

Course progression map for 2021 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 should be used in conjunction with the requirements of the course as specified in the [Handbook](#). The map is subject to updates. Update version: 23 September 2021

E6001 Master of Advanced Engineering

Specialisation – Additive manufacturing

Entry level 2 program

| | | | | |
|----------------------|---|--|--|--|
| YEAR 1 Semester 1 | ENG5001 Advanced engineering data analysis | MTE5887 Additive manufacturing of polymeric and functional materials | MEC5891 Design for additive manufacturing | Enhancement unit |
| YEAR 1 Semester 2 | ENG5002 Engineering entrepreneurship <small>No offering in 2022</small> Or ENG5008 Work integrated learning | MTE5886 Additive manufacturing of metallic materials | MEC5881 Engineering systems performance analysis | ENG5005 Research methods |

| Enhancement units |
|---|
| <ul style="list-style-type: none"> • 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 • 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 |

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E6001 Master of Advanced Engineering

Specialisation – Chemical engineering

Entry level 2 program

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

| Enhancement units |
|---|
| <ul style="list-style-type: none"> • ACF5903 Accounting for business • BTF5910 Corporate sustainability regulation • 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 • 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 (Infrastructure systems)

Entry level 2 program

| | | | | |
|-----------------------------|---|--|--|--|
| YEAR 1 Semester 1 | ENG5001 Advanced engineering data analysis | CIV5885 Infrastructure dynamics | CIV5886 Infrastructure geomechanics | Enhancement unit |
| YEAR 1 Semester 2 | ENG5002 Engineering entrepreneurship <small>No offering in 2022</small> Or ENG5008 Work integrated learning | CIV5887 Infrastructure rehabilitation and monitoring | CIV5888 Advanced computational methods | ENG5005 Research methods |

| Enhancement units | |
|--|---|
| <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 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 (Transport)

Entry level 2 program

| | | | | |
|----------------------|---|--|---|--|
| YEAR 1 Semester 1 | ENG5001 Advanced engineering data analysis | CIV5302 Traffic engineering and management | CIV5304 Intelligent transport | Enhancement unit |
| YEAR 1 Semester 2 | ENG5002 Engineering entrepreneurship <small>No offering in 2022</small> Or ENG5008 Work integrated learning | CIV5301 Advanced traffic engineering | CIV5314 Planning urban mobility futures | ENG5005 Research methods |

| Enhancement units | |
|--|--|
| <ul style="list-style-type: none"> • 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 • CIV5313 Asset management • 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 • CIV5885 Infrastructure dynamics • CIV5886 Infrastructure geomechanics • CIV5887 Infrastructure rehabilitation and monitoring | <ul style="list-style-type: none"> • 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 • 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 – Civil engineering (Water)

Entry level 2 program

| | | | | |
|----------------------|---|---|---|--|
| YEAR 1 Semester 1 | ENG5001 Advanced engineering data analysis | CIV5881 Ground water hydraulics | CIV5884 Water sensitive stormwater design | Enhancement unit |
| YEAR 1 Semester 2 | ENG5002 Engineering entrepreneurship <small>No offering in 2022</small> Or ENG5008 Work integrated learning | CIV5883 Surface water hydrology | CIV5882 Flood hydraulics and hydrology | ENG5005 Research methods |

| Enhancement units | |
|--|--|
| <ul style="list-style-type: none"> • 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 • CIV5885 Infrastructure dynamics • CIV5886 Infrastructure geomechanics • CIV5887 Infrastructure rehabilitation and monitoring | <ul style="list-style-type: none"> • 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 • 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 – Electrical engineering

Entry level 2 program

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

| Enhancement units |
|---|
| <ul style="list-style-type: none"> • 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 • 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

| | | | | |
|-----------------------------|---|--|---|--|
| YEAR 1 Semester 1 | ENG5001 Advanced engineering data analysis | MTE5882 Advanced polymeric materials | MTE5884 Materials for energy technologies | Enhancement unit |
| YEAR 1 Semester 2 | ENG5002 Engineering entrepreneurship <small>No offering in 2022</small> Or ENG5008 Work integrated learning | MTE5881 Applied crystallography in advanced materials characterisation | MTE5883 Environmental durability and protection of metals and engineering materials | ENG5005 Research methods |

| Enhancement units |
|---|
| <ul style="list-style-type: none"> • 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

| | | | | |
|-----------------------------|---|--|---|--|
| YEAR 1 Semester 1 | ENG5001 Advanced engineering data analysis | MEC5882 Instrumentation, sensing and monitoring | MEC5883 Mechanical systems design | Enhancement unit |
| YEAR 1 Semester 2 | ENG5002 Engineering entrepreneurship <small>No offering in 2022</small> Or ENG5008 Work integrated learning | MEC5881 Engineering systems performance analysis | MEC5884 Sustainable engineering systems | ENG5005 Research methods |

| Enhancement units |
|---|
| <ul style="list-style-type: none"> • 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 • MEC5891 Design for additive manufacturing • 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 – Renewable and sustainable energy engineering

Entry level 2 program

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

| Enhancement units |
|--|
| <ul style="list-style-type: none"> • ACF5903 Accounting for business • BTF5910 Corporate sustainability regulation • CHE5882 Biomass and biorefineries • CHE5883 Nanostructured membranes for separation and energy production • ECF5953 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 |