Course progression map for 2019 commencing students

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E3002 Bachelor of Engineering (Honours) and Bachelor of Arts

Common first year

If no foundation units are required:

<table>
<thead>
<tr>
<th>Year</th>
<th>Sem</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>ENG1001 Engineering design: lighter, faster, stronger</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ENG1005 Engineering mathematics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ENG1060 Computing for engineers</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>ENG1002 Engineering design: cleaner, safer, smarter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ENG1003 Engineering mobile apps</td>
</tr>
<tr>
<td></td>
<td></td>
<td>First year engineering elective unit</td>
</tr>
</tbody>
</table>

Tip: You can swap the semester of your engineering elective and your semester 1 Arts unit.

If you need to enrol in foundation physics and maths:

<table>
<thead>
<tr>
<th>Year</th>
<th>Sem</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>ENG1002 Engineering design: cleaner, safer, smarter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PHS1001 Foundation physics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ENG1090 Foundation mathematics</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>ENG1001 Engineering design: lighter, faster, stronger</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ENG1005 Engineering mathematics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ENG1060 Computing for engineers</td>
</tr>
</tbody>
</table>

1. Double degree students requiring two foundation units will need to take the remaining core unit ENG1003 Engineering mobile apps in semester one of year two as an overload, and increase the total credit points needed for the double by 6 points. You cannot swap the semesters of any of the units.
2. Students wanting to complete Software Engineering must complete ENG1003 Engineering mobile apps in Year 1 (Semester 1) and PHS1001 Foundation physics in Year 2 (Semester 1) as an overload.

If you need to enrol in foundation maths:

<table>
<thead>
<tr>
<th>Year</th>
<th>Sem</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>ENG1002 Engineering design: cleaner, safer, smarter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ENG1003 Engineering mobile apps</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ENG1090 Foundation mathematics</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>ENG1001 Engineering design: lighter, faster, stronger</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ENG1005 Engineering mathematics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ENG1060 Computing for engineers</td>
</tr>
</tbody>
</table>

Tip: You can swap the semester of ENG1003 and your semester 2 Arts unit.

If you need to enrol in foundation physics:

<table>
<thead>
<tr>
<th>Year</th>
<th>Sem</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>ENG1002 Engineering design: cleaner, safer, smarter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ENG1003 Engineering mobile apps</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PHS1001 Foundation physics</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>ENG1001 Engineering design: lighter, faster, stronger</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ENG1005 Engineering mathematics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ENG1060 Computing for engineers</td>
</tr>
</tbody>
</table>

Tip: You can swap the semester of ENG1003 and your semester 2 Arts unit.

Note:
- All students 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.
- For enrolment advice, please refer to the Course advisers webpage.
## E3002 Bachelor of Engineering (Honours) and Bachelor of Arts
### Specialisation - Aerospace engineering

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Bachelor of Aerospace Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 1</td>
<td>Common first year</td>
<td>Arts major</td>
</tr>
<tr>
<td>Semester 2</td>
<td></td>
<td>Arts major</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2</th>
<th>Bachelor of Aerospace Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 1</td>
<td>ENG2005 Advanced engineering mathematics</td>
<td>MAE2406 Orbital mechanics and space flight dynamics</td>
</tr>
<tr>
<td>Semester 2</td>
<td>MAE2404 Aerodynamics 1</td>
<td>MAE2405 Aircraft performance</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3</th>
<th>Bachelor of Aerospace Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 1</td>
<td>MAE2401 Aircraft structures 1</td>
<td>MAE3404 Flight vehicle dynamics</td>
</tr>
<tr>
<td>Semester 2</td>
<td>MAE2402 Thermodynamics and heat transfer</td>
<td>MAE3408 Aerospace control</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 4</th>
<th>Bachelor of Aerospace Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 1</td>
<td>MAE3456 Aerospace computational mechanics</td>
<td>MAE3401 Aerodynamics 2</td>
</tr>
<tr>
<td>Semester 2</td>
<td>MAE3411 Aircraft structural mechanics</td>
<td>MAE3405 Flight vehicle propulsion</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 5</th>
<th>Bachelor of Aerospace Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 1</td>
<td>MEC4401 Final year project</td>
<td>MAE4410 Flight vehicle design</td>
</tr>
<tr>
<td>Semester 2</td>
<td>MEC4402 Final year – thesis</td>
<td>MAE4404 Aerospace practices</td>
</tr>
</tbody>
</table>

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# Course progression map for 2019 commencing students

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## E3002 Bachelor of Engineering (Honours) and Bachelor of Arts

### Specialisation - Chemical engineering

<table>
<thead>
<tr>
<th>Year 1 Semester 1</th>
<th>Bachelor of Chemical Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Common first year</td>
<td>Arts major</td>
</tr>
</tbody>
</table>

| Year 2 Semester 1 | CHM1011 Chemistry 1 (if not already completed at level 1) or CHM1051 Chemistry 1 Advanced | ENG2005 Advanced engineering mathematics | Arts minor | Arts major |

| Year 2 Semester 2 | CHE2162 Material and energy balances | CHE2161 Mechanics of fluids | Arts minor | Arts major |

| Year 3 Semester 1 | CHE2164 Thermodynamics 1 | CHE3167 Transport phenomena and numerical methods | Arts minor | Arts major |

| Year 3 Semester 2 | CHE2163 Heat and mass transfer | CHE3162 Process control | Arts minor | Arts major |

| Year 4 Semester 1 | CHE3161 Chemistry and chemical thermodynamics | CHE3165 Separation processes | Arts elective | Arts major |

| Year 4 Semester 2 | CHE3166 Process design | CHE3164 Reaction engineering | Arts elective | Arts major |

| Year 5 Semester 1 | CHE4164 Integrated industrial project (18 points) | CHE4180 Chemical engineering project* (12 points) | Arts elective | ENG0001 Continuous Professional Development (0 credit points) |

For selected students taking a period of integrated industrial training in the first semester of their final year. This will replace the two core units below [CHE4180 and CHE4161]

OR

| Year 5 Semester 1 | CHE4161 Engineer in society | CHE4180 Chemical engineering project* (12 points) | Arts elective |

* See footnote

| Year 5 Semester 2 | CHE4162 Particle technology | CHE4170 Design project (12 points) | Arts elective |

Note:
- From 2021, ENG4701 and ENG4702 will replace CHE4180, therefore extending the final year project over two semesters. Please seek course advice if needed.
- Depending on placement location, students who choose CHE4164 may have to overload a semester or extend an additional semester in order to complete their course requirement.
- Students should not overload in the semester of undertaking CHE4170.
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- For enrolment advice, please refer to the Course advisers webpage.

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CRICOS Provider Number: 00081B

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**E3002 Bachelor of Engineering (Honours) and Bachelor of Arts**

**Specialisation - Civil engineering**

<table>
<thead>
<tr>
<th>Year 1 Semester 1</th>
<th>Bachelor of Civil Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Common first year</td>
<td>Arts major</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 1 Semester 2</th>
<th>Common first year</th>
<th>Arts major</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Year 2 Semester 1</th>
<th>CIV2225 Design of steel and timber structures*</th>
<th>CIV2206 Structural mechanics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*See footnote</td>
<td>Arts minor</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2 Semester 2</th>
<th>ENG2005 Advanced engineering mathematics</th>
<th>CIV2242 Geomechanics 1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Arts minor</td>
<td>Arts major</td>
</tr>
</tbody>
</table>

| Year 3 Semester 1 | CIV2263 Water systems                         | CIV3284 Design of concrete and masonry structures* |
|-------------------|-----------------------------------------------|*See footnote                  |
|                   | Arts minor                                    | Arts major                   |

<table>
<thead>
<tr>
<th>Year 3 Semester 2</th>
<th>CIV2282 Transport and traffic engineering</th>
<th>CIV3204 Engineering investigation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*Sem 1 offering from 2021</td>
<td>Arts minor</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 4 Semester 1</th>
<th>CIV3248 Groundwater and environmental geomechanics</th>
<th>CIV3285 Engineering hydrology</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Arts elective</td>
<td>Arts major</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 4 Semester 2</th>
<th>CIV3247 Geomechanics 2</th>
<th>CIV3221 Building structures and technology</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Arts elective</td>
<td>Arts major</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 5 Semester 1</th>
<th>CIV4210 Project A</th>
<th>CIV4286 Project management for civil engineers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Arts elective</td>
<td>CIV4280 Bridge design and assessment</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 5 Semester 2</th>
<th>CIV4212 Civil engineering practice 4</th>
<th>CIV4287 Road engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Arts elective</td>
<td>CIV4288 Water treatment</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 5 Semester 2</th>
<th>CIV4212 Civil engineering practice 4</th>
<th>CIV4286 Project management for civil engineers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Arts elective</td>
<td>CIV4280 Bridge design and assessment</td>
</tr>
</tbody>
</table>

Note:

- CIV2225 and CIV3294 will be replacing CIV2225 and CIV3284 respectively. If you have completed CIV2225 prior to 2021, you must complete CIV3284 (last offering 2022). Otherwise, complete CIV2235 and CIV3294 combination. Please seek course advice.
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**CRICOS Provider Number:** 00008C

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**E3002 Bachelor of Engineering (Honours) and Bachelor of Arts**

Specialisation - Electrical and computer systems engineering

<table>
<thead>
<tr>
<th>Year</th>
<th>Semester</th>
<th>Bachelor of Electrical and Computer Systems Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Common first year</td>
<td>Arts major</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td></td>
<td>Arts major</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>ENG2005 Advanced engineering mathematics</td>
<td>Arts minor</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>ECE2071 Computer organisation and programming</td>
<td>Arts major</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>ECE2072 Digital systems (if not already taken at level one)</td>
<td>Arts minor</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>ECE2191 Probability models in engineering</td>
<td>Arts major</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>ECE2121 Electrical circuits</td>
<td>Arts minor</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>ECE3073 Computer systems</td>
<td>Arts major</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>ECE2111 Signals and systems</td>
<td>Arts minor</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>ECE3121 Engineering electromagnetics</td>
<td>Arts major</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>ECE3161 Analogue electronics</td>
<td>Arts elective</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>ECE3141 Information and networks</td>
<td>Arts major</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>ECE3091 Engineering design</td>
<td>Arts elective</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>ECE3051 Electrical energy systems*</td>
<td>Arts major</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>ECE4094 Project A</td>
<td>ECSE technical elective at level 4</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>ECE4132 Control system design</td>
<td>ECSE technical elective at level 4</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>ECE4095 Project B</td>
<td>ECE4099 Professional practice</td>
</tr>
</tbody>
</table>

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*This unit is taught in Semester 1 from 2020

If two foundation units are required then overload is required for ENG1003 Engineering mobile apps
### Course progression map for 2019 commencing students

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#### E3002 Bachelor of Engineering (Honours) and Bachelor of Arts

**Specialisation - Environmental engineering**

<table>
<thead>
<tr>
<th>Year 1 Semester 1</th>
<th>Bachelor of Environmental Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Common first year</td>
<td>Arts major</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2 Semester 1</th>
<th>Bachelor of Environmental Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>If two foundation units are required then overload is required for ENG1003 Engineering mobile apps</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 1 Semester 2</th>
<th>Bachelor of Environmental Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Arts minor</td>
<td>Arts major</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2 Semester 1</th>
<th>Bachelor of Environmental Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Arts minor</td>
<td>Arts major</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3 Semester 1</th>
<th>Bachelor of Environmental Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Arts minor</td>
<td>Arts major</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3 Semester 2</th>
<th>Bachelor of Environmental Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Arts minor</td>
<td>Arts major</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 4 Semester 1</th>
<th>Bachelor of Environmental Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Arts elective</td>
<td>Arts major</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 4 Semester 2</th>
<th>Bachelor of Environmental Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Arts elective</td>
<td>Arts major</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 5 Semester 1</th>
<th>Bachelor of Environmental Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Arts elective</td>
<td>Arts major</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 5 Semester 2</th>
<th>Bachelor of Environmental Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Arts elective</td>
<td>Arts major</td>
</tr>
</tbody>
</table>

**Note:**
- The Sustainable processing stream is not available in a double degree as it requires extra prerequisites in the elective space.
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**E3002 Bachelor of Engineering (Honours) and Bachelor of Arts**

Specialisation - Materials engineering

<table>
<thead>
<tr>
<th>Year 1 Semester 1</th>
<th>Bachelor of Materials Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common first year</td>
<td>Arts major</td>
<td>Arts major</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2 Semester 1</th>
<th>MTE2541 Crystal structures, thermodynamics and phase equilibria</th>
<th>MTE2544 Functional materials</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*Unit replaced by MTE2101 from 2021. See footnote</td>
<td>*Unit replaced by MTE2002 from 2021. See footnote</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2 Semester 2</th>
<th>ENG2005 Advanced engineering maths</th>
<th>MTE2542 Microstructural development</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>*Unit replaced by MTE2002 from 2021. See footnote</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3 Semester 1</th>
<th>MTE2546 Mechanics of materials</th>
<th>MTE3541 Materials durability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*Unit replaced by MTE3103 from 2021</td>
<td>*Unit replaced by MTE3103 from 2022</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3 Semester 2</th>
<th>MTE2545 Polymers and ceramics 1</th>
<th>MTE3545 Functional materials and devices</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*Unit replaced by MTE2001 from 2021</td>
<td>*Unit replaced by MTE2002 from 2022</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 4 Semester 1</th>
<th>MTE3543 Microstructure to applications: The mechanics of materials</th>
<th>MTE3542 Microstructural design in structural materials</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*See footnote</td>
<td>*Unit replaced by MTE3103 from 2022. See footnote</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 4 Semester 2</th>
<th>MTE3547 Materials characterisation and modelling</th>
<th>MTE3546 Polymers and ceramics 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*See footnote</td>
<td>*Unit replaced by MTE3103 from 2022. See footnote</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 5 Semester 1</th>
<th>MTE4525 Project 1</th>
<th>MTE4571 Materials engineering design and practice</th>
<th>MTE4572 Polymer and composite processing and engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*See footnote</td>
<td>*See footnote</td>
<td>*See footnote</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 5 Semester 2</th>
<th>MTE4573 Processing and engineering of metals and ceramics</th>
<th>ENG0001 Continuous Professional Development (0 credit points)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*See footnote</td>
<td></td>
</tr>
</tbody>
</table>

Note:
- **MINORS AND ELECTIVES LIST** is located on the Faculty's current student course information webpage.
- MTE2101 and MTE3101 will be replacing MTE2541 and MTE3547 respectively. If you have completed MTE2541 prior to 2021, you must complete MTE3547 (last offering 2021). Otherwise, complete MTE2101 and MTE3101 combination.
- MTE2201 and MTE3203 will be replacing MTE2545 and MTE3546 respectively. If you have completed MTE2545 prior to 2021, you must complete MTE3546 (last offering 2021). Otherwise, complete MTE2201 and MTE3203 combination.
- You must complete the (MTE3543+MTE4571+MTE4572+MTE4573) combination (last offerings 2022). Otherwise, complete (MTE3201+MTE4101+MTE4102+MTE4201) combination.
- The placement of units may be rearranged to support sequencing for double degree courses but care should be taken to ensure sequenced units are maintained in sequence.
- 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.

For enrolment advice, please refer to the Course Advisers webpage.
**Course progression map for 2019 commencing students**

This progression map provides advice on the suitable sequencing of units and guidance on how to plan unit enrolment for each semester of study. It does not substitute for the list of required units as described in the course 'Requirements' section of the Handbook. The map is subject to updates. Update version: 9 June 2021

### E3002 Bachelor of Engineering (Honours) and Bachelor of Arts

**Specialisation - Mechanical engineering**

<table>
<thead>
<tr>
<th>Year 1 Semester 1</th>
<th>Bachelor of Mechanical Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Common first year</td>
<td>Arts major</td>
</tr>
<tr>
<td>Year 1 Semester 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 2 Semester 1</td>
<td>MEC2403 Mechanics of materials</td>
<td>MEC2401 Dynamics 1</td>
</tr>
<tr>
<td>Year 2 Semester 2</td>
<td>ENG2005 Advanced engineering mathematics</td>
<td>MEC2404 - Mechanics of fluids</td>
</tr>
<tr>
<td>Year 3 Semester 1</td>
<td>MEC2402 Engineering design 1 *Unit title changed in 2021</td>
<td>MEC3456 Engineering computational mechanics</td>
</tr>
<tr>
<td>Year 3 Semester 2</td>
<td>MEC2405 Thermodynamics</td>
<td>MEC3457 Systems and control</td>
</tr>
<tr>
<td>Year 4 Semester 1</td>
<td>MEC3455 Solid mechanics</td>
<td>MEC3451 Fluid mechanics 2</td>
</tr>
<tr>
<td>Year 4 Semester 2</td>
<td>MEC3416 Engineering design 2 *Unit title changed in 2021</td>
<td>MEC3453 Dynamics 2</td>
</tr>
<tr>
<td>Year 5 Semester 1</td>
<td>MEC4408 Thermodynamics and heat transfer</td>
<td>MEC4401 Final year project</td>
</tr>
<tr>
<td>Year 5 Semester 2</td>
<td>MEC4426 Computer-aided design</td>
<td>MEC4402 Final year project – Thesis</td>
</tr>
<tr>
<td></td>
<td>MEC4407 Engineering design 3 *Unit title changed from 2021</td>
<td>MEC4404 Professional practice</td>
</tr>
</tbody>
</table>

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Course progression map for 2019 commencing students

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**E3002 Bachelor of Engineering (Honours) and Bachelor of Arts**

Specialisation – Robotics and Mechatronics engineering

<table>
<thead>
<tr>
<th>Year 1 Semester 1</th>
<th>Bachelor of Robotics and Mechatronics Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Common first year</td>
<td>Arts major</td>
</tr>
<tr>
<td>Year 1 Semester 2</td>
<td></td>
<td>Arts major</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2 Semester 1</th>
<th>Bachelor of Robotics and Mechatronics Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE2071 Computer organisation and programming</td>
<td>ECE2131 Electrical circuits</td>
<td>Arts minor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Arts major</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2 Semester 2</th>
<th>Bachelor of Robotics and Mechatronics Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG2005 Advanced engineering mathematics</td>
<td>TRC2201 Mechanics</td>
<td>Arts minor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Arts major</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3 Semester 1</th>
<th>Bachelor of Robotics and Mechatronics Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEC2402 Engineering design 1</td>
<td>TRC3200 Dynamical systems</td>
<td>Arts minor</td>
</tr>
<tr>
<td><em>Unit title change in 2021</em></td>
<td></td>
<td>Arts major</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3 Semester 2</th>
<th>Bachelor of Robotics and Mechatronics Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE2072 Digital systems</td>
<td>Automation stream</td>
<td>Arts minor</td>
</tr>
<tr>
<td></td>
<td>TRC4802 Thermo-fluids and power systems</td>
<td>Arts major</td>
</tr>
<tr>
<td></td>
<td>Artificial intelligence stream</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TRC479 Neural networks and deep learning</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 4 Semester 1</th>
<th>Bachelor of Robotics and Mechatronics Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRC3500 Sensors and artificial perception</td>
<td>ECE3161 Analogue electronics</td>
<td>Arts elective</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Arts major</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 4 Semester 2</th>
<th>Bachelor of Robotics and Mechatronics Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRC3600 Modelling and control</td>
<td>Automation stream</td>
<td>Arts elective</td>
</tr>
<tr>
<td></td>
<td>TRC3000 Automation project</td>
<td>Arts major</td>
</tr>
<tr>
<td></td>
<td>Artificial intelligence stream</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TRC3091 Engineering design</td>
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Course progression map for 2019 commencing students

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<table>
<thead>
<tr>
<th>Year 5 Semester 1</th>
<th>TRC4000 Robotics and mechatronics final year project 1</th>
<th>TRC4800 Robotics</th>
<th>Automation stream TRC4200 Engineering cyber-physical systems</th>
<th>Artificial intelligence stream ECE4076 Computer vision</th>
<th>Arts elective</th>
<th>ENG0001 Continuous Professional Development (0 credit points)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 5 Semester 2</td>
<td>TRC4001 Robotics and mechatronics final year project 2</td>
<td>TRC4902 Mechatronics and manufacturing</td>
<td>Automation stream TRC4902 Mechatronics and manufacturing</td>
<td>Artificial intelligence stream ECE4078 Intelligent robotics</td>
<td>TRC4002 Professional practice</td>
<td>Arts elective</td>
</tr>
</tbody>
</table>

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- For enrolment advice, please refer to the Course advisers webpage.

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## E3002 Bachelor of Engineering (Honours) and Bachelor of Arts

### Specialisation - Mechatronics engineering*

<table>
<thead>
<tr>
<th>Year</th>
<th>Semester</th>
<th>Bachelor of Mechatronics Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>Semester 1</td>
<td>Common first year</td>
<td>Arts major</td>
</tr>
<tr>
<td>Year 1</td>
<td>Semester 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 2</td>
<td>Semester 1</td>
<td>ECE2071 Computer organisation and programming</td>
<td>ECE2131 Electrical circuits</td>
</tr>
<tr>
<td>Year 2</td>
<td>Semester 2</td>
<td>ENG2005 Advanced engineering mathematics</td>
<td>TRC2201 Mechanics</td>
</tr>
<tr>
<td>Year 3</td>
<td>Semester 1</td>
<td>MEC2402 Engineering design 1</td>
<td>TRC3200 Dynamical systems</td>
</tr>
<tr>
<td>Year 3</td>
<td>Semester 2</td>
<td>TRC2001 Introduction to systems engineering</td>
<td>TRC4802 Thermo-fluids and power systems</td>
</tr>
<tr>
<td>Year 4</td>
<td>Semester 1</td>
<td>TRC3500 Sensors and artificial perception</td>
<td>ECE3161 Analogue electronics</td>
</tr>
<tr>
<td>Year 4</td>
<td>Semester 2</td>
<td>TRC3600 Modelling and control</td>
<td>TRC3000 Mechatronics project 2</td>
</tr>
<tr>
<td>Year 5</td>
<td>Semester 1</td>
<td>TRC4000 Mechatronics final year project 1</td>
<td>TRC4800 Robotics</td>
</tr>
<tr>
<td>Year 5</td>
<td>Semester 2</td>
<td>TRC4001 Mechatronics final year project 2</td>
<td>TRC4902 Mechatronics and manufacturing</td>
</tr>
<tr>
<td>Year 5</td>
<td>Semester 2</td>
<td>TRC4002 Professional practice</td>
<td></td>
</tr>
</tbody>
</table>

**Note:**

* ROBOTICS AND MECHATRONICS ENGINEERING will replace the Mechatronics Engineering specialisation in 2020.

- All students 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](http://www.monash.edu.au/pubs/2019handbooks/maps/map-e3002.pdf).
- For enrolment advice, please refer to the [Course advisers webpage](http://www.monash.edu.au/pubs/2019handbooks/maps/map-e3002.pdf).
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**E3002 Bachelor of Engineering (Honours) and Bachelor of Arts**

Specialisation - Software engineering

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Bachelor of Software Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 1</td>
<td>Common first year</td>
<td>Arts major</td>
</tr>
<tr>
<td>Semester 2</td>
<td></td>
<td>Arts major</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2</th>
<th>Bachelor of Software Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 1</td>
<td>MAT1830 Discrete mathematics for computer science</td>
<td>Arts major</td>
</tr>
<tr>
<td></td>
<td>FIT2085 Introduction to computer science</td>
<td>Arts minor</td>
</tr>
<tr>
<td>Semester 2</td>
<td>FIT2004 Algorithms and data structures</td>
<td>If two foundation units are required then overload is required for ENG1003 Engineering mobile apps</td>
</tr>
<tr>
<td></td>
<td>FIT2101 Software engineering process and management</td>
<td>Arts major</td>
</tr>
<tr>
<td></td>
<td>Arts minor</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3</th>
<th>Bachelor of Software Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 1</td>
<td>FIT2099 Object oriented design and implementation</td>
<td>Arts major</td>
</tr>
<tr>
<td></td>
<td>FIT3159 Computer architecture</td>
<td>Arts elective</td>
</tr>
<tr>
<td>Semester 2</td>
<td>FIT2107 Software quality and testing</td>
<td>Arts major</td>
</tr>
<tr>
<td></td>
<td>FIT2100 Operating systems</td>
<td>Arts elective</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 4</th>
<th>Bachelor of Software Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 1</td>
<td>FIT3170 Software engineering practice (12 points)</td>
<td>Arts major</td>
</tr>
<tr>
<td></td>
<td>FIT3077 Software engineering; architecture and design</td>
<td>Arts elective</td>
</tr>
<tr>
<td>Semester 2</td>
<td>FIT3171 Databases</td>
<td>Arts major</td>
</tr>
<tr>
<td></td>
<td>ENG0001 Continuous Professional Development (0 credit points)</td>
<td>Arts elective</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 5</th>
<th>Bachelor of Software Engineering (Honours)</th>
<th>Bachelor of Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 1</td>
<td>FIT4002 Software engineering industry experience studio project (12 points)</td>
<td>Arts elective</td>
</tr>
<tr>
<td></td>
<td>FIT4165 Computer networks</td>
<td>Software engineering technical elective at level 4 or above</td>
</tr>
<tr>
<td>Semester 2</td>
<td>FIT4003 Software engineering research project (12 points)</td>
<td>Arts elective</td>
</tr>
</tbody>
</table>

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