

Bachelor of Engineering (Honours)

Aerospace engineering specialisation

Available minors in Clayton

Update version: 30 November 2023

The environmental engineering and the civil engineering minors are not available within the aerospace engineering specialisation.

Before commencing a minor, it is essential for you to review the prerequisite requirements for the units within the minor and proactively plan ahead to fulfil the requirements.

Artificial intelligence in engineering

You must complete four units (24 cp) selected from below

- [CIV4100](#) Autonomous vehicle systems
- [ECE2071](#) Computer organisation and programming
- [ECE4179](#) Neural networks and deep learning
- [ECE4076](#) Computer vision
- [ECE4078](#) Intelligent robotics

Computational engineering

You must complete the four units (24 cp) below

- [ECE3093](#) Optimisation and numerical methods for engineers
- [FIT3179](#) Data visualisation
- [MEC4447](#) Computers in fluids and energy
- [MTE4590](#) Modelling of materials

Engineering entrepreneurship

You must complete the four units (24 cp) below

- [BEX3311](#) Entrepreneurial mindsets and capabilities
- [BEX3411](#) Building start-ups with impact
- [ENG3701](#) Entrepreneurial project A (Unit available from 2024)
- [ENG3702](#) Entrepreneurial project B (Unit available from 2024)

Micro and nano technologies

You must complete the four units (24 cp) below

- [MEC3010](#) Micro and nanotechnologies: Fabrication and applications
- [CHE3172](#) Nanotechnology and materials 1
- [MTE4597](#) Engineering with nanomaterials
- [CHE4172](#) Nanotechnology and materials 2

Mining engineering

You must complete the four units (24 cp) below

- [RSE3020](#) Resource estimation
- [RSE3040](#) Mining systems
- [RSE4010](#) Mine planning and development
- [RSE3030](#) Ventilation for surface and underground spaces

Renewable energy engineering

You must complete four units (24 cp) selected from below

- [RSE3141](#) Solar energy
- [RSE3241](#) Hydropower
- [RSE3242](#) Geothermal energy
- [RSE3243](#) Bioenergy
- [MTE4235](#) Nuclear energy: Science, technology and society

Smart manufacturing

You must complete the four units (24 cp) below

- [ECE3141](#) Information and networks
- [TRC3000](#) Automation project
- [TRC4200](#) Engineering cyber-physical systems
- [TRC4902](#) Mechatronics and manufacturing

Sustainable engineering

You must complete four units (24 cp) selected from below

- [ENE2021](#) Energy and the environment
- [ENE3031](#) Building sustainability
- [CIV4268](#) Water resources management
- [ENE4042](#) Environmental impact and risk assessment
- [MTE4593](#) Materials and sustainability

Bachelor of Engineering (Honours)

Chemical engineering specialisation

Available minors in Clayton

Update version: 30 November 2023

The civil engineering and the engineering entrepreneurship minors are not available within the chemical engineering specialisation.

Before commencing a minor, it is essential for you to review the prerequisite requirements for the units within the minor and proactively plan ahead to fulfil the requirements.

Artificial intelligence in engineering

You must complete four units (24 cp) selected from below

- [CIV4100](#) Autonomous vehicle systems
- [ECE2071](#) Computer organisation and programming
- [ECE4179](#) Neural networks and deep learning
- [ECE4076](#) Computer vision
- [ECE4078](#) Intelligent robotics

Computational engineering

You must complete the four units (24 cp) below

- [ECE3093](#) Optimisation and numerical methods for engineers
- [FIT3179](#) Data visualisation
- [MEC4447](#) Computers in fluids and energy
- [MTE4590](#) Modelling of materials

Environmental engineering

You must complete four units (24 cp) selected from below

- [ENE3031](#) Building sustainability
- [ENE3032](#) Fate and transport of contaminants
- [ENE3606](#) The air environment
- [ENE4041](#) Soil remediation and solid waste management
- [ENE4042](#) Environmental impact and risk assessment

Micro and nano technologies

You must complete the four units (24 cp) below

- [MEC3010](#) Micro and nanotechnologies: Fabrication and applications
- [CHE3172](#) Nanotechnology and materials 1
- [MTE4597](#) Engineering with nanomaterials
- [CHE4172](#) Nanotechnology and materials 2

Mining engineering

You must complete the four units (24 cp) below

- [RSE3020](#) Resource estimation
- [RSE3040](#) Mining systems
- [RSE4010](#) Mine planning and development
- [RSE3030](#) Ventilation for surface and underground spaces

Renewable energy engineering

You must complete four units (24 cp) selected from below

- [RSE3141](#) Solar energy
- [RSE3241](#) Hydropower
- [RSE3242](#) Geothermal energy
- [RSE3243](#) Bioenergy
- [MTE4235](#) Nuclear energy: Science, technology and society

Smart manufacturing

You must complete the four units (24 cp) below

- [ECE3141](#) Information and networks
- [TRC3000](#) Automation project
- [TRC4200](#) Engineering cyber-physical systems
- [TRC4902](#) Mechatronics and manufacturing

Sustainable engineering

You must complete four units (24 cp)

- [CHE3163](#) Sustainable processing 1 (Core unit)
- [CHE4173](#) Sustainable processing 2 (Core unit)

and two units from the following

- [RSE3243](#) Bioenergy
- [ENE4042](#) Environmental impact and risk assessment
- [MTE4593](#) Materials and sustainability

Bachelor of Engineering (Honours)

Civil engineering specialisation

Available minors in Clayton

Update version: 30 November 2023

Before commencing a minor, it is essential for you to review the prerequisite requirements for the units within the minor and proactively plan ahead to fulfil the requirements.

Artificial intelligence in engineering

You must complete four units (24 cp) selected from below

- [CIV4100](#) Autonomous vehicle systems
- [ECE2071](#) Computer organisation and programming
- [ECE4179](#) Neural networks and deep learning
- [ECE4076](#) Computer vision
- [ECE4078](#) Intelligent robotics

Computational engineering

You must complete the four units (24 cp) below

- [ECE3093](#) Optimisation and numerical methods for engineers
- [FIT3179](#) Data visualisation
- [MEC4447](#) Computers in fluids and energy
- [MTE4590](#) Modelling of materials

Engineering entrepreneurship

You must complete the four units (24 cp) below

- [BEX3311](#) Entrepreneurial mindsets and capabilities
- [BEX3411](#) Building start-ups with impact
- [ENG3701](#) Entrepreneurial project A (Unit available from 2024)
- [ENG3702](#) Entrepreneurial project B (Unit available from 2024)

Environmental engineering

You must complete four units (24 cp) selected from below

- [ENE2021](#) Energy and the environment
- [ENE3031](#) Building sustainability
- [ENE3032](#) Fate and transport of contaminants
- [ENE3606](#) The air environment
- [ENE4041](#) Soil remediation and solid waste management
- [ENE4042](#) Environmental impact and risk assessment

Micro and nano technologies

You must complete the four units (24 cp) below

- [MEC3010](#) Micro and nanotechnologies: Fabrication and applications
- [CHE3172](#) Nanotechnology and materials 1
- [MTE4597](#) Engineering with nanomaterials
- [CHE4172](#) Nanotechnology and materials 2

Mining engineering

You must complete the four units (24 cp) below

- [RSE3020](#) Resource estimation
- [RSE3040](#) Mining systems
- [RSE3060](#) Rock breakage
- [RSE3010](#) Mine geotechnical engineering

Renewable energy engineering

You must complete four units (24 cp) selected from below

- [RSE3141](#) Solar energy
- [RSE3241](#) Hydropower
- [RSE3242](#) Geothermal energy
- [RSE3243](#) Bioenergy
- [MTE4235](#) Nuclear energy: Science, technology and society

Smart manufacturing

You must complete the four units (24 cp) below

- [ECE3141](#) Information and networks
- [TRC3000](#) Automation project
- [TRC4200](#) Engineering cyber-physical systems
- [TRC4902](#) Mechatronics and manufacturing

Sustainable engineering

You must complete four units (24 cp) selected from below

- [ENE2021](#) Energy and the environment
- [ENE3031](#) Building sustainability
- [CIV4268](#) Water resources management
- [ENE4042](#) Environmental impact and risk assessment
- [MTE4593](#) Materials and sustainability

Bachelor of Engineering (Honours)

Electrical and computer systems engineering specialisation

Available minors in Clayton

Update version: 30 November 2023

The environmental engineering and the civil engineering minors are not available within the electrical and computer systems engineering specialisation.

Before commencing a minor, it is essential for you to review the prerequisite requirements for the units within the minor and proactively plan ahead to fulfil the requirements.

Artificial intelligence in engineering

You must complete the four units (24 cp) below

- [CIV4100](#) Autonomous vehicle systems
- [ECE4179](#) Neural networks and deep learning
- [ECE4076](#) Computer vision
- [ECE4078](#) Intelligent robotics

Computational engineering

You must complete the four units (24 cp) below

- [ECE3093](#) Optimisation and numerical methods for engineers
- [FIT3179](#) Data visualisation
- [MEC4447](#) Computers in fluids and energy
- [MTE4590](#) Modelling of materials

Engineering entrepreneurship

You must complete the four units (24 cp) below

- [BEX3311](#) Entrepreneurial mindsets and capabilities
- [BEX3411](#) Building start-ups with impact
- [ENG3701](#) Entrepreneurial project A *(Unit available from 2024)*
- [ENG3702](#) Entrepreneurial project B *(Unit available from 2024)*

Micro and nano technologies

You must complete the four units (24 cp) below

- [MEC3010](#) Micro and nanotechnologies: Fabrication and applications
- [CHE3172](#) Nanotechnology and materials 1
- [MTE4597](#) Engineering with nanomaterials
- [CHE4172](#) Nanotechnology and materials 2

Mining engineering

You must complete the four units (24 cp) below

- [RSE3020](#) Resource estimation
- [RSE3040](#) Mining systems
- [RSE4010](#) Mine planning and development
- [RSE3030](#) Ventilation for surface and underground spaces

Renewable energy engineering

You must complete four units (24 cp) selected from below

- [RSE3141](#) Solar energy
- [RSE3241](#) Hydropower
- [RSE3242](#) Geothermal energy
- [RSE3243](#) Bioenergy
- [MTE4235](#) Nuclear energy: Science, technology and society

Smart manufacturing

You must complete the four units (24 cp) below

- [MEC2402](#) Design methods
- [TRC3000](#) Automation project
- [TRC4200](#) Engineering cyber-physical systems
- [TRC4902](#) Mechatronics and manufacturing

Sustainable engineering

You must complete four units (24 cp) selected from below

- [ENE2021](#) Energy and the environment
- [ENE3031](#) Building sustainability
- [CIV4268](#) Water resources management
- [ENE4042](#) Environmental impact and risk assessment
- [MTE4593](#) Materials and sustainability

Bachelor of Engineering (Honours)

Environmental engineering specialisation

Available minors in Clayton

Update version: 30 November 2023

The sustainable engineering minor is not available within the environmental engineering specialisation.

Before commencing a minor, it is essential for you to review the prerequisite requirements for the units within the minor and proactively plan ahead to fulfil the requirements.

Artificial intelligence in engineering

You must complete four units (24 cp) selected from below

- [CIV4100](#) Autonomous vehicle systems
- [ECE2071](#) Computer organisation and programming
- [ECE4179](#) Neural networks and deep learning
- [ECE4076](#) Computer vision
- [ECE4078](#) Intelligent robotics

Civil engineering

You must complete the four units (24 cp) below

- [CIV2282](#) Transport and traffic engineering
- [CIV2235](#) Structural materials or [CIV2206](#) Structural mechanics
- [CIV2242](#) Geomechanics
- [CIV4288](#) Water treatment

Computational engineering

You must complete the four units (24 cp) below

- [ECE3093](#) Optimisation and numerical methods for engineers
- [FIT3179](#) Data visualisation
- [MEC4447](#) Computers in fluids and energy
- [MTE4590](#) Modelling of materials

Engineering entrepreneurship

You must complete the four units (24 cp) below

- [BEX3311](#) Entrepreneurial mindsets and capabilities
- [BEX3411](#) Building start-ups with impacts
- [ENG3701](#) Entrepreneurial project A *(Unit available from 2024)*
- [ENG3702](#) Entrepreneurial project B *(Unit available from 2024)*

Micro and nano technologies

You must complete the four units (24 cp) below

- [MEC3010](#) Micro and nanotechnologies: Fabrication and applications
- [CHE3172](#) Nanotechnology and materials 1
- [MTE4597](#) Engineering with nanomaterials
- [CHE4172](#) Nanotechnology and materials 2

Mining engineering

You must complete the four units (24 cp) below

- [RSE3020](#) Resource estimation
- [RSE3040](#) Mining systems
- [RSE4010](#) Mine planning and development
- [RSE3030](#) Ventilation for surface and underground spaces

Renewable energy engineering

You must complete four units (24 cp) selected from below

- [RSE3141](#) Solar energy
- [RSE3241](#) Hydropower
- [RSE3242](#) Geothermal energy
- [RSE3243](#) Bioenergy
- [MTE4235](#) Nuclear energy: Science, technology and society

Smart manufacturing

You must complete the four units (24 cp) below

- [ECE3141](#) Information and networks
- [TRC3000](#) Automation project
- [TRC4200](#) Engineering cyber-physical systems
- [TRC4902](#) Mechatronics and manufacturing

Bachelor of Engineering (Honours)

Materials engineering specialisation

Available minors in Clayton

Update version: 30 November 2023

The environmental engineering and the civil engineering minors are not available within the materials engineering specialisation.

Before commencing a minor, it is essential for you to review the prerequisite requirements for the units within the minor and proactively plan ahead to fulfil the requirements.

Artificial intelligence in engineering

You must complete four units (24 cp) selected from below

- [CIV4100](#) Autonomous vehicle systems
- [ECE2071](#) Computer organisation and programming
- [ECE4179](#) Neural networks and deep learning
- [ECE4076](#) Computer vision
- [ECE4078](#) Intelligent robotics

Computational engineering

You must complete the four units (24 cp) below

- [ECE3093](#) Optimisation and numerical methods for engineers
- [FIT3179](#) Data visualisation
- [MEC4447](#) Computers in fluids and energy
- [MTE4590](#) Modelling of materials

Engineering entrepreneurship

You must complete the four units (24 cp) below

- [BEX3311](#) Entrepreneurial mindsets and capabilities
- [BEX3411](#) Building start-ups with impact
- [ENG3701](#) Entrepreneurial project A (Unit available from 2024)
- [ENG3702](#) Entrepreneurial project B (Unit available from 2024)

Micro and nano technologies

You must complete the four units (24 cp) below

- [MEC3010](#) Micro and nanotechnologies: Fabrication and applications
- [CHE3172](#) Nanotechnology and materials 1
- [MTE4597](#) Engineering with nanomaterials
- [CHE4172](#) Nanotechnology and materials 2

Mining engineering

You must complete the four units (24 cp) below

- [RSE3020](#) Resource estimation
- [RSE3040](#) Mining systems
- [RSE4010](#) Mine planning and development
- [RSE3030](#) Ventilation for surface and underground spaces

Renewable energy engineering

You must complete four units (24 cp) selected from below

- [RSE3141](#) Solar energy
- [RSE3241](#) Hydropower
- [RSE3242](#) Geothermal energy
- [RSE3243](#) Bioenergy
- [MTE4235](#) Nuclear energy: Science, technology and society

Smart manufacturing

You must complete the four units (24 cp) below

- [ECE3141](#) Information and networks
- [TRC3000](#) Automation project
- [TRC4200](#) Engineering cyber-physical systems
- [TRC4902](#) Mechatronics and manufacturing

Sustainable engineering

You must complete four units (24 cp) selected from below

- [ENE2021](#) Energy and the environment
- [ENE3031](#) Building sustainability
- [CIV4268](#) Water resources management
- [ENE4042](#) Environmental impact and risk assessment
- [MTE4593](#) Materials and sustainability

Bachelor of Engineering (Honours)

Mechanical engineering specialisation

Available minors in Clayton

Update version: 30 November 2023

The environmental engineering and the civil engineering minors are not available within the mechanical engineering specialisation.

Before commencing a minor, it is essential for you to review the prerequisite requirements for the units within the minor and proactively plan ahead to fulfil the requirements.

Artificial intelligence in engineering

You must complete four units (24 cp) selected from below

- [CIV4100](#) Autonomous vehicle systems
- [ECE2071](#) Computer organisation and programming
- [ECE4179](#) Neural networks and deep learning
- [ECE4076](#) Computer vision
- [ECE4078](#) Intelligent robotics

Computational engineering

You must complete the four units (24 cp) below

- [ECE3093](#) Optimisation and numerical methods for engineers
- [FIT3179](#) Data visualisation
- [MEC4447](#) Computers in fluids and energy
- [MTE4590](#) Modelling of materials

Engineering entrepreneurship

You must complete the four units (24 cp) below

- [BEX3311](#) Entrepreneurial mindsets and capabilities
- [BEX3411](#) Building start-ups with impact
- [ENG3701](#) Entrepreneurial project A (Unit available from 2024)
- [ENG3702](#) Entrepreneurial project B (Unit available from 2024)

Micro and nano technologies

You must complete the four units (24 cp) below

- [MEC3010](#) Micro and nanotechnologies: Fabrication and applications
- [CHE3172](#) Nanotechnology and materials 1
- [MTE4597](#) Engineering with nanomaterials
- [CHE4172](#) Nanotechnology and materials 2

Mining engineering

You must complete the four units (24 cp) below

- [RSE3020](#) Resource estimation
- [RSE3040](#) Mining systems
- [RSE4010](#) Mine planning and development
- [RSE3030](#) Ventilation for surface and underground spaces

Renewable energy engineering

You must complete four units (24 cp) selected from below

- [RSE3141](#) Solar energy
- [RSE3241](#) Hydropower
- [RSE3242](#) Geothermal energy
- [RSE3243](#) Bioenergy
- [MTE4235](#) Nuclear energy: Science, technology and society

Smart manufacturing

You must complete the four units (24 cp) below

- [ECE3141](#) Information and networks
- [TRC3000](#) Automation project
- [TRC4200](#) Engineering cyber-physical systems
- [TRC4902](#) Mechatronics and manufacturing

Sustainable engineering

You must complete four units (24 cp) selected from below

- [ENE2021](#) Energy and the environment
- [ENE3031](#) Building sustainability
- [CIV4268](#) Water resources management
- [ENE4042](#) Environmental impact and risk assessment
- [MTE4593](#) Materials and sustainability

Bachelor of Engineering (Honours)

Resources and mining engineering specialisation

Available minors in Clayton

Update version: 30 November 2023

The mining engineering minor is not available within the resources and mining engineering specialisation.

Before commencing a minor, it is essential for you to review the prerequisite requirements for the units within the minor and proactively plan ahead to fulfil the requirements.

Artificial intelligence in engineering

You must complete four units (24 cp) selected from below

- [CIV4100](#) Autonomous vehicle systems
- [ECE2071](#) Computer organisation and programming
- [ECE4179](#) Neural networks and deep learning
- [ECE4076](#) Computer vision
- [ECE4078](#) Intelligent robotics

Civil engineering

You must complete the four units (24 cp) from below

- [CIV2282](#) Transport and traffic engineering
- [CIV2235](#) Structural materials
- [CIV3285](#) Engineering hydrology
- [CIV3247](#) Geomechanics 2

Computational engineering

You must complete the four units (24 cp) below

- [ECE3093](#) Optimisation and numerical methods for engineers
- [FIT3179](#) Data visualisation
- [MEC4447](#) Computers in fluids and energy
- [MTE4590](#) Modelling of materials

Engineering entrepreneurship

You must complete the four units (24 cp) below

- [BEX3311](#) Entrepreneurial mindsets and capabilities
- [BEX3411](#) Building start-ups with impact
- [ENG3701](#) Entrepreneurial project A *(Unit available from 2024)*
- [ENG3702](#) Entrepreneurial project B *(Unit available from 2024)*

Environmental engineering

You must complete four units (24 cp) selected from below

- [ENE2021](#) Energy and the environment
- [ENE3031](#) Building sustainability
- [ENE3032](#) Fate and transport of contaminants
- [ENE3606](#) The air environment
- [ENE4041](#) Soil remediation and solid waste management

Micro and nano technologies

You must complete the four units (24 cp) below

- [MEC3010](#) Micro and nanotechnologies: Fabrication and applications
- [CHE3172](#) Nanotechnology and materials 1
- [MTE4597](#) Engineering with nanomaterials
- [CHE4172](#) Nanotechnology and materials 2

Renewable energy engineering

You must complete four units (24 cp) selected from below

- [RSE3141](#) Solar energy
- [RSE3241](#) Hydropower
- [RSE3242](#) Geothermal energy
- [RSE3243](#) Bioenergy
- [MTE4235](#) Nuclear energy: Science, technology and society

Smart manufacturing

You must complete the four units (24 cp) below

- [ECE3141](#) Information and networks
- [TRC3000](#) Automation project
- [TRC4200](#) Engineering cyber-physical systems
- [TRC4902](#) Mechatronics and manufacturing

Sustainable engineering

You must complete four units (24 cp) selected from below

- [ENE2021](#) Energy and the environment
- [ENE3031](#) Building sustainability
- [CIV4268](#) Water resources management
- [ENE4042](#) Environmental impact and risk assessment
- [MTE4593](#) Materials and sustainability

Bachelor of Engineering (Honours)

Resources and renewable energy engineering specialisation

Available minors in Clayton

Update version: 31 October 2022

The renewable energy engineering minor is not available within the resources and renewable energy engineering specialisation.

Before commencing a minor, it is essential for you to review the prerequisite requirements for the units within the minor and proactively plan ahead to fulfil the requirements.

Artificial intelligence in engineering

You must complete four units (24 cp) selected from below

- [CIV4100](#) Autonomous vehicle systems
- [ECE2071](#) Computer organisation and programming
- [ECE4179](#) Neural networks and deep learning
- [ECE4076](#) Computer vision
- [ECE4078](#) Intelligent robotics

Civil engineering

You must complete the four units (24 cp) below

- [CIV2282](#) Transport and traffic engineering
- [CIV2235](#) Structural materials
- [CIV3285](#) Engineering hydrology
- [CIV3247](#) Geomechanics 2

Computational engineering

You must complete the four units (24 cp) below

- [ECE3093](#) Optimisation and numerical methods for engineers
- [FIT3179](#) Data visualisation
- [MEC4447](#) Computers in fluids and energy
- [MTE4590](#) Modelling of materials

Engineering entrepreneurship

You must complete the four units (24 cp) below

- [BEX3311](#) Entrepreneurial mindsets and capabilities
- [BEX3411](#) Building start-ups with impact
- [ENG3701](#) Entrepreneurial project A *(Unit available from 2024)*
- [ENG3702](#) Entrepreneurial project B *(Unit available from 2024)*

Environmental engineering

You must complete four units (24 cp) selected from below

- [ENE2021](#) Energy and the environment
- [ENE3031](#) Building sustainability
- [ENE3032](#) Fate and transport of contaminants
- [ENE3606](#) The air environment
- [ENE4041](#) Soil remediation and solid waste management

Mining engineering

You must complete the four units (24 cp) below

- [RSE3020](#) Resource estimation
- [RSE3040](#) Mining systems
- [RSE4010](#) Mine planning and development
- [RSE3030](#) Ventilation for surface and underground spaces

Micro and nano technologies

You must complete the four units (24 cp) below

- [MEC3010](#) Micro and nanotechnologies: Fabrication and applications
- [CHE3172](#) Nanotechnology and materials 1
- [MTE4597](#) Engineering with nanomaterials
- [CHE4172](#) Nanotechnology and materials 2

Smart manufacturing

You must complete the four units (24 cp) below

- [ECE3141](#) Information and networks
- [TRC3000](#) Automation project
- [TRC4200](#) Engineering cyber-physical systems
- [TRC4902](#) Mechatronics and manufacturing

Sustainable engineering

You must complete four units (24 cp) selected from below

- [ENE2021](#) Energy and the environment
- [ENE3031](#) Building sustainability
- [CIV4268](#) Water resources management
- [ENE4042](#) Environmental impact and risk assessment
- [MTE4593](#) Materials and sustainability

Bachelor of Engineering (Honours)

Robotics and mechatronics engineering specialisation

Available minors in Clayton

Update version: 30 November 2023

The environmental engineering and the civil engineering minors are not available within the robotics and mechatronics engineering specialisation.

Before commencing a minor, it is essential for you to review the prerequisite requirements for the units within the minor and proactively plan ahead to fulfil the requirements.

Artificial intelligence in engineering

*This minor is available to the **Automation stream** only*

You must complete the four units (24 cp) below

- [CIV4100](#) Autonomous vehicle systems
- [ECE4179](#) Neural networks and deep learning
- [ECE4076](#) Computer vision
- [ECE4078](#) Intelligent robotics

Computational engineering

You must complete the four units (24 cp) below

- [ECE3093](#) Optimisation and numerical methods for engineers
- [FIT3179](#) Data visualisation
- [MEC4447](#) Computers in fluids and energy
- [MTE4590](#) Modelling of materials

Engineering entrepreneurship

You must complete the four units (24 cp) below

- [BEX3311](#) Entrepreneurial mindsets and capabilities
- [BEX3411](#) Building start-ups with impact
- [ENG3701](#) Entrepreneurial project A *(Unit available from 2024)*
- [ENG3702](#) Entrepreneurial project B *(Unit available from 2024)*

Micro and nano technologies

You must complete the four units (24 cp) below

- [MEC3010](#) Micro and nanotechnologies: Fabrication and applications
- [CHE3172](#) Nanotechnology and materials 1
- [MTE4597](#) Engineering with nanomaterials
- [CHE4172](#) Nanotechnology and materials 2

Mining engineering

You must complete the four units (24 cp) below

- [RSE3020](#) Resource estimation
- [RSE3040](#) Mining systems
- [RSE4010](#) Mine planning and development
- [RSE3030](#) Ventilation for surface and underground spaces

Renewable energy engineering

You must complete four units (24 cp) selected from below

- [RSE3141](#) Solar energy
- [RSE3241](#) Hydropower
- [RSE3242](#) Geothermal energy
- [RSE3243](#) Bioenergy
- [MTE4235](#) Nuclear energy: Science, technology and society

Smart manufacturing

*This minor is available to the **Artificial intelligence stream** only*

You must complete the four units (24 cp) below

- [ECE3141](#) Information and networks
- [TRC3000](#) Automation project
- [TRC4200](#) Engineering cyber-physical systems
- [TRC4902](#) Mechatronics and manufacturing

Sustainable engineering

You must complete four units (24 cp) selected from below

- [ENE2021](#) Energy and the environment
- [ENE3031](#) Building sustainability
- [CIV4268](#) Water resources management
- [ENE4042](#) Environmental impact and risk assessment
- [MTE4593](#) Materials and sustainability

Bachelor of Engineering (Honours)

2024 Technical electives in Clayton

Update version: 11 March 2024

| ● Offered ✕ Not offered Offerings are subject to change | |
|---|------------|
| Semester 1 | Semester 2 |

First Year breadth study

¹ **Intending to specialise in biomedical engineering:** You must complete BMS1021 as a First Year elective unit.

² CHM1011 and CHE1051 are mutual prohibition units, meaning that you can only complete either CHM1011 or CHM1051.

³ **NOTE:** If you complete a First Year technical elective that is also a core unit in your chosen specialisation or if you have completed a unit that is a prohibition to a core unit in your specialisation, you must replace the core with another unit chosen from your specialisation technical electives list or from one of the engineering minors. The replacement unit must be at the same level as the core unit or higher. Please seek advice from the Faculty of Engineering prior to enrolling in the replacement unit.

⁴ **Intending to specialise in chemical engineering:** Due to the prohibition with CHE2161, you are strongly advised against completing MEC2404 as a First Year elective. Choosing MEC2404 may lead to an insufficient foundation for the subsequent core unit CHE3167 in the chemical engineering specialisation. If you intend to specialise in chemical engineering, you are advised to choose CHE2161 as your First Year elective instead.

| | | |
|---|---|---|
| BMS1021 Cells, tissues and organisms ¹ | ● | |
| CHE1010 Grand challenges in chemical engineering: Delivering sustainable food, water and energy | | ● |
| CHM1011 Chemistry 1 or CHM1051 Chemistry 1 advanced ^{2,3} | ● | |
| ENE1621 Environmental engineering | ● | |
| ENG1021 Spatial communication in engineering | | ● |
| ENG1051 Materials for energy and sustainability | | ● |
| MAT1830 Discrete mathematics for computer science ³ | ● | |
| FIT1056 Introduction to software engineering | | ● |
| PHS1002 Physics for engineering | | ● |
| RSE1010 Introduction to resources engineering | | ● |
| CHE2161 Mechanics of fluids ^{3,4} | | ● |
| ECE2072 Digital systems ³ | | ● |
| FIT2085 Introduction to computer science for engineers ³ | ● | ● |
| MAE2505 Aerospace dynamics ³ | | ● |
| MEC2404 Mechanics of fluids ^{3,4} | | ● |
| TRC2001 Introduction to systems engineering | | ✕ |

Aerospace engineering

Electives must be completed at the unit level required to satisfy your course requirements.

¹ **Level 5 units:** You must obtain a weighted average mark (WAM) of 65 or above at the conclusion of level 3 and be in your final year to be eligible to enrol in the level 5 units.

| | | |
|--|---|---|
| MEC3010 Micro and nanotechnologies: Fabrication and applications | ● | |
| MEC3416 Machine design | | ● |
| MEC3459 Materials selection for engineers | | ● |
| TRC3000 Automation project | | ● |
| TRC3500 Sensors and artificial perception | ● | |
| ECE4078 Intelligent robotics | | ● |
| MEC4407 Design project | | ● |
| MEC4428 Advanced dynamics | | ✕ |
| MEC4447 Computers in fluids and energy | ● | |
| MEC4459 Wind engineering | | ✕ |
| TRC4200 Engineering cyber-physical systems | ● | |
| MEC5221 Railway engineering ¹ | | ● |
| MEC5881 Engineering systems performance analysis ¹ | | ● |
| MEC5882 Instrumentation, sensing and monitoring ¹ | ● | |
| MEC5883 Mechanical systems design ¹ | ● | |
| MEC5884 Sustainable engineering systems ¹ | | ● |
| You may consider an engineering technical unit chosen from the engineering minors, subject to meeting the unit prerequisite and/or co-requisite rules. | | |

| ● Offered × Not offered Offerings are subject to change | |
|---|------------|
| Semester 1 | Semester 2 |

Chemical engineering

Electives must be completed at the unit level required to satisfy your course requirements.

¹ **Level 5 units:** You must obtain a weighted average mark (WAM) of 65 or above at the conclusion of level 3 and be in your final year to be eligible to enrol in the level 5 units.

| | | | |
|--|--|---|---|
| CHE2166 | Introduction to process simulation | | × |
| CHE2167 | Process material selection | × | |
| CHM2951 | Environmental chemistry – Water | ● | |
| ECE2071 | Computer organisation and programming | ● | |
| ECE2131 | Electrical circuits | ● | |
| MTH2232 | Mathematical statistics | | ● |
| CHE3133 | Food engineering | ● | |
| CHE3163 | Sustainable processing 1 | ● | |
| CHE3171 | Bioprocess technology | | × |
| CHE3172 | Nanotechnology and materials 1 | | ● |
| CHM3960 | Environmental chemistry | ● | |
| TRC3500 | Sensors and artificial perception | ● | |
| ENE4042 | Environmental impact and risk assessment | ● | |
| CHE4171 | Biochemical engineering | | × |
| CHE4172 | Nanotechnology and materials 2 | | ● |
| CHE4173 | Sustainable processing 2 | ● | |
| ENG5002 | Engineering entrepreneurship ¹ | | × |
| CHE5321 | Advanced bioprocess technology ¹ | ● | |
| CHE5322 | Advanced biochemical engineering ¹ | | ● |
| CHE5881 | Advanced reaction engineering ¹ | ● | |
| CHE5882 | Biomass and bio-refineries ¹ | | ● |
| CHE5883 | Nanostructured membranes for separation and energy production ¹ | | ● |
| CHE5884 | Process modelling and optimisation ¹ | ● | |
| CHE5889 | Food engineering and processing ¹ | | ● |
| You may consider an engineering technical unit chosen from the engineering minors, subject to meeting the unit prerequisite and/or co-requisite rules. | | | |

Civil engineering

Electives must be completed at the unit level required to satisfy your course requirements.

¹ **Level 5 units:** You must obtain a weighted average mark (WAM) of 65 or above at the conclusion of level 3 and be in your final year to be eligible to enrol in the level 5 units.

| | | | |
|-------------------------|---|-----------------------------|---|
| ENG1021 | Spatial communication in engineering | | ● |
| CIV2283 | Civil engineering construction | ● Semester 1 Extended | |
| CIV3283 | Road engineering (Available elective to students who commenced Civil Engineering before 2020) | | ● |
| ENE2503 | Material properties and recycling | | ● |
| RSE2010 | Fixed plant engineering and project management | | × |
| MEC3459 | Materials selection for engineers | | ● |
| RSE3010 | Mine geotechnical engineering | ● | |
| RSE3020 | Resource estimation | ● | |
| RSE3030 | Ventilation for surface and underground spaces | ● | |
| RSE3040 | Mining systems | | ● |
| RSE3060 | Rock breakage | | ● |
| RSE3141 | Solar energy | ● | |
| RSE3241 | Hydropower | | ● |
| RSE3242 | Geothermal energy | ● | |
| RSE3243 | Bioenergy | | ● |
| CIV4100 | Autonomous vehicle systems | ● | |
| CIV4234 | Advanced structural analysis | × | |
| CIV4235 | Advanced structural design | | × |
| CIV4248 | Ground hazards engineering | | × |
| CIV4261 | Integrated urban water management | × | |
| CIV4268 | Water resources management | | ● |

| ● Offered × Not offered Offerings are subject to change | |
|---|------------|
| Semester 1 | Semester 2 |

| | | | |
|--|---|---|---|
| CIV4283 | Transport planning | | × |
| CIV4284 | Sustainable traffic systems | | ● |
| CIV4293 | Transport planning for Asian cities | | × |
| CIV5301 | Advanced traffic engineering ¹ | | × |
| CIV5302 | Traffic engineering and management ¹ | ● | |
| CIV5304 | Intelligent transport systems ¹ | | × |
| CIV5314 | Planning urban mobility futures ¹ | | ● |
| CIV5881 | Ground water hydraulics ¹ | × | |
| CIV5882 | Flood hydraulics and hydrology ¹ | | ● |
| CIV5883 | Surface water hydrology ¹ | | ● |
| CIV5884 | Water sensitive storm water design ¹ | ● | |
| CIV5885 | Infrastructure dynamics ¹ | ● | |
| CIV5887 | Infrastructure rehabilitation and monitoring ¹ | | ● |
| CIV5888 | Advanced computational methods ¹ | | ● |
| CIV5899 | Infrastructure information management ¹ | ● | |
| MEC5221 | Railway engineering ¹ | | ● |
| You may consider an engineering technical unit chosen from the engineering minors, subject to meeting the unit prerequisite and/or co-requisite rules. | | | |

Electrical and computer systems engineering

Electives must be completed at the unit level required to satisfy your course requirements.

CORE ELECTIVES

The ECSE specialisation requires the completion of sixteen core units AND two core electives chosen from the ECSE technical electives list. **The core electives must be level 4 or 5 ECE-coded.**

¹ **Level 5 units:** You must obtain a weighted average mark (WAM) of 65 or above at the conclusion of level 3 and be in your final year to be eligible to enrol in the level 5 units.

| | | | |
|-------------------------|---|---|---|
| TRC2001 | Introduction to systems engineering | | × |
| ECE3093 | Optimisation and numerical methods for engineers | ● | |
| MEC3459 | Materials selection for engineers | | ● |
| RSE3141 | Solar energy | ● | |
| TRC3500 | Sensors and artificial perception | ● | |
| ECE4024 | Wireless communications | | ● |
| ECE4042 | Communications theory | ● | |
| ECE4043 | Optical communications | | × |
| ECE4044 | Telecommunications protocols | × | |
| ECE4045 | Network performance | | × |
| ECE4053 | Power system analysis | | ● |
| ECE4055 | Power electronic converters | ● | |
| ECE4058 | Electrical energy - high voltage engineering | | × |
| ECE4076 | Computer vision | ● | |
| ECE4078 | Intelligent robotics | | ● |
| ECE4081 | Medical instrumentation | | ● |
| ECE4086 | Medical imaging technology | | × |
| ECE4087 | Medical technology innovation | | ● |
| ECE4122 | Advanced electromagnetics | | ● |
| ECE4146 | Multimedia technologies | × | |
| ECE4179 | Neural networks and deep learning | | ● |
| ECE4886 | Smart grids | | ● |
| ENG4700 | Engineering technology for biomedical imaging and sensing | × | |
| MEC4601 | Implantable devices | ● | |
| ECE5156 | Advanced power electronics ¹ | | × |
| ECE5881 | Real-time system design ¹ | ● | |
| ECE5882 | Advanced electronics design ¹ | | ● |
| ECE5883 | Advanced signal processing ¹ | ● | |
| ECE5884 | Wireless communications ¹ | | ● |

| ● Offered × Not offered Offerings are subject to change | |
|--|------------|
| Semester 1 | Semester 2 |

| | | |
|---|---|--|
| MEC5885 Energy efficiency and sustainability engineering ¹ | ● | |
| <i>You may consider an engineering technical unit chosen from the engineering minors, subject to meeting the unit prerequisite and/or co-requisite rules.</i> | | |

Environmental engineering

Electives must be completed at the unit level required to satisfy your course requirements.

¹ **Level 5 units:** You must obtain a weighted average mark (WAM) of 65 or above at the conclusion of level 3 and be in your final year to be eligible to enrol in the level 5 units.

| | | |
|---|---|---|
| ATS2548 Climate and environmental policy and management | | ● |
| BIO2011 Ecology and biodiversity | ● | |
| BIO2040 Conservation biology | | ● |
| CIV2242 Geomechanics 1 | | ● |
| CIV2282 Transport and traffic engineering | ● | |
| ECX2800 Prosperity, poverty and sustainability in a globalised world | ● | |
| BTX3100 Sustainability regulation for business <i>(Available elective to students who commenced Environmental Engineering before 2020)</i> | ● | |
| CHE3161 Chemistry and chemical thermodynamics | ● | |
| CHE3163 Sustainable processing 1 | ● | |
| CHE3165 Separation processes | ● | |
| CHE3166 Process design | | ● |
| CIV3247 Geomechanics 2 | | ● |
| RSE3020 Resource estimation | ● | |
| RSE3030 Ventilation for surface and underground spaces | ● | |
| RSE3040 Mining systems | | ● |
| RSE3060 Rock breakage | | ● |
| RSE3141 Solar energy | ● | |
| RSE3241 Hydropower | | ● |
| RSE3243 Bioenergy | | ● |
| CIV4248 Ground hazards engineering | | × |
| CIV4249 Foundation engineering | | × |
| CIV4261 Integrated urban water management | × | |
| CIV4268 Water resources management | | ● |
| CIV4283 Transport planning | | × |
| CIV4284 Sustainable traffic systems | | ● |
| CIV4288 Water treatment | | ● |
| MTE4593 Materials and sustainability | | ● |
| MEC5221 Railway engineering ¹ | | ● |
| <i>You may consider an engineering technical unit chosen from the engineering minors, subject to meeting the unit prerequisite and/or co-requisite rules.</i> | | |

Materials engineering

Electives must be completed at the unit level required to satisfy your course requirements.

¹ **Level 5 units:** You must obtain a weighted average mark (WAM) of 65 or above at the conclusion of level 3 and be in your final year to be eligible to enrol in the level 5 units.

| | | |
|---|---|---|
| MTE3204 Biomaterials 1 | ● | |
| ENG4001 Special studies in engineering 1 | ● | ● |
| ENG4700 Engineering technology for biomedical imaging and sensing | × | |
| MEC4601 Implantable devices | ● | |
| MTE4235 Nuclear energy: Science, technology and society | | ● |
| MTE4590 Modelling of materials | | ● |
| MTE4592 Advanced ceramics and applications | × | |
| MTE4593 Materials and sustainability | | ● |
| MTE4594 Engineering alloy design, processing and selection | | × |
| MTE4595 Corrosion mechanisms and protection methods | | × |
| MTE4596 Biomaterials 2 | | × |
| MTE4597 Engineering with nanomaterials | ● | |

| <p>● Offered ✕ Not offered Offerings are subject to change</p> | |
|---|------------|
| Semester 1 | Semester 2 |

| | | |
|---|---|---|
| MTE4598 Electron microscopy | ✕ | |
| MTE5881 Applied crystallography in advanced materials characterisation ¹ | | ✕ |
| MTE5882 Advanced polymeric materials ¹ | ● | |
| MTE5883 Environmental durability and protection of metals and engineering materials ¹ | | ● |
| MTE5884 Materials for energy technologies ¹ | ● | |
| MTE5885 Biomaterials and biomechanics ¹ | | ● |
| MTE5886 Additive manufacturing of metallic materials ¹ | | ● |
| MTE5887 Additive manufacturing of polymeric and functional materials ¹ | ● | |
| <i>You may consider an engineering technical unit chosen from the engineering minors, subject to meeting the unit prerequisite and/or co-requisite rules.</i> | | |

Mechanical engineering

Electives must be completed at the unit level required to satisfy your course requirements.

¹ **Level 5 units:** You must obtain a weighted average mark (WAM) of 65 or above at the conclusion of level 3 and be in your final year to be eligible to enrol in the level 5 units.

| | | |
|---|---|---|
| ECE2131 Electrical circuits | ● | |
| MAE2505 Aerospace dynamics | | ● |
| TRC2001 Introduction to systems engineering | | ✕ |
| MEC3010 Micro and nanotechnologies: Fabrication and applications | ● | |
| MEC3448 Engineering technologies | | ✕ |
| MEC3459 Materials selection for engineers | | ● |
| MEC3602 Biomedical microsystems | | ● |
| RSE3030 Ventilation for surface and underground spaces | ● | |
| RSE3241 Hydropower | | ● |
| TRC3000 Automation project | | ● |
| TRC3500 Sensors and artificial perception | ● | |
| ECE4179 Neural networks and deep learning | | ● |
| ENG4700 Engineering technology for biomedical imaging and sensing | ✕ | |
| MEC4418 Control systems | ✕ | |
| MEC4425 Micro/nano solid and fluid mechanics | | ✕ |
| MEC4428 Advanced dynamics | | ✕ |
| MEC4444 Introduction to engineering acoustics | | ✕ |
| MEC4446 Composite structures | | ✕ |
| MEC4447 Computers in fluids and energy | ● | |
| MEC4459 Wind engineering | | ✕ |
| MEC4601 Implantable devices | ● | |
| TRC4200 Engineering cyber-physical systems | ● | |
| TRC4800 Robotics | ● | |
| MEC5221 Railway engineering ¹ | | ● |
| MEC5881 Engineering systems performance analysis ¹ | | ● |
| MEC5882 Instrumentation, sensing and monitoring ¹ | ● | |
| MEC5883 Mechanical systems design ¹ | ● | |
| MEC5884 Sustainable engineering systems ¹ | | ● |
| MEC5885 Energy efficiency and sustainability engineering ¹ | ● | |
| MEC5888 Renewable energy systems ¹ | | ● |
| MEC5891 Design for additive manufacturing ¹ | ✕ | |
| MEC5897 Lean manufacturing ¹ | | ● |
| <i>You may consider an engineering technical unit chosen from the engineering minors, subject to meeting the unit prerequisite and/or co-requisite rules.</i> | | |

Resources and mining engineering

| | | |
|---|--|---|
| ATS2548 Climate and environmental policy and management | | ● |
| CHE2163 Heat and mass transfer | | ● |

| ● Offered × Not offered Offerings are subject to change | |
|---|------------|
| Semester 1 | Semester 2 |

Electives must be completed at the unit level required to satisfy your course requirements.

| | | | |
|--|--|---|---|
| EAE2522 | Earth surface dynamics | ● | |
| ENE2021 | Energy and the environment | ● | |
| MEC2405 | Thermodynamics | | ● |
| CHE3163 | Sustainable processing 1 | ● | |
| CIV3247 | Geomechanics 2 | | ● |
| CIV3248 | Groundwater and environmental geomechanics | x | |
| RSE3141 | Solar energy | ● | |
| RSE3241 | Hydropower | | ● |
| RSE3242 | Geothermal energy | ● | |
| RSE3243 | Bioenergy | | ● |
| CIV4248 | Ground hazards engineering | | x |
| CIV4268 | Water resources management | | ● |
| CIV4288 | Water treatment | | ● |
| CIV4249 | Foundation engineering | | x |
| MTE4593 | Materials and sustainability | | ● |
| You may consider an engineering technical unit chosen from the engineering minors, subject to meeting the unit prerequisite and/or co-requisite rules. | | | |

Resources and renewable energy engineering

Electives must be completed at the unit level required to satisfy your course requirements.

| | | | |
|--|---|---|---|
| ATS2548 | Climate and environmental policy and management | | ● |
| CHE2163 | Heat and mass transfer | | ● |
| EAE2522 | Earth surface dynamics | ● | |
| ENE2021 | Energy and the environment | ● | |
| MEC2405 | Thermodynamics | | ● |
| CIV3247 | Geomechanics 2 | | ● |
| CIV3248 | Groundwater and environmental geomechanics | x | |
| ENE3031 | Building sustainability | | ● |
| ENE3032 | Fate and transport of contaminants | | ● |
| ENE3606 | The air environment | | ● |
| RSE3010 | Mine geotechnical engineering | ● | |
| RSE3020 | Resources estimation | ● | |
| RSE3030 | Ventilation for surface and underground spaces | ● | |
| RSE3040 | Mining systems | | ● |
| RSE3060 | Rock breakage | | ● |
| CIV4248 | Ground hazards engineering | | x |
| CIV4268 | Water resources management | | ● |
| CIV4288 | Water treatment | | ● |
| RSE4010 | Mine planning and development | | ● |
| You may consider an engineering technical unit chosen from the engineering minors, subject to meeting the unit prerequisite and/or co-requisite rules. | | | |

Robotics and mechatronics engineering

Electives must be completed at the unit level required to satisfy your course requirements.

| | | | |
|-------------------------|--|---|---|
| ECE2111 | Signals and systems | | ● |
| ECE2191 | Probability models in engineering | | ● |
| MAE2505 | Aerospace dynamics | | ● |
| TRC2001 | Introduction to systems engineering | | x |
| ECE3051 | Electrical energy systems | ● | |
| ECE3073 | Computer systems | ● | |
| ECE3141 | Information and networks | ● | |
| MEC3010 | Micro and nanotechnologies: Fabrication and applications | ● | |

| ● Offered × Not offered Offerings are subject to change | |
|--|------------|
| Semester 1 | Semester 2 |

¹ **Level 5 units:** You must obtain a weighted average mark (WAM) of 65 or above at the conclusion of level 3 and be in your final year to be eligible to enrol in the level 5 units.

| | | | |
|--|---|---|---|
| MEC3416 | Machine design | | ● |
| MEC3448 | Engineering technologies | | × |
| MEC3459 | Materials selection for engineers | | ● |
| MEC3602 | Biomedical microsystems | | ● |
| ECE4044 | Telecommunication protocols | × | |
| ECE4045 | Network performance | | × |
| ECE4053 | Power system analysis | | ● |
| ECE4055 | Power electronic converters | ● | |
| ECE4076 | Computer vision | ● | |
| ECE4078 | Intelligent robotics | | ● |
| ECE4081 | Medical instrumentation | | ● |
| ECE4146 | Multimedia technologies | × | |
| ECE4179 | Neural networks and deep learning | | ● |
| ECE4886 | Smart grids | | ● |
| ENG4700 | Engineering technology for biomedical imaging and sensing | × | |
| MEC4425 | Micro/nano solid and fluid mechanics | | × |
| MEC4426 | Computer-aided design | | ● |
| MEC4428 | Advanced dynamics | | × |
| MEC4444 | Introduction to engineering acoustics | | × |
| MEC4446 | Composite structures | | × |
| MEC4601 | Implantable devices | ● | |
| TRC4200 | Engineering cyber-physical systems | ● | |
| TRC4802 | Thermo-fluids and power systems | | ● |
| TRC4902 | Mechatronics and manufacturing | | ● |
| ECE5881 | Real time system design ¹ | ● | |
| ECE5882 | Advanced electronics design ¹ | | ● |
| ECE5883 | Advanced signal processing ¹ | ● | |
| ECE5884 | Wireless communications ¹ | | ● |
| MEC5881 | Engineering systems performance analysis ¹ | | ● |
| MEC5882 | Instrumentation, sensing and monitoring ¹ | ● | |
| MEC5883 | Mechanical systems design ¹ | ● | |
| MEC5884 | Sustainable engineering systems ¹ | | ● |
| MEC5885 | Energy efficiency and sustainability engineering ¹ | ● | |
| MEC5888 | Renewable energy systems ¹ | | ● |
| MEC5891 | Design for additive manufacturing ¹ | × | |
| You may consider an engineering technical unit chosen from the engineering minors, subject to meeting the unit prerequisite and/or co-requisite rules. | | | |

Software engineering

Electives must be completed at the unit level required to satisfy your course requirements.

| | | | |
|-------------------------|---|---|---|
| FIT3003 | Business intelligence and data warehousing | | ● |
| FIT3031 | Network security | | ● |
| FIT3080 | Artificial intelligence | | ● |
| FIT3094 | Artificial life, artificial intelligence and virtual environments | ● | |
| FIT3134 | Entrepreneurship | | × |
| FIT3138 | Real time enterprise systems | | ● |
| FIT3139 | Computational modelling and simulation | ● | |
| FIT3142 | Distributed computing | | × |
| FIT3143 | Parallel computing | | ● |
| FIT3146 | Maker lab | | ● |
| FIT3152 | Data analytics | ● | |

| ● Offered × Not offered <i>Offerings are subject to change</i> | |
|--|------------|
| Semester 1 | Semester 2 |

| | | | |
|-------------------------|---|---|---|
| FIT3154 | Advanced data analysis | | ● |
| FIT3155 | Advanced data structures and algorithms | ● | ● |
| FIT3157 | Advanced web design | | × |
| FIT3168 | IT forensics | | ● |
| FIT3169 | Immersive environments | ● | |
| FIT3173 | Software security | ● | |
| FIT3175 | Usability | ● | |
| FIT3176 | Advanced database design | | ● |
| FIT3178 | iOS app development | ● | |
| FIT3179 | Data visualisation | | ● |
| FIT3182 | Big data management and processing | ● | |
| FIT4005 | IT research methods | ● | ● |
| FIT5003 | Software security | | ● |
| FIT5032 | Internet applications development | | ● |
| FIT5037 | Network security | | ● |
| FIT5042 | Enterprise application development on the web | | × |
| FIT5046 | Mobile and distributed computing systems | ● | |
| FIT5124 | Emerging topics for cybersecurity in practice | ● | |
| FIT5129 | Enterprise IT security: Planning, operations and management | ● | |
| FIT5133 | Enterprise architecture and management | | × |
| FIT5137 | Advanced database technology | | ● |
| FIT5140 | IoT and mobile applications | | × |
| FIT5145 | Introduction to data science | ● | ● |
| FIT5163 | Information and computer security | ● | ● |
| FIT5201 | Machine learning | ● | ● |
| FIT5202 | Data processing for big data | | ● |
| FIT5214 | Blockchain | | ● |
| FIT5215 | Deep learning | | ● |
| FIT5216 | Modelling discrete optimisation problems | ● | |
| FIT5217 | Natural language processing | ● | |
| FIT5219 | Advanced learning and cognitive systems | | × |
| FIT5220 | Solving discrete optimisation problems | | × |
| FIT5221 | Intelligent image and video analysis | ● | |
| FIT5222 | Planning and automated reasoning | ● | |
| FIT5223 | IT forensics | | ● |
| FIT5224 | Smart contracts | | × |
| FIT5225 | Cloud computing and security | ● | |