

## Course progression maps for 2027 commencing students

This progression map provides advice on the optimal sequencing of units and guidance on planning unit enrolment for each semester of study in conjunction with the required units outlined in the course 'Requirements' section of the [Handbook](#). Please note that the map may be updated to reflect changes to course requirements. Be sure to review it for the latest information before re-enrolling. Last updated: 3 August 2026 (**Pending finalisation – Subject to change**)

### E3010 Bachelor of Engineering (Honours) and Bachelor of Computer Science

#### Common First Year

| You do not have VCE Units 3 & 4 Specialist Maths >30 study score <u>and</u> VCE Units 3 & 4 Physics >25 study score: You must enrol in Foundation mathematics (ENG1090) <u>and</u> Foundation physics (PHS1001)                                                                          |               |                                                   |                                                                               |                                                                                      |                                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------|
| Year                                                                                                                                                                                                                                                                                     | Sem           | Units                                             |                                                                               |                                                                                      |                                                     |
| 1                                                                                                                                                                                                                                                                                        | Sem 1<br>Feb  | <a href="#">ENG1013</a> Engineering smart systems | <a href="#">PHS1001</a> Foundation physics *<br><i>Recommended: ENG1090 *</i> | <a href="#">ENG1090</a> Foundation mathematics *                                     | <a href="#">FIT1045</a> Introduction to programming |
|                                                                                                                                                                                                                                                                                          | Sem 2<br>July | <a href="#">ENG1011</a> Engineering methods       | <a href="#">ENG1005</a> Engineering mathematics<br><i>Required: ENG1090 *</i> | <a href="#">ENG1014</a> Engineering numerical analysis<br><i>Required: ENG1090 *</i> | <a href="#">FIT1058</a> Foundations of computing    |
| If you require two foundation units, you will need to take the remaining core unit ENG1012 Engineering design in Year 2 (Semester 1) as an overload. This increases the total credit points needed for the double degree by 6 points. You cannot swap the semesters of any of the units. |               |                                                   |                                                                               |                                                                                      |                                                     |

| You do not have VCE Units 3 & 4 Specialist Maths >30 study score: You must enrol in Foundation mathematics (ENG1090) |               |                                                   |                                                                               |                                                                                      |                                                     |
|----------------------------------------------------------------------------------------------------------------------|---------------|---------------------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------|
| 1                                                                                                                    | Sem 1<br>Feb  | <a href="#">ENG1012</a> Engineering design        | <a href="#">ENG1011</a> Engineering methods                                   | <a href="#">ENG1090</a> Foundation mathematics *                                     | <a href="#">FIT1045</a> Introduction to programming |
|                                                                                                                      | Sem 2<br>July | <a href="#">ENG1013</a> Engineering smart systems | <a href="#">ENG1005</a> Engineering mathematics<br><i>Required: ENG1090 *</i> | <a href="#">ENG1014</a> Engineering numerical analysis<br><i>Required: ENG1090 *</i> | <a href="#">FIT1058</a> Foundations of computing    |

| You do not have VCE Units 3 & 4 Physics >25 study score: You must enrol in Foundation physics (PHS1001) |               |                                                                               |                                                   |                                                                                      |                                                     |
|---------------------------------------------------------------------------------------------------------|---------------|-------------------------------------------------------------------------------|---------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------|
| 1                                                                                                       | Sem 1<br>Feb  | <a href="#">ENG1005</a> Engineering mathematics<br><i>Required: ENG1090 *</i> | <a href="#">ENG1013</a> Engineering smart systems | <a href="#">PHS1001</a> Foundation physics *<br><i>Recommended: ENG1090 *</i>        | <a href="#">FIT1045</a> Introduction to programming |
|                                                                                                         | Sem 2<br>July | <a href="#">ENG1011</a> Engineering methods                                   | <a href="#">ENG1012</a> Engineering design        | <a href="#">ENG1014</a> Engineering numerical analysis<br><i>Required: ENG1090 *</i> | <a href="#">FIT1058</a> Foundations of computing    |

| You have completed VCE Units 3 & 4 Physics >25 study score <u>and</u> VCE Units 3 and 4 Specialist Maths >30 study score: No foundation units are required |               |                                             |                                                                               |                                                                                      |                                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------|
| 1                                                                                                                                                          | Sem 1<br>Feb  | <a href="#">ENG1011</a> Engineering methods | <a href="#">ENG1005</a> Engineering mathematics<br><i>Required: ENG1090 *</i> | <a href="#">ENG1014</a> Engineering numerical analysis<br><i>Required: ENG1090 *</i> | <a href="#">FIT1045</a> Introduction to programming |
|                                                                                                                                                            | Sem 2<br>July | <a href="#">ENG1012</a> Engineering design  | <a href="#">ENG1013</a> Engineering smart systems                             | <a href="#">First Year engineering breadth study</a>                                 | <a href="#">FIT1058</a> Foundations of computing    |

#### NOTE:

- It is important that you follow the course map unit sequence, as units are designed to build on prior knowledge. Taking units out of sequence can disrupt your progression and cause delays due to semester offerings and enrolment rules.
- \*Foundation units ENG1090 and PHS1001:** You enrol in the foundation units ENG1090 and/or PHS1001 if you have not completed the Australian VCE (Units 3 & 4) or equivalent Specialist mathematics and/or Physics with [the required study score](#).
- Each unit requires 12 hours of work per week. A full-time study week totals 48 hours. If you are unable to commit 48 hours of study due to external commitments, please speak with a course advisor about options to study less units per semester or take some units in the summer semester.
- For enrolment advice, please refer to the [Course advisers webpage](#).

## Course progression maps for 2027 commencing students

This progression map provides advice on the optimal sequencing of units and guidance on planning unit enrolment for each semester of study in conjunction with the required units outlined in the course 'Requirements' section of the [Handbook](#). Please note that the map may be updated to reflect changes to course requirements. Be sure to review it for the latest information before re-enrolling. Last updated: 3 August 2026 (**Pending finalisation – Subject to change**)

### E3010 Bachelor of Engineering (Honours) and Bachelor of Computer Science

Engineering specialisation - Electrical and computer systems engineering

Computer Science specialisation – Algorithms and software

|                               | Bachelor of Electrical and Computer Systems Engineering (Honours) |                                                                | Bachelor of Computer Science                                                    |                                                                            |                                                                                                                |
|-------------------------------|-------------------------------------------------------------------|----------------------------------------------------------------|---------------------------------------------------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| Year 1 Semester 1<br>February | Common First Year                                                 |                                                                |                                                                                 | <a href="#">FIT1045</a> Introduction to programming                        |                                                                                                                |
| Year 1 Semester 2<br>July     |                                                                   |                                                                |                                                                                 | <a href="#">FIT1058</a> Foundations of computing                           |                                                                                                                |
| Year 2 Semester 1<br>February | <a href="#">ENG2005</a> Advanced engineering mathematics          | <a href="#">ECE2071</a> Systems programming                    | <a href="#">ECE2131</a> Electrical circuits                                     | <a href="#">FIT1008</a> Fundamentals of algorithms                         | If two foundation units are required, then overload is required for <a href="#">ENG1012</a> Engineering design |
| Year 2 Semester 2<br>July     | <a href="#">ECE2072</a> Digital systems                           | <a href="#">ECE2111</a> Signals and systems                    | <a href="#">FIT1047</a> Introduction to computer systems, networks and security | <a href="#">FIT1049</a> / <a href="#">FIT1055</a> IT professional practice |                                                                                                                |
| Year 3 Semester 1<br>February | <a href="#">ECE3073</a> Computer systems                          | <a href="#">ECE3051</a> Electrical energy systems              | <a href="#">FIT2004</a> Algorithms and data structures                          | <a href="#">FIT2094</a> Databases                                          |                                                                                                                |
| Year 3 Semester 2<br>July     | <a href="#">ECE2191</a> Probability and AI for engineers          | <a href="#">ECE4132</a> Control system design                  | <a href="#">FIT2109</a> Computer science workshop                               | <a href="#">FIT2102</a> Programming paradigms                              |                                                                                                                |
| Year 4 Semester 1<br>February | <a href="#">ECE3141</a> Information and networks                  | <a href="#">Core List A elective</a>                           | <a href="#">FIT2099</a> Object oriented design and implementation               | <a href="#">FIT2014</a> Theory of computation                              |                                                                                                                |
| Year 4 Semester 2<br>July     | <a href="#">ECE3121</a> Engineering electromagnetics              | <a href="#">ECE3161</a> Analogue electronics                   | <a href="#">FIT3155</a> Advanced data structures and algorithms                 | <a href="#">FIT3143</a> Parallel computing                                 |                                                                                                                |
| Year 5 Semester 1<br>February | <a href="#">ENG4701</a> Final year project A                      | <a href="#">Complete one Professional Practice domain unit</a> | Any level 3 unit from list B of the algorithms and software specialisation      | <a href="#">FIT3161</a> Computer science project 1                         | <a href="#">ENG0001</a> Continuous Professional Development (0 credit points)                                  |
| Year 5 Semester 2<br>July     | <a href="#">ENG4702</a> Final year project B                      | <a href="#">ECE4191</a> Engineering integrated design          | <a href="#">Core List A or B elective</a>                                       | <a href="#">FIT3162</a> Computer science project 2                         |                                                                                                                |

#### NOTE:

- It is important that you follow the course map unit sequence, as units are designed to build on prior knowledge. Taking units out of sequence can disrupt your progression and cause delays due to semester offerings and enrolment rules.
- [ECE2072](#) - If you have completed this unit as a First Year breadth study unit, it will count towards your ECSE study. You must still fulfil the First Year engineering breadth study requirement by completing another breadth study unit.
- Engineering minors are not available in the Engineering related degree courses.
- You are required to complete at least 420 hours of Continuous Professional Development (CPD) in order to graduate. For further information refer to the [CPD webpage](#).
- Each unit requires 12 hours of work per week. A full-time study week totals 48 hours. If you are unable to commit 48 hours of study due to external commitments, please speak with a course advisor about options to study less units per semester or take some units in the summer semester.
- For enrolment advice, please refer to the [Course advisers webpage](#).

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### E3010 Bachelor of Engineering (Honours) and Bachelor of Computer Science

Engineering specialisation – Robotics and mechatronics engineering

Computer Science specialisation – Algorithms and software

|                               | Bachelor of Robotics and Mechatronics Engineering (Honours) |                                                           | Bachelor of Computer Science                                                    |                                                                            |                                                                                                                |
|-------------------------------|-------------------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| Year 1 Semester 1<br>February | Common First Year                                           |                                                           |                                                                                 | <a href="#">FIT1045</a> Introduction to programming                        |                                                                                                                |
| Year 1 Semester 2<br>July     |                                                             |                                                           |                                                                                 | <a href="#">FIT1058</a> Foundations of computing                           |                                                                                                                |
| Year 2 Semester 1<br>February | <a href="#">ECE2071</a> Systems programming                 | <a href="#">ECE2131</a> Electrical circuits               | <a href="#">FIT1047</a> Introduction to computer systems, networks and security | <a href="#">FIT1008</a> Fundamentals of algorithms                         | If two foundation units are required, then overload is required for <a href="#">ENG1012</a> Engineering design |
| Year 2 Semester 2<br>July     | <a href="#">ENG2005</a> Advanced engineering mathematics    | <a href="#">MMA2004</a> Dynamics 1                        | <a href="#">FIT1049</a> / <a href="#">FIT1055</a> IT professional practice      | <a href="#">FIT2109</a> Computer science workshop                          |                                                                                                                |
| Year 3 Semester 1<br>February | <a href="#">MMA2001</a> Design 1                            | <a href="#">TRC3200</a> Dynamical systems                 | <a href="#">FIT2004</a> Algorithms and data structures                          | <a href="#">FIT2094</a> Databases                                          |                                                                                                                |
| Year 3 Semester 2<br>July     | <a href="#">ECE2072</a> Digital systems                     | <a href="#">MMA2005</a> Modelling and control             | <a href="#">FIT2014</a> Theory of computation                                   | <a href="#">FIT2102</a> Programming paradigms                              |                                                                                                                |
| Year 4 Semester 1<br>February | <a href="#">TRC3500</a> Sensors and artificial perception   | <a href="#">ECE3073</a> Computer systems                  | <a href="#">FIT2099</a> Object oriented design and implementation               | Any level 3 unit from list B of the algorithms and software specialisation |                                                                                                                |
| Year 4 Semester 2<br>July     | <a href="#">MMA2003</a> Thermofluids 1                      | <a href="#">ECE4179</a> Neural networks and deep learning | <a href="#">FIT3155</a> Advanced data structures and algorithms                 | <a href="#">FIT3143</a> Parallel computing                                 |                                                                                                                |
| Year 5 Semester 1<br>February | <a href="#">ENG4701</a> Final year project A                | <a href="#">TRC4800</a> Robotics                          | <a href="#">ECE4076</a> Computer vision                                         | <a href="#">FIT3161</a> Computer science project 1                         | <a href="#">ENG0001</a> Continuous Professional Development (0 credit points)                                  |
| Year 5 Semester 2<br>July     | <a href="#">ENG4702</a> Final year project B                | <a href="#">TRC4407</a> Automation design project         | Complete one <a href="#">Professional Practice domain unit</a>                  | <a href="#">FIT3162</a> Computer science project 2                         |                                                                                                                |

#### NOTE:

- It is important that you follow the course map unit sequence, as units are designed to build on prior knowledge. Taking units out of sequence can disrupt your progression and cause delays due to semester offerings and enrolment rules.
- Each unit requires 12 hours of work per week. A full-time study week totals 48 hours. If you are unable to commit 48 hours of study due to external commitments, please speak with a course advisor about options to study less units per semester or take some units in the summer semester.
- [ECE2072](#) - If you have completed this unit as a First Year breadth study unit, it will count towards your robotics and mechatronics engineering study. You must still fulfil the First Year engineering breadth study requirement by completing another breadth study unit.
- You are required to complete the [Continuous Professional Development](#) in order to graduate.

For enrolment advice, please speak with a course adviser in your specialisation. Refer to the [Course Advisers webpage](#) if you are in Clayton.

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### E3010 Bachelor of Engineering (Honours) and Bachelor of Computer Science

Engineering specialisation - Software engineering

Computer Science specialisation – Algorithms and software

|                                  | Bachelor of Software Engineering (Honours)                                                  |                                                                     | Bachelor of Computer Science                                                                              |                                                                            |                                                                                                                |
|----------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| Year 1<br>Semester 1<br>February | Common First Year                                                                           |                                                                     |                                                                                                           | <a href="#">FIT1045</a> Introduction to programming                        |                                                                                                                |
| Year 1<br>Semester 2<br>July     |                                                                                             |                                                                     |                                                                                                           | <a href="#">FIT1058</a> Foundations of computing                           |                                                                                                                |
| Year 2<br>Semester 1<br>February | <a href="#">FIT2099</a> Object oriented design and implementation                           | <a href="#">FIT2173</a> Software security                           | <a href="#">FIT1047</a> Introduction to computer systems, networks and security                           | <a href="#">FIT1008</a> Fundamentals of algorithms                         | If two foundation units are required, then overload is required for <a href="#">ENG1012</a> Engineering design |
| Year 2<br>Semester 2<br>July     | <a href="#">FIT2100</a> Operating systems                                                   | <a href="#">FIT2101</a> Software engineering process and management | <a href="#">FIT2004</a> Algorithms and data structures                                                    | <a href="#">FIT2102</a> Programming paradigms                              |                                                                                                                |
| Year 3<br>Semester 1<br>February | <a href="#">FIT3197</a> Software quality and testing                                        | <a href="#">FIT2094</a> Databases                                   | <a href="#">FIT1049</a> / <a href="#">FIT1055</a> IT professional practice                                | Level 2 or 3 FIT-coded elective **                                         |                                                                                                                |
| Year 3<br>Semester 2<br>July     | <a href="#">FIT3184</a> Cloud computing                                                     | <a href="#">FIT3196</a> Computer architecture and networks          | <a href="#">FIT2014</a> Theory of computation                                                             | <a href="#">FIT2109</a> Computer science workshop                          |                                                                                                                |
| Year 4<br>Semester 1<br>February | <a href="#">FIT3077</a> Software engineering: architecture and design                       | <a href="#">Software engineering technical elective</a> *           | Level 2 or 3 FIT-coded elective **                                                                        | Any level 3 unit from list B of the algorithms and software specialisation |                                                                                                                |
| Year 4<br>Semester 2<br>July     | <a href="#">FIT3170</a> Software engineering practice (12 points)                           | <a href="#">Software engineering technical elective</a> *           | <a href="#">FIT3155</a> Advanced data structures and algorithms                                           | <a href="#">FIT3143</a> Parallel computing                                 |                                                                                                                |
| Year 5<br>Semester 1<br>February | <a href="#">FIT4002</a> Software engineering industry experience studio project (12 points) | <a href="#">FIT4701</a> Final year software engineering project A   | <a href="#">FIT4043</a> Advanced topics in software engineering<br><small>New unit in development</small> | <a href="#">FIT3161</a> Computer science project 1                         | <a href="#">ENG0001</a> Continuous Professional Development (0 credit points)                                  |
| Year 5<br>Semester 2<br>July     |                                                                                             | <a href="#">FIT4702</a> Final year software engineering project B   | <a href="#">Level 4 or 5 software engineering core elective</a>                                           | <a href="#">FIT3162</a> Computer science project 2                         |                                                                                                                |

#### NOTE:

- It is important that you follow the course map unit sequence, as units are designed to build on prior knowledge. Taking units out of sequence can disrupt your progression and cause delays due to semester offerings and enrolment rules.
- \* **MAT1830 and FIT2085:** Replace with approved software engineering electives due to overlapping content with the Bachelor of Computer Science.
- \*\* **FIT2094 and FIT2099:** Replace with level 2 or 3 FIT electives due to overlapping content with the Bachelor of Software Engineering
- Engineering minors are not available in the Engineering double degree courses.
- You are required to complete at least 420 hours of Continuous Professional Development (CPD) in order to graduate. For further information refer to the [CPD webpage](#).
- Each unit requires 12 hours of work per week. A full-time study week totals 48 hours. If you are unable to commit 48 hours of study due to external commitments, please speak with a course advisor about options to study less units per semester or take some units in the summer semester.
- For enrolment advice, please refer to the [Course advisers webpage](#).