommunications
- [ECE2072](#) Digital systems
- [ENG2801](#) Leadership and innovation
- [FIT2085](#) Introduction to computer science for engineers
- [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 your second semester of study.
- Don’t underestimate the difficulty and level of work involved in these units. Remember, you will be in class with Level 2 students.
Two information technology specified study units are compulsory at Level 1:

- **FIT1047** Introduction to computer systems, networks and security **AND**
- **FIT1051** Programming fundamentals in java **OR**
- **FIT1045** Algorithms and programming fundamentals in python **OR**
- **FIT1048** Fundamentals of C++

**Tip!**
If you’ve completed VCE Algorithmics, you are eligible for credit for FIT1045.
## Here’s what to enrol in if you don’t need any foundation units

<table>
<thead>
<tr>
<th>Sem 2 2020</th>
<th>ENG1001 Engineering design: lighter, faster, stronger</th>
<th>ENG1005 Engineering mathematics</th>
<th>ENG1060 Computing for engineers</th>
<th>FIT1048 Fundamentals of C++ or FIT1045 Algorithms &amp; programming fundamentals in python or FIT1051 Programming fundamentals in java</th>
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### In October 2020 you will re-enrol in the following units for 2021

<table>
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<tr>
<th>Sem 1 2021</th>
<th>ENG1002 Engineering design: cleaner, safer, smarter</th>
<th>ENG1003 Engineering mobile apps</th>
<th>Engineering elective unit</th>
<th>FIT1047 Introduction to computer systems, networks and security</th>
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<tr>
<td>Sem 2 2021</td>
<td>ENG2001 Engineering Specialisation selection code (12cp) mid-year entry students</td>
<td>Information technology unit</td>
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### Tip!

- You can swap the semesters of your S2 2020 engineering elective and S1 2021 FIT1045.
Here’s what to enrol in if you need to take Foundation maths* and physics

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<th>Sem 2 2020</th>
<th>ENG1002 Engineering design: cleaner, safer, smarter</th>
<th>ENG1003 Engineering mobile apps</th>
<th>MTH1020 Analysis of change*</th>
<th>FIT1048 Fundamentals of C++ or FIT1045 Algorithms &amp; programming fundamentals in python or FIT1051 Programming fundamentals in java</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 semesters 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.
## Let’s enrol

### 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)
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?

All students

- [Enrol via Step 3 on Get Started](#) using the Web Enrolment System (WES)

- Order your ID card (Get Started - Step 4)