Course progression map for 2021 commencing students

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E6001 Master of Advanced Engineering
Specialisation – Additive manufacturing

Entry level 2 program

<table>
<thead>
<tr>
<th>YEAR 1</th>
<th>SEMESTER 1</th>
<th></th>
<th>SEMESTER 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG5001</td>
<td>Advanced engineering data analysis</td>
<td>MTE5887</td>
<td>Additive manufacturing of polymeric and functional materials</td>
<td>MEC5891</td>
</tr>
<tr>
<td>ENG5002</td>
<td>Engineering entrepreneurship</td>
<td>MTE5886</td>
<td>Additive manufacturing of metallic materials</td>
<td>MEC5881</td>
</tr>
<tr>
<td>Or ENG5008</td>
<td>Work integrated learning</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Enhancement units

- ACF5903 Accounting for business
- BTF5910 Corporate sustainability regulation
- CHE5882 Biomass and biorefineries
- CHE5883 Nanostructured membranes for separation and energy production
- ECE5886 Smart grids
- ECF5953 Economics
- ENG5100 Professional engineer in organisation and society
- MEC5862 Instrumentation, sensing and monitoring
- MGF5600 Managing innovation
- MGF5011 Commercialisation
- MGF5020 Business ethics in a global environment
- MKF5955 Marketing management - Theory and practice
- MTE5863 Environmental durability and protection of metals and engineering materials
- MTE5885 Biomaterials and biomechanics

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E6001 Master of Advanced Engineering
Specialisation – Chemical engineering

Entry level 2 program

<table>
<thead>
<tr>
<th>YEAR 1 Semester 1</th>
<th>ENG5001 Advanced engineering data analysis</th>
<th>CHE5881 Advanced reaction engineering</th>
<th>CHE5884 Process modelling and optimisation</th>
<th>Enhancement unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>YEAR 1 Semester 2</td>
<td>ENG5002 Engineering entrepreneurship No offering in 2022 Or ENG5008 Work integrated learning</td>
<td>CHE5882 Biomass and biorefineries</td>
<td>CHE5883 Nanostructured membranes for separation and energy production</td>
<td>ENG5005 Research methods</td>
</tr>
</tbody>
</table>

Enhancement units

- ACF5903 Accounting for business
- BTF5910 Corporate sustainability regulation
- ECE5886 Smart grids
- ECF5963 Economics
- ENG5100 Professional engineer in organisation and society
- MEC5881 Engineering systems performance analysis
- MEC5882 Instrumentation, sensing and monitoring
- MGF5600 Managing innovation
- MGF5011 Commercialisation
- MGF5020 Business ethics in a global environment
- MKF5955 Marketing management - Theory and practice
- MTE5883 Environmental durability and protection of metals and engineering materials
- MTE5885 Biomaterials and biomechanics
- MTE5886 Additive manufacturing of metallic materials
- MTE5887 Additive manufacturing of polymeric and functional materials

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Course progression map for 2021 commencing students

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E6001 Master of Advanced Engineering
Specialisation – Civil engineering (Infrastructure systems)

Entry level 2 program

<table>
<thead>
<tr>
<th>YEAR 1 Semester 1</th>
<th>ENG5001 Advanced engineering data analysis</th>
<th>CIV5885 Infrastructure dynamics</th>
<th>CIV5886 Infrastructure geomechanics</th>
<th>Enhancement unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>YEAR 1 Semester 2</td>
<td>ENG5002 Engineering entrepreneurship</td>
<td>No offering in 2022 Or ENG5008 Work integrated learning</td>
<td>CIV5887 Infrastructure rehabilitation and monitoring</td>
<td>CIV5888 Advanced computational methods</td>
</tr>
</tbody>
</table>

Enhancement units

- ACF5903 Accounting for business
- BTF5910 Corporate sustainability regulation
- CHE5882 Biomass and biorefineries
- CHE5883 Nanostructured membranes for separation and energy production
- CIV5301 Advanced traffic engineering
- CIV5302 Traffic engineering and management
- CIV5305 Travel demand modelling
- CIV5310 Infrastructure project and policy evaluation
- CIV5313 Asset management
- CIV5314 Planning urban mobility futures
- CIV5315 Applied transport economics
- CIV5316 Fundamentals of urban public transport
- CIV5323 Project risk management
- CIV5881 Ground water hydraulics
- CIV5882 Flood hydraulics and hydrology
- CIV5883 Surface water hydrology
- CIV5884 Water sensitive stormwater design
- CIV5899 Infrastructure information management
- ECE5886 Smart grids
- ECF5953 Economics
- ENG5100 Professional engineer in organisation and society
- MEC5881 Engineering systems performance analysis
- MEC5882 Instrumentation, sensing and monitoring
- MGF5600 Managing innovation
- MGF5011 Commercialisation
- MKF5955 Marketing management - Theory and practice
- MTE5883 Environmental durability and protection of metals and engineering materials
- MTE5885 Biomaterials and biomechanics
- MTE5886 Additive manufacturing of metallic materials
- MTE5887 Additive manufacturing of polymeric and functional materials

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E6001 Master of Advanced Engineering
Specialisation – Civil engineering (Transport)

Entry level 2 program

<table>
<thead>
<tr>
<th>YEAR 1</th>
<th>ENG5001 Advanced engineering data analysis</th>
<th>CIV5302 Traffic engineering and management</th>
<th>CIV5304 Intelligent transport</th>
<th>Enhancement unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 1</td>
<td></td>
<td></td>
<td></td>
<td>ENG5005 Research methods</td>
</tr>
<tr>
<td>YEAR 1</td>
<td>ENG5002 Engineering entrepreneurship</td>
<td>CIV5301 Advanced traffic engineering</td>
<td>CIV5314 Planning urban mobility futures</td>
<td></td>
</tr>
<tr>
<td>Semester 2</td>
<td>Or ENG5008 Work integrated learning</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Enhancement units

- ACF5903 Accounting for business
- BTF5910 Corporate sustainability regulation
- CHE5882 Biomass and biorefineries
- CHE5883 Nanostructured membranes for separation and energy production
- CIV5305 Travel demand modelling
- CIV5310 Infrastructure project and policy evaluation
- CIV5312 Asset management
- CIV5315 Applied transport economics
- CIV5316 Fundamentals of urban public transport
- CIV5320 Project risk management
- CIV5881 Ground water hydraulics
- CIV5882 Flood hydraulics and hydrology
- CIV5883 Surface water hydrology
- CIV5884 Water sensitive stormwater design
- CIV5885 Infrastructure dynamics
- CIV5886 Infrastructure geomechanics
- CIV5887 Infrastructure rehabilitation and monitoring
- CIV5888 Advanced computational methods
- CIV5899 Infrastructure information management
- ECE5886 Smart grids
- ECF5953 Economics
- ENG5100 Professional engineer in organisation and society
- MEC5881 Engineering systems performance analysis
- MEC5882 Instrumentation, sensing and monitoring
- MGF5800 Managing innovation
- MGF5011 Commercialisation
- MGF5020 Business ethics in a global environment
- MKF5955 Marketing management - Theory and practice
- MTE5883 Environmental durability and protection of metals and engineering materials
- MTE5885 Biomaterials and biomechanics
- MTE5886 Additive manufacturing of metallic materials
- MTE5887 Additive manufacturing of polymeric and functional materials

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E6001 Master of Advanced Engineering
Specialisation – Civil engineering (Water)

Entry level 2 program

<table>
<thead>
<tr>
<th>YEAR 1</th>
<th>ENG5001 Advanced engineering data analysis</th>
<th>CIV5881 Ground water hydraulics</th>
<th>CIV5884 Water sensitive stormwater design</th>
<th>Enhancement unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>YEAR 1</th>
<th>ENG5002 Engineering entrepreneurship No offering in 2022 Or ENG5008 Work integrated learning</th>
<th>CIV5883 Surface water hydrology</th>
<th>CIV5882 Flood hydraulics and hydrology</th>
<th>ENG5005 Research methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 2</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

 Enhancement units

- AC5903 Accounting for business
- BT5910 Corporate sustainability regulation
- CHE5852 Biomass and biorefineries
- CHE5893 Nanostructured membranes for separation and energy production
- CIV5301 Advanced traffic engineering
- CIV5302 Traffic engineering and management
- CIV5310 Infrastructure project and policy evaluation
- CIV5313 Asset management
- CIV5314 Planning urban mobility futures
- CIV5315 Applied transport economics
- CIV5316 Fundamentals of urban public transport
- CIV5323 Project risk management
- CIV5887 Infrastructure dynamics
- CIV5886 Infrastructure geomechanics
- CIV5887 Infrastructure rehabilitation and monitoring
- CIV5888 Advanced computational methods
- CIV5899 Infrastructure information management
- ECE5896 Smart grids
- ECF993 Economics
- EN5010 Professional engineer in organisation and society
- MEC5861 Engineering systems performance analysis
- MEC5892 Instrumentation, sensing and monitoring
- MGF5600 Managing innovation
- MGF5011 Commercialisation
- MGF5020 Business ethics in a global environment
- MK5055 Marketing management - Theory and practice
- MTE5861 Environmental durability and protection of metals and engineering materials
- MTE5896 Biomaterials and biomechanics
- MTE5896 Additive manufacturing of metallic materials
- MTE5877 Additive manufacturing of polymeric and functional materials

The unit listings are subject to updates.
E6001 Master of Advanced Engineering

Specialisation – Electrical engineering

Entry level 2 program

<table>
<thead>
<tr>
<th>YEAR 1 Semester 1</th>
<th>ENG5001 Advanced engineering data analysis</th>
<th>ECE5881 Real-time system design</th>
<th>ECE5883 Advanced signal processing</th>
<th>Enhancement unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>YEAR 1 Semester 2</td>
<td>ENG5002 Engineering entrepreneurship No offering in 2022 Or ENG5008 Work integrated learning</td>
<td>ECE5882 Advanced electronics design</td>
<td>ECE5884 Wireless communications</td>
<td>ENG5005 Research methods</td>
</tr>
</tbody>
</table>

Enhancement units

- ACF5903 Accounting for business
- BTF5910 Corporate sustainability regulation
- CHE5882 Biomass and biorefineries
- CHE5883 Nanostructured membranes for separation and energy production
- ECE5886 Smart grids
- ECF5863 Economics
- ENG5100 Professional engineer in organisation and society
- MEC5881 Engineering systems performance analysis
- MEC5882 Instrumentation, sensing and monitoring
- MGF5600 Managing innovation
- MGF5011 Commercialisation
- MGF5020 Business ethics in a global environment
- MKF5955 Marketing management - Theory and practice
- MTE5883 Environmental durability and protection of metals and engineering materials
- MTE5885 Biomaterials and biomechanics
- MTE5886 Additive manufacturing of metallic materials
- MTE5887 Additive manufacturing of polymeric and functional materials

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E6001 Master of Advanced Engineering

Specialisation – Materials engineering

Entry level 2 program

<table>
<thead>
<tr>
<th>YEAR 1 Semester 1</th>
<th>ENG5001 Advanced engineering data analysis</th>
<th>MTE5882 Advanced polymeric materials</th>
<th>MTE5884 Materials for energy technologies</th>
<th>Enhancement unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>YEAR 1 Semester 2</td>
<td>ENG5002 Engineering entrepreneurship No offering in 2022 Or ENG5008 Work integrated learning</td>
<td>MTE5881 Applied crystallography in advanced materials characterisation</td>
<td>MTE5893 Environmental durability and protection of metals and engineering materials</td>
<td>ENG5005 Research methods</td>
</tr>
</tbody>
</table>

Enhancement units

- ACF5903 Accounting for business
- BTF5910 Corporate sustainability regulation
- CHE5882 Biomass and biorefineries
- CHE5883 Nanostructured membranes for separation and energy production
- ECE5886 Smart grids
- ECF5953 Economics
- ENG5100 Professional engineer in organisation and society
- MEC5881 Engineering systems performance analysis
- MEC5882 Instrumentation, sensing and monitoring
- MEC5891 Design for additive manufacturing
- MGF5600 Managing innovation
- MGF5011 Commercialisation
- MGF5020 Business ethics in a global environment
- MKF5955 Marketing management - Theory and practice
- MTE5885 Biomaterials and biomechanics
- MTE5886 Additive manufacturing of metallic materials
- MTE5887 Additive manufacturing of polymeric and functional materials

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E6001 Master of Advanced Engineering
Specialisation – Mechanical engineering

Entry level 2 program

<table>
<thead>
<tr>
<th>YEAR 1</th>
<th>Semester 1</th>
<th>ENG5001 Advanced engineering data analysis</th>
<th>MEC5882 Instrumentation, sensing and monitoring</th>
<th>MEC5883 Mechanical systems design</th>
<th>Enhancement unit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>ENG5002 Engineering entrepreneurship</td>
<td>MEC5881 Engineering systems performance analysis</td>
<td>MEC5884 Sustainable engineering systems</td>
<td>ENG5005 Research methods</td>
</tr>
</tbody>
</table>

| YEAR 1                      | Semester 2 | ENGS5008 Work integrated learning        | MEC5881 Engineering systems performance analysis | MEC5884 Sustainable engineering systems | ENG5005 Research methods |

Enhancement units

- ACF5903 Accounting for business
- BTF5910 Corporate sustainability regulation
- CHE5882 Biomass and biorefineries
- CHE5883 Nanostructured membranes for separation and energy production
- ECE5886 Smart grids
- ECF5953 Economics
- ENG5010 Professional engineer in organisation and society
- MEC5891 Design for additive manufacturing
- MGF5600 Managing innovation
- MGF5020 Business ethics in a global environment
- MKF5955 Marketing management - Theory and practice
- MTE5883 Environmental durability and protection of metals and engineering materials
- MTE5885 Biomaterials and biomechanics
- MTE5886 Additive manufacturing of metallic materials
- MTE5887 Additive manufacturing of polymeric and functional materials

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E6001 Master of Advanced Engineering

Specialisation – Renewable and sustainable energy engineering

Entry level 2 program

<table>
<thead>
<tr>
<th>YEAR 1 Semester 1</th>
<th>ENG5001 Advanced engineering data analysis</th>
<th>MEC5885 Energy efficiency and sustainability engineering</th>
<th>MTE5884 Advanced photovoltaics and energy storage</th>
<th>Enhancement unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>YEAR 1 Semester 2</td>
<td>ENG5002 Engineering entrepreneurship No offering in 2022 Or ENG5008 Work integrated learning</td>
<td>ECE5886 Smart grids</td>
<td>MEC5888 Renewable energy systems</td>
<td>ENG5005 Research methods</td>
</tr>
</tbody>
</table>

Enhancement units

- ACF5903 Accounting for business
- BTF5910 Corporate sustainability regulation
- CHE5882 Biomass and biorefineries
- CHE5883 Nanostructured membranes for separation and energy production
- ECF5963 Economics
- ENG5100 Professional engineer in organisation and society
- MEC5881 Engineering systems performance analysis
- MEC5882 Instrumentation, sensing and monitoring
- MGF5600 Managing innovation
- MGF5011 Commercialisation
- MGF5020 Business ethics in a global environment
- MKF5965 Marketing management - Theory and practice
- MTE5883 Environmental durability and protection of metals and engineering materials
- MTE5885 Biomaterials and biomechanics
- MTE5886 Additive manufacturing of metallic materials
- MTE5887 Additive manufacturing of polymeric and functional materials