How to enrol in the Bachelor of Engineering (Honours) and Bachelor of Information Technology
## 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>Specialisations</td>
<td>Electrical and Computer Systems or Software Engineering (for eng)</td>
</tr>
<tr>
<td>IT Major</td>
<td>Computer Networks and Security (for IT)</td>
</tr>
<tr>
<td>You’ll graduate with</td>
<td>Two awards:</td>
</tr>
<tr>
<td></td>
<td>1. The award title for your engineering specialisation for example:</td>
</tr>
<tr>
<td></td>
<td>Bachelor of Software Engineering (Honours)</td>
</tr>
<tr>
<td></td>
<td>2. Bachelor of Information Technology</td>
</tr>
<tr>
<td>Credit points</td>
<td>40 units x 6 credit points = 240 credit points</td>
</tr>
<tr>
<td></td>
<td>41 units x 6 credit points = 246 cps if you need two foundation units</td>
</tr>
<tr>
<td>Duration</td>
<td>5 years full time - domestic and international students</td>
</tr>
<tr>
<td></td>
<td>10 years part time - domestic students</td>
</tr>
<tr>
<td>Time limit</td>
<td>10 years</td>
</tr>
</tbody>
</table>
# Now for the course structure

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

<table>
<thead>
<tr>
<th>Level 1 units</th>
<th>Engineering specialisation selection at the end of common first year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Levels 2, 3 and 4 units are taken in your specialisation over the remaining four years</td>
</tr>
</tbody>
</table>

<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>

## 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).
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 both semester 1 and 2
  • Full-time study (local and international students)
    o 4 units per semester/ 8 units for the year
  • Part-time study (local students only)
    o 2 units per semester/ 4 units for the year
• 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 e.g. students transferring from another university
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

Level 1 consists of 5 core units, 1 Engineering elective and 2 Foundation units (if required).

Foundation units develop your understanding of the natural and physical sciences and mathematics that underpin all engineering disciplines. You may have completed these units in your final year of school or in tertiary study. If you haven’t, these units are compulsory.

**ENG1090** Foundation mathematics (equivalent to VCE Specialist Maths units 3 & 4). You don’t need to take foundation maths 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 ENG1090. If you have taken Gao Kao Maths you should enrol in ENG1090.**

**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 having to take 9 units, 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 |
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, ECE2072 or FIT2085 are good choices to complement any specialisation.
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 semester 2.
- 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.
## Let’s enrol

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

<table>
<thead>
<tr>
<th>Sem 1</th>
<th>ENG1001 Engineering design: lighter, faster, stronger</th>
<th>ENG1005 Engineering mathematics</th>
<th>ENG1060 Computing for engineers</th>
<th>FIT1047 Introduction to computer systems, networks and security</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sem 2</td>
<td>ENG1002 Engineering design: cleaner, safer, smarter</td>
<td>ENG1003 Engineering mobile apps</td>
<td>Engineering elective unit</td>
<td>FIT1048 Fundamentals of C++ or FIT1045 Algorithms &amp; programming fundamentals in python or FIT1051 Programming fundamentals in java</td>
</tr>
</tbody>
</table>

**Tip!**

- You can swap the semester of your engineering elective and your semester 1 IT unit.

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

<table>
<thead>
<tr>
<th>Sem 1</th>
<th>ENG1002 Engineering design: cleaner, safer, smarter</th>
<th>PHS1001 Foundation physics</th>
<th>ENG1090 Foundation Mathematics</th>
<th>FIT1047 Introduction to computer systems, networks and security</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sem 2</td>
<td>ENG1003 Engineering mobile apps</td>
<td>ENG1005 Engineering mathematics</td>
<td>ENG1060 Computing for engineers</td>
<td>FIT1048 Fundamentals of C++ or FIT1045 Algorithms &amp; programming fundamentals in python or FIT1051 Programming fundamentals in java</td>
</tr>
</tbody>
</table>

**Tip!**

- You can take the remaining core unit ENG1001 in semester one of year two as an overload.
- You cannot swap the semesters of any of the unit.
Let’s enrol

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

<table>
<thead>
<tr>
<th>Sem 1</th>
<th>ENG1002 Engineering design: cleaner, safer, smarter</th>
<th>ENG1003 Engineering mobile apps</th>
<th>PHS1001 Foundation physics</th>
<th>FIT1047 Introduction to computer systems, networks and security</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sem 2</td>
<td>ENG1001 Engineering design: lighter, faster, stronger</td>
<td>ENG1005 Engineering mathematics</td>
<td>ENG1060 Computing for engineers</td>
<td>FIT1048 Fundamentals of C++ or FIT1045 Algorithms &amp; programming fundamentals in python or FIT1051 Programming fundamentals in java</td>
</tr>
</tbody>
</table>

Tip!
✔ You can swap the semester of ENG1003 and FIT1051/FIT1045 if you like.

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

<table>
<thead>
<tr>
<th>Sem 1</th>
<th>ENG1002 Engineering design: cleaner, safer, smarter</th>
<th>ENG1003 Engineering mobile apps</th>
<th>ENG1090 Foundation Mathematics</th>
<th>FIT1047 Introduction to computer systems, networks and security</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sem 2</td>
<td>ENG1001 Engineering design: lighter, faster, stronger</td>
<td>ENG1005 Engineering mathematics</td>
<td>ENG1060 Computing for engineers</td>
<td>FIT1048 Fundamentals of C++ or FIT1045 Algorithms &amp; programming fundamentals in python or FIT1051 Programming fundamentals in java</td>
</tr>
</tbody>
</table>

Tip!
✔ You can swap the semester of ENG1003 and FIT1051/FIT1045 if you like.
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

• **Apply for credit** for university level subjects you’ve completed
• **Search online** for current credit decisions
• You don’t need to give us your results or syllabus for Monash enhancement units (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>Domestic students</th>
<th>International students</th>
</tr>
</thead>
<tbody>
<tr>
<td>•  <a href="#">Enrol on WES</a> (Get Started - Step 3)</td>
<td>•  <a href="#">Enrol on WES</a> (Get Started - Step 3)</td>
</tr>
<tr>
<td>•  Order your ID card (Get Started - Step 4)</td>
<td>•  Order your ID card (Get Started - Step 4)</td>
</tr>
<tr>
<td>•  Select your preferred class times in Allocate+</td>
<td>•  Select your preferred class times in Allocate+</td>
</tr>
<tr>
<td>•  <a href="#">Attend Orientation</a> (Get Started – Step 5)</td>
<td>•  <a href="#">Attend Orientation</a> (Get Started – Step 5)</td>
</tr>
</tbody>
</table>

Collect and register your arrival by scanning your card at [Monash Connect](#).

You need to register your arrival at Monash Connect by 28 February 2020.
**Orientation** provides critical academic and social preparation for your study in engineering. Your attendance is required. See you in February!

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