



Bachelor of Engineering (Honours) (Domestic students)

Program code

1546

Available at

Gold Coast Campus

Duration

4 years full-time

8 years part-time

Credit points

320

Indicative fee

\$9,527.00* per year ([more](#))

* 2020 indicative annual CSP fee

[Calculate](#) your fees

Entry requirements

12

Overall position (OP) 2019

73

Rank 2019 ([more](#))

OR VET qualification

Certificate IV

([Additional requirements](#))

Commencing in

Trimester 1 and Trimester 2

Prerequisites

English (4SA)

Maths B (4SA)

Assumed knowledge

Nil



OP 1-10 or ATAR 80+

Guarantee

If you receive an OP of 1-10 or ATAR of 80+ and meet subject prerequisites, you are guaranteed a place in this program.

Degree requirements: Students who started Trimester 1 - 2020

For Domestic and those International students not required to complete the English Language Enhancement course

For the award of *Bachelor of Engineering (Honours) [BEng(Hons)]*, you must successfully complete 320 credit points, made up of the core courses AND:

- 20 credit points of foundation courses for your chosen major; AND
- 150 credit points for a major; AND
 - 40 credit points for a minor and 10 credit points of free-choice elective/s; **OR**
 - 30 credit points of courses listed in any minor available to your chosen major and 20 credit points of free-choice elective/s;

OR

- 20 credit points of foundation courses for your chosen major; AND
- 190 credit points for an extended major and 10 credit points for free-choice elective/s; AND

Other program requirements

You must successfully complete:

- no more than 100 credit points of Level 1 courses (the first digit of a course code denotes the level);
- at least 60 credit points of Level 4 courses or higher.

Exit point

To be eligible to exit the Bachelor of Engineering (Honours) program with the Bachelor of Engineering Science award, you must acquire 240 credit points as prescribed below:

- at least 210 credit points from the Bachelor of Engineering (Honours) course list for any major including all first year level and second year level core courses
- no more than 30 credit points of free-choice electives
- at least 60 credit points of courses at third year level or higher
- no more than 100 credit points of courses at first year level.

Note: If you are undertaking the **Software Engineering extended major** you will need to have completed some Year 4 courses to meet the above requirements.

To exit, you should apply for a program transfer.

Honours

Classification of Honours

Bachelor of Engineering (Honours)

The class of Honours to be awarded to each student in this degree will be determined by the School of Engineering Assessment Board on the basis of the Program Grade Point Average and the performance in the final year IAP - Thesis course.

A minimum IAP Thesis mark of 50% is required for the award of the Bachelor of Engineering (Honours).

Students who have repeated 6007ENG IAP-Thesis will be eligible for no higher than Class III Honours. A second fail in 6007ENG IAP-Thesis will result in termination of the student's enrolment in the program.

Cut-offs for Honours Classifications

- **Class I Honours:**
 - Program Grade Point Average - 6.200 (minimum)
 - Minimum IAP-Thesis Mark - 80%
- **Class IIA Honours:**
 - Program Grade Point Average - 5.650 (minimum)
 - Minimum IAP-Thesis Mark - 70%
- **Class IIB Honours:**
 - Program Grade Point Average - 5.000 (minimum)
 - Minimum IAP-Thesis Mark - 60%
- **Class III Honours:**
 - Program Grade Point Average - < 5.000
 - Minimum IAP-Thesis Mark - 50%

Australian Qualifications Framework (AQF) Level and Type

The **Australian Qualifications Framework (AQF)** is the national policy for regulated qualifications in Australian education and training. This qualification is accredited as an AQF Level 8 - Bachelor Honours Degree.

English Language Enhancement

Domestic students enrolled in this program whose first language is not English may complete the following **English Language Enhancement (ELE)** course as an elective.

- **5903LHS Language and Communication for Sciences**

Students whose first language is English are not permitted to undertake this ELE course.

Program learning outcomes

Program learning outcomes

Program Learning Outcomes communicate to the community the value of the Griffith educational experience as benchmarked against national qualification standards.

Program Learning Outcomes for this award describe the knowledge, skills and the application of knowledge and skills you will acquire through studying the Griffith program of your choice.

Course list: Students starting Trimester 1 - 2020

Note: Students must check the prerequisite and incompatible requirements before selecting any course within this program.

Year 1

You must complete the following **core** courses:

Trimester	Course code	Course title	CP
Tri 1	1010ENG	Engineering Mathematics 1	10
Tri 1	1018ENG	Engineering Science	10
Tri 1	1017ENG	Engineering Materials	10
Tri 1	1701ENG	Creative Engineering (see Note 1)	10
		OR	
Tri 1	5903LHS	Language and Communication for Sciences (see Note 1)	10
Tri 2	1020ENG	Engineering Mathematics 2	10
Tri 2	1022ENG	Engineering Design Practice	10

Note 1: Students taking 5903LHS in Trimester 1 are required to complete 1701ENG in place of an elective course. Students undertaking the Electronic and UAV Engineering major will complete 1701ENG in Year 2 Trimester 3 in place of an elective course.

You must complete 20 credit points (for the chosen major) from the following **foundation** courses:

Trimester	Course code	Course title	CP
Tri 2	1105ENG	Numerical and Computing Skills (for Civil or Environmental Engineering majors)	10
Tri 2	1501ENG	Engineering Mechanics (for Civil, Environmental or Mechanical Engineering majors)	10
Tri 2	1305ENG	Engineering Programming (for Electrical, Electronic, Mechanical, Software or UAV Engineering majors)	10
Tri 2	1301ENG	Electric Circuits (for Electrical, Electronic, Software or UAV Engineering majors)	10

Years 2-4

Note: Some courses are being introduced incrementally and may not be available for enrolment. Click on the **course code** to find out more information on when the course is offered.

You must complete one of the following options:

Trimester	Course code	Course title	CP
Tri 1		Major	150
		AND	
Tri 1		Minor	40
		AND	
Tri 1		Free-choice elective	10
		OR	
Tri 1		Major	150
		AND	
Tri 1		Listed electives	30
		AND	
Tri 1		Free-choice electives	20
		OR	
Tri 1		Extended major	190
		AND	
Tri 1		Free-choice elective	10

Exit point: Bachelor of Engineering Science (1573). To exit (after completing the 240 credit point requirements of Years 1, 2 and 3), you should apply for a program transfer.

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 1,2 or 3	6007ENG	IAP - Thesis (capstone course)	30
Tri 1,2 or 3	6008ENG	IAP - Professional Practice (capstone course) (see Note 1)	10

Note 1: It is a requirement that students complete a minimum of 60 days approved experience in an engineering practice environment (or a satisfactory alternative) during their degree studies. A co requisite of this course is the completion of a minimum of 12 weeks (60 days) of approved experience in an engineering practice environment (or a satisfactory alternative).

Majors (8 available)

Civil Engineering

You must complete the following foundation courses:

Trimester	Course code	Course title	CP
Tri 2	1105ENG	Numerical and Computing Skills	10
Tri 3	1501ENG	Engineering Mechanics	10

Year 2

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 1	2205NSC	Calculus II	10
Tri 1	2002ENG	Fluid Mechanics and Hydraulics	10
Tri 1	2101ENG	Mechanics of Materials I	10
Tri 1	2104ENG	Construction Methods and Practices	10
Tri 2	2004ENG	Hydrology	10
Tri 2	2102ENG	Soil Mechanics	10
Tri 2	2103ENG	Structural Design	10

Year 3

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 1	3101ENG	Structural Analysis	10
Tri 2	4000ENG	Research Methods and Statistics	10
Tri 2	3004ENG	Project Management Principles	10
Tri 1	3102ENG	Geotechnical Engineering	10
Tri 2	3103ENG	Concrete Structures	10
Tri 2	2106ENG	Design for Civil Engineers (not offered from 2019)	10
		OR	
Tri 2	3113ENG	Civil Engineering Design Project	10

Year 4

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 2	6106ENG	Transportation Engineering	10
Tri 2	6003ENG	Integrated Design Project	10

Electrical and Electronic Engineering

You must complete the following foundation courses:

Trimester	Course code	Course title	CP
Tri 2	1305ENG	Engineering Programming	10
Tri 2	1301ENG	Electric Circuits	10

Year 2

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 1	2205NSC	Calculus II	10
Tri 1	2311ENG	Analog Electronics I	10
Tri 1	2315ENG	Digital Electronics	10
Tri 2	2303ENG	Microprocessor Techniques	10
Tri 2	2305ENG	Signals and Systems	10
Tri 2	2314ENG	Engineering Electromagnetics	10
Tri 2	2318ENG	Electromechanics	10

Year 3

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 3	4000ENG	Research Methods and Statistics	10
Tri 1	3304ENG	Control Systems	10
Tri 1	3312ENG	Electrical Design Project	10
Tri 1	3322ENG	Electromagnetic Waves and Propagation	10
Tri 2	3004ENG	Project Management Principles	10
Tri 2	3325ENG	Numerical Engineering Methods	10

Year 4

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 1	6321ENG	Discrete Time Signal Processing	10
Tri 1	6315ENG	Communication Systems	10

Electronic and Energy Engineering (Nathan Extended major)

You must complete the following foundation courses:

Trimester	Course code	Course title	CP
Tri 2	1305ENG	Engineering Programming	10
Tri 3	1301ENG	Electric Circuits	10

Year 2

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 1	2205NSC	Calculus II	10
Tri 1	2319ENG	Introduction to Electronics	10
Tri 1	2305ENG	Signals and Systems	10
Tri 1	2315ENG	Digital Electronics	10
Tri 2	2301ENG	Semiconductor Devices and Circuits	10
Tri 2	2303ENG	Microprocessor Techniques	10
Tri 2	2201ENG	Engineering Thermodynamics	10
Tri 2	2307ENG	Electromagnetic Fields and Propagating Systems	10

Year 3

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 1	3301ENG	Practical Electronics	10
Tri 1	2002ENG	Fluid Mechanics and Hydraulics	10
Tri 1	3315ENG	Efficient Energy Systems	10
Tri 2	3004ENG	Project Management Principles	10
Tri 2	4000ENG	Research Methods and Statistics	10
Tri 2	3203ENG	Renewable Energy Systems	10
Tri 2	3314ENG	Power Distribution and Storage	10

Year 4

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 2	6311ENG	Energy Resources Management	10
Tri 2	6301ENG	Linear Electromagnetics	10
Tri 2		Listed Electronic && Energy Engineering elective course (see below)	20

Listed Electronic & Energy Engineering elective

You must complete 20 credit points from the following courses:

Trimester	Course code	Course title	CP
Tri 1	3304ENG	Control Systems	10
Tri 1	3303ENG	Digital Signal Processing	10
Tri 1	6202ENG	Cleaner Production and Eco-Efficiency	10
Tri 2	3028IBA	Energy and Environmental Security	10
Tri 2	6302ENG	Image Processing and Machine Vision (offered even years)	10
Tri 2	6303ENG	Advanced Communication Systems (offered odd years)	10
Tri 2	6306ENG	Design of Real-Time Systems (offered odd years)	10
Tri 2	6307ENG	Advanced Digital Signal Processing (offered odd years)	10
Tri 2	6308ENG	Digital Control System Engineering (offered even years) (not offered from 2019)	10
		OR	
Tri 1	6323ENG	SCADA Systems (offered from 2020)	10
Tri 2	6310ENG	Integrated Circuit Design	10

Electronic and UAV Engineering (Nathan Extended major)

This major will be offered from 2018.

Note: Year 2/Trimester 3 is a compulsory trimester of study for students completing the Electronic and UAV Engineering major.

You must complete the following foundation courses:

Trimester	Course code	Course title	CP
Tri 2	1305ENG	Engineering Programming	10
Tri 2	1301ENG	Electric Circuits	10

Year 2

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 1	2205NSC	Calculus II	10
Tri 1	2319ENG	Introduction to Electronics	10
Tri 1	2315ENG	Digital Electronics	10
Tri 1	2305ENG	Signals and Systems	10
Tri 2	2307ENG	Electromagnetic Fields and Propagating Systems	10
Tri 2	2303ENG	Microprocessor Techniques	10
Tri 2	2301ENG	Semiconductor Devices and Circuits	10
Tri 2	3324ENG	Communication Systems and Circuits	10
Tri 3	6701ENG	Avionics	10
Tri 3	2701ENG	Avionics Practical	10

Transfer point: For students transferring to the [Bachelor of Engineering \(Honours\)/Bachelor of Aviation \(1584\)](#). These students should apply for a program transfer.

Note: Students wishing to undertake optional Private Pilot Licence (PPL) flight training may do so within the Year 3 and 4 structure listed below.

Year 3

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 1	2317ENG	Workshop Technology	10
Tri 1	3701ENG	Basic Aeronautical Knowledge	10
Tri 1	3301ENG	Practical Electronics	10
Tri 1	3304ENG	Control Systems	10
Tri 2	6702ENG	UAV Design	10
Tri 2	4000ENG	Research Methods and Statistics	10
Tri 2	3702ENG	Pilot Theory	10

Year 4

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 2	6303ENG	Advanced Communication Systems	10
Tri 2	3004ENG	Project Management Principles	10

Electronic Engineering (Nathan)

You must complete the following foundation courses:

Trimester	Course code	Course title	CP
Tri 2	1305ENG	Engineering Programming	10
Tri 3	1301ENG	Electric Circuits	10

Year 2

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 1	2205NSC	Calculus II	10
Tri 1	2319ENG	Introduction to Electronics	10
Tri 1	2315ENG	Digital Electronics	10
Tri 1	2305ENG	Signals and Systems	10
Tri 2	2301ENG	Semiconductor Devices and Circuits	10
Tri 2	2323ENG	Data and Computer Communications	10
Tri 2	2303ENG	Microprocessor Techniques	10
Tri 2	2307ENG	Electromagnetic Fields and Propagating Systems	10

Year 3

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 1	3304ENG	Control Systems	10
Tri 1	3301ENG	Practical Electronics	10
Tri 2	4000ENG	Research Methods and Statistics	10
Tri 2	3324ENG	Communication Systems and Circuits	10
Tri 2	3303ENG	Digital Signal Processing	10

Year 4

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 2	3004ENG	Project Management Principles	10
Tri 2		Electronic Engineering elective course (see below)	10

Electronic Engineering electives

You must complete 10 credit points from the following courses:

Trimester	Course code	Course title	CP
Tri 1	6309ENG	Mechatronic Systems Design and Engineering (Mechanical Engineering major)	10
Tri 1	6313ENG	Electric Power Systems and Control	10
Tri 1	6316ENG	Power Electronics and Machine Drives	10
Tri 1	6318ENG	Signals and Imaging for Biomedical Applications	10
Tri 1,2	6308ENG	Digital Control System Engineering (offered even years) (not offered from 2019)	10
		OR	
Tri 1	6323ENG	SCADA Systems (offered from 2020)	10
Tri 2	6303ENG	Advanced Communication Systems (offered odd years)	10
Tri 2	6310ENG	Integrated Circuit Design	10
Tri 2	6301ENG	Linear Electromagnetics	10
Tri 2	6305ENG	Advanced Computer Systems (offered even years)	10
Tri 2	6306ENG	Design of Real-Time Systems (offered odd years)	10
Tri 2	6302ENG	Image Processing and Machine Vision (offered even years)	10
Tri 2	6307ENG	Advanced Digital Signal Processing (offered odd years)	10

Environmental Engineering (Nathan)

You must complete the following foundation courses:

Trimester	Course code	Course title	CP
Tri 2	1105ENG	Numerical and Computing Skills	10
Tri 3	1501ENG	Engineering Mechanics	10

Year 2

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 1	2205NSC	Calculus II	10
Tri 1	2002ENG	Fluid Mechanics and Hydraulics	10
Tri 1	1021SCG	Chemistry 1A	10
Tri 1	2202ENG	Environmental Microbiology and Ecology	10
Tri 2	2004ENG	Hydrology	10
Tri 2	2102ENG	Soil Mechanics	10
Tri 2	2201ENG	Engineering Thermodynamics	10
Tri 2	2206ENG	Design 1	10

Year 3

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 1	3201ENG	Water and Wastewater Treatment Fundamentals	10
Tri 1	3202ENG	Solid Waste Engineering	10
Tri 2	3004ENG	Project Management Principles	10
Tri 2	4000ENG	Research Methods and Statistics	10
Tri 2	3213ENG	Environmental Engineering Design Project	10

Year 4

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 2	6209ENG	System Design Project	10
Tri 2	6205ENG	Environmental Hydrology and Hydraulics	10

Mechanical Engineering

You must complete the following foundation courses:

Trimester	Course code	Course title	CP
Tri 2	1305ENG	Engineering Programming	10
Tri 2,3	1501ENG	Engineering Mechanics	10

Year 2

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 1	2205NSC	Calculus II	10
Tri 1	2517ENG	Kinematics and Dynamics	10
Tri 1	2101ENG	Mechanics of Materials I	10
Tri 1	2502ENG	Mechanical Engineering Design	10
Tri 2	2501ENG	Manufacturing Technology 1	10
Tri 2	2503ENG	Thermodynamics (not offered from 2019)	10
		OR	
Tri 2	2201ENG	Engineering Thermodynamics	10
Tri 2	2505ENG	Design of Machine Elements (not offered from 2019)	10
		OR	
Tri 2	3511ENG	Design of Machine Elements	10
Tri 2	2105ENG	Mechanics of Materials 2	10

Year 3

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 1	2002ENG	Fluid Mechanics and Hydraulics	10
Tri 1	3304ENG	Control Systems	10
Tri 2	2506ENG	Materials and Manufacturing (not offered from 2019)	10
		OR	
Tri 1	3508ENG	Materials and Manufacturing	10
Tri 2	2318ENG	Electromechanics	10
Tri 2	3004ENG	Project Management Principles	10

Year 4

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 1	4000ENG	Research Methods and Statistics	10
Tri 1	3505ENG	Heat and Mass Transfer (not offered from 2019)	10
		OR	
Tri 1	6527ENG	Heat and Mass Transfer	10

Software Engineering (Nathan Extended major)

You must complete the following foundation courses:

Trimester	Course code	Course title	CP
Tri 2	1305ENG	Engineering Programming	10
Tri 3	1301ENG	Electric Circuits	10

Year 2

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 1	2205NSC	Calculus II	10
Tri 1	2315ENG	Digital Electronics	10
Tri 1,3	2807ICT	Programming Principles	10
Tri 2,3	2810ICT	Software Technologies	10
Tri 2	2809ICT	Computer Networking Essentials	10
Tri 2	2303ENG	Microprocessor Techniques	10
Tri 2,3	1802ICT	Foundations of Systems Development	10

Year 3

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 1	3410ICT	Social and Professional Issues	10
Tri 1	3809ICT	Applied Network Security	10
Tri 1,3	3812ICT	Agile Business Analysis (Tri 3 Nathan only)	10
Tri 1		Listed Software Engineering elective course (see below)	10
Tri 2	2805ICT	System and Software Design (not offered at Nathan)	10
		OR	
Tri 2	3815ICT	Software Engineering	10
Tri 2	4000ENG	Research Methods and Statistics	10
Tri 2	1805ICT	Human Computer Interaction	10
Tri 2	3004ENG	Project Management Principles	10

Year 4

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 2	2323ENG	Data and Computer Communications	10
Tri 2	2703ICT	Web Application Development	10
Tri 2,3	3810ICT	Information Systems Architecture (Tri 3 Nathan only)	10
Tri 2	3813ICT	Software Frameworks	10

Listed Software Engineering elective course

You must complete 10 credit points from the following courses:

Trimester	Course code	Course title	CP
Tri 1	3701ICT	Mobile Application Development	10
Tri 2	6306ENG	Design of Real-Time Systems (odd years only)	10
Tri 2	6305ENG	Advanced Computer Systems (even years only)	10
Tri 1,2	6205ICT	Advanced Topics in Information Technology A	10
Tri 1,2	6206ICT	Advanced Topics in Information Technology B	10
Tri 1,2	6105ICT	Advanced Topics in Information Technology C	10
Tri 2	6106ICT	Advanced Topics in Information Technology D	10

Minors (14 available)

Architectural

For students undertaking the **Civil Engineering major**.

You must complete 40 credit points from the following courses:

Trimester	Course code	Course title	CP
Tri 1	2904ENV	Sustainable Design Principles	10
Tri 1	3904ENV	Building Construction and Services	10
Tri 2	1903ENV	Architecture and Landscape Architecture History 1	10
Tri 2	3910ENV	Innovation in Design	10
Tri 2	6109ENV	Experimental Design and Statistics	10

Biomedical

For students undertaking the **Electrical or Mechanical Engineering major**.

You must complete 40 credit points from the following courses:

Trimester	Course code	Course title	CP
Tri 1	1805NRS	Human Anatomy and Physiology 1	10
Tri 1	6318ENG	Signals and Imaging for Biomedical Applications (Electrical & Electronic Engineering major)	10
Tri 1	2010AHS	Musculoskeletal Anatomy (Mechanical Engineering major)	10
		OR	
Tri 1	2007AHS	Musculoskeletal Biomechanics (Mechanical Engineering major)	10
Tri 2	1808NRS	Human Anatomy and Physiology 2	10
Tri 1	6526ENG	Advanced Materials for Biomedical Applications (compulsary Mechanical major students only)	10
Tri 2	1008AHS	Introductory Biomechanics	10

Coastal and Water Engineering

For students undertaking the **Civil Engineering major**.

Note: This minor will be offered in mixed mode across both campuses.

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 1	2107ENV	Introduction to Geographic Information Systems	10
Tri 2	3105ENG	Water Resources Engineering	10
Tri 2	6110ENG	Coastal Engineering and Modelling	10
Tri 1	7309ENG	Advanced Water Engineering Practice	10

Communication Systems (Nathan)

For students undertaking the **Electronic Engineering major**.

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 2	6303ENG	Advanced Communication Systems (offered odd years)	10
Tri 2	6310ENG	Integrated Circuit Design	10
Tri 2	6301ENG	Linear Electromagnetics	10
Tri 2	6308ENG	Digital Control System Engineering (offered even years) (not offered from 2019)	10
		OR	
Tri 1	6323ENG	SCADA Systems (offered from 2020)	10

Computer Systems (Nathan)

For students undertaking the **Electronic Engineering major**

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 1	3302ENG	Computer Systems	10
Tri 2	6305ENG	Advanced Computer Systems (offered even years)	10

You must complete 20 credit points from the following courses:

Trimester	Course code	Course title	CP
Tri 2	6306ENG	Design of Real-Time Systems (offered odd years only)	10
Tri 2	6302ENG	Image Processing and Machine Vision (offered even years)	10
Tri 2	6307ENG	Advanced Digital Signal Processing (offered odd years)	10

Construction Engineering

For students undertaking the **Civil Engineering major**.

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 1	3107ENG	Construction Materials	10
Tri 2	6109ENG	Construction Project Management	10

You must complete 20 credit points from the following courses:

Trimester	Course code	Course title	CP
Tri 2	7203ENG	Resource Planning and Management	10
Tri 1	7202ENG	Project Evaluation and Control	10
Tri 2	7204ENG	Risk Analysis and Management	10

Design and Modelling

For students undertaking the **Mechanical Engineering major**.

You must complete 40 credit points from the following courses:

Trimester	Course code	Course title	CP
Tri 1	6505ENG	Manufacturing with Composites (not offered in 2019)	10
Tri 1	6525ENG	Advanced Studies in Engineering	10
		OR	
Tri 1	3101ENG	Structural Analysis	10
Tri 2	2604QCA	3D Digital Modelling for Manufacturing	10
Tri 2	6508ENG	Fluids and CFD	10
Tri 2	6522ENG	Computational Statics and Dynamics	10

Digital and Spatial Innovation (Nathan)

This minor will be offered from 2019.

For students undertaking the **Civil Engineering major**.

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 2	3118ENG	Digital Earth	10
Tri 1	2107ENV	Introduction to Geographic Information Systems	10

You must complete 20 credit points from the following courses:

Trimester	Course code	Course title	CP
Tri 3	2007ENG	International Engineering Practice (see Note 1)	10
Tri 2	7204ENG	Risk Analysis and Management	10
Tri 1	7125LHS	Communication in Crises and Disasters	10

Note 1: This course attracts additional costs and students should refer to the Course Profile for full details.

Mechatronics

For students undertaking the **Electrical and Electronic or Mechanical Engineering major**.

You must complete 40 credit points from the following courses (as specified for their major):

Trimester	Course code	Course title	CP
Tri 1	2517ENG	Kinematics and Dynamics (Electrical and Electronic Engineering major)	10
Tri 1	3304ENG	Control Systems (not offered from 2019)	10
Tri 1	6309ENG	Mechatronic Systems Design and Engineering	10
Tri 1	6308ENG	Digital Control System Engineering (Electrical & Electronic Engineering major) (not offered from 2019)	10
Tri 1	2801ICT	Computing Algorithms (Mechanical Engineering major)	10
		OR	
Tri 1	2311ENG	Analog Electronics I (Mechanical Engineering major)	10
Tri 2	2305ENG	Signals and Systems (not offered from 2019)	10
Tri 2	3327ENG	Sensors and Conditioning Circuits	10
Tri 2	6524ENG	System Dynamics and Advanced Control	10

Pollution Monitoring and Control (Nathan)

For students undertaking the **Civil or Environmental Engineering major**.

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 1	6206ENG	Site Remediation and Rehab	10
Tri 2	6201ENG	Air Quality Monitoring and Control	10
Tri 2	6208ENG	Hazardous Waste Management	10
Tri 2	6204ENG	Advanced Water and Wastewater Engineering	10

Power and Machines

For students undertaking the **Electrical and Electronic Engineering major**.

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 1	6313ENG	Electric Power Systems and Control	10
Tri 1	6316ENG	Power Electronics and Machine Drives	10
Tri 2	3319ENG	Power Transmission and Distribution	10
Tri 2	3320ENG	Electrical Machines and Renewable Generators	10

Renewable Energy (Nathan)

For students undertaking the **Mechanical Engineering major**

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 1	3315ENG	Efficient Energy Systems	10
Tri 2	3203ENG	Renewable Energy Systems	10
Tri 2	6311ENG	Energy Resources Management	10
		OR	
Tri 2	3314ENG	Power Distribution and Storage	10
Tri 1	6202ENG	Cleaner Production and Eco-Efficiency	10

Signal Processing and Control (Nathan)

For students undertaking the **Electronic Engineering major**.

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 2	6308ENG	Digital Control System Engineering (offered even years) (not offered from 2019)	10
		OR	
Tri 1	6323ENG	SCADA Systems (offered from 2020)	10
Tri 2	6302ENG	Image Processing and Machine Vision (offered even years)	10
Tri 2	6307ENG	Advanced Digital Signal Processing (offered odd years)	10
Tri 2	6306ENG	Design of Real-Time Systems (offered odd years)	10

Structural and Geotechnical Engineering

For students undertaking the **Civil Engineering major**.

You must complete the following courses:

Trimester	Course code	Course title	CP
Tri 2	2105ENG	Mechanics of Materials 2	10
Tri 1	3114ENG	Rock Mechanics	10
Tri 2	3115ENG	Geotechnical Engineering Practice	10
Tri 2	6522ENG	Computational Statics and Dynamics	10

Electives (2 available)

Listed Electives

Civil Engineering major

Trimester	Course code	Course title	CP
Tri 3	2007ENG	International Engineering Practice (see Note 1)	10
Tri 2	2105ENG	Mechanics of Materials 2	10
Tri 1	2107ENV	Introduction to Geographic Information Systems	10
Tri 1	3047ENV	Geographic Information Systems	10
Tri 2	3105ENG	Water Resources Engineering	10
Tri 1	3107ENG	Construction Materials	10
Tri 1	3114ENG	Rock Mechanics	10
Tri 2	3115ENG	Geotechnical Engineering Practice	10
Tri 2	3118ENG	Digital Earth	10
Tri 2	6109ENG	Construction Project Management	10
Tri 2	6110ENG	Coastal Engineering and Modelling	10
Tri 2	6201ENG	Air Quality Monitoring and Control	10
Tri 2	6204ENG	Advanced Water and Wastewater Engineering	10
Tri 1	6206ENG	Site Remediation and Rehab	10
Tri 2	6208ENG	Hazardous Waste Management	10
Tri 2	6522ENG	Computational Statics and Dynamics	10
Tri 1	7125LHS	Communication in Crises and Disasters	10
Tri 1	7202ENG	Project Evaluation and Control	10
Tri 2	7203ENG	Resource Planning and Management	10
Tri 2	7204ENG	Risk Analysis and Management	10
Tri 1	7309ENG	Advanced Water Engineering Practice	10

Note 1: This course attracts additional costs and students should refer to the Course Profile for full details.

Electrical and Electronic Engineering major

Trimester	Course code	Course title	CP
Tri 2	2305ENG	Signals and Systems	10
Tri 1	3304ENG	Control Systems	10
Tri 2	3319ENG	Power Transmission and Distribution	10
Tri 2	3320ENG	Electrical Machines and Renewable Generators	10
Tri 2	3327ENG	Sensors and Conditioning Circuits	10
Tri 1	6308ENG	Digital Control System Engineering (not offered from 2019)	10
		OR	
Tri 1	6323ENG	SCADA Systems (offered from 2020)	10
Tri 1	6313ENG	Electric Power Systems and Control	10
Tri 1	6316ENG	Power Electronics and Machine Drives	10
Tri 2	6524ENG	System Dynamics and Advanced Control	10

Electronic Engineering major

Trimester	Course code	Course title	CP
Tri 1	3302ENG	Computer Systems	10
Tri 2	6301ENG	Linear Electromagnetics	10
Tri 2	6302ENG	Image Processing and Machine Vision (offered even years)	10
Tri 2	6303ENG	Advanced Communication Systems (offered odd years)	10
Tri 2	6305ENG	Advanced Computer Systems (offered even years)	10
Tri 2	6306ENG	Design of Real-Time Systems (offered odd years only)	10
Tri 2	6307ENG	Advanced Digital Signal Processing (offered odd years)	10
Tri 2	6308ENG	Digital Control System Engineering (offered even years) (not offered from 2019)	10
		OR	
Tri 1	6323ENG	SCADA Systems (offered from 2020)	10
Tri 2	6310ENG	Integrated Circuit Design	10

Environmental Engineering major

Trimester	Course code	Course title	CP
Tri 1	6206ENG	Site Remediation and Rehab	10
Tri 2	6201ENG	Air Quality Monitoring and Control	10
Tri 2	6208ENG	Hazardous Waste Management	10
Tri 2	6204ENG	Advanced Water and Wastewater Engineering	10

Mechanical Engineering major

Trimester	Course code	Course title	CP
Tri 1	1805NRS	Human Anatomy and Physiology 1	10
Tri 2	1808NRS	Human Anatomy and Physiology 2	10
Tri 2	1008AHS	Introductory Biomechanics	10
Tri 2	2305ENG	Signals and Systems	10
Tri 1	2517ENG	Kinematics and Dynamics	10
Tri 1	3304ENG	Control Systems	10
Tri 2	3327ENG	Sensors and Conditioning Circuits	10
Tri 1	6318ENG	Signals and Imaging for Biomedical Applications	10
Tri 1	6505ENG	Manufacturing with Composites (not offered in 2019)	10
		OR	
Tri 2	2604QCA	3D Digital Modelling for Manufacturing	10
Tri 1	6309ENG	Mechatronic Systems Design and Engineering	10
Tri 2	6508ENG	Fluids and CFD	10
Tri 2	6522ENG	Computational Statics and Dynamics	10
Tri 1	6525ENG	Advanced Studies in Engineering	10
Tri 2	6526ENG	Advanced Materials for Biomedical Applications	10

Free-choice electives

You may select free-choice electives from the list below or any **Undergraduate free-choice elective/s** offered across the University provided prerequisites are met. If you require guidance, please liaise with your Program Director.

Trimester	Course code	Course title	CP
Tri 1,2	1001EHR	Work and Employability	10
Tri 1,2 or 3	1003MKT	Introduction to Marketing	10
Tri 1,2	1005IBA	Introduction to International Business	10
Tri 1	1007ICT	Computer Systems and Networks	10
Tri 2,3	1014SCG	Statistics	10
Tri 1,3	1015SCG	Quantitative Reasoning	10
Tri 1,3	1032LHS	Japanese 1A	10
Tri 1,3	1041SCG	Biological Systems	10
Tri 1,3	1043SCG	Introduction to Environmental Sustainability	10
Tri 2	1044SCG	Earth Systems	10
Tri 1,2 or 3	1101IBA	Management Concepts	10
Tri 1,2 or 3	1102AFE	Accounting for Decision Making	10
Tri 1,2,3	1303AFE	Economics for Decision Making 1	10
Tri 2	1304NSC	Atmospheric Science	10
Tri 1,2 or 3	1305AFE	Business Data Analysis	10
Tri 2	1606QCA	3D Digital Modelling for Design	10
Tri 1	1621ICT	Web Technologies	10
Tri 2,3	1701ICT	Creative Coding	10
Tri 1	1807ICT	Computer and Network Architecture	10
Tri 2	2001ICT	Project Management	10
Tri 1,2 or 3	2043MKT	Entrepreneurship and New Business Ventures (Tri 1: NA,OL; Tri 2: SB,GC; Tri 3: NA,GC)	10
Tri 1	2071ENV	Soils and Geomorphology	10
Tri 1,3	2128IBA	Business Processes (Tri 1&3: GC,NA; Tri 3: OL)	10
Tri 2	2304ENV	Rivers and Catchments	10
Tri 1,2	2604QCA	3D Digital Modelling for Manufacturing	10
Tri 1,2 or 3	2639QCA	Digital Modelling for Design	10
Tri 1,2	2640QCA	Introduction to 3D Printing	10
Tri 1,2 or 3	3031IBA	Griffith Innovation Challenge (offered GC only in T2-2019)	10
Tri 1	3612ICT	Database Systems and Administration (not offered from 2018)	20
Tri 2	6207ENG	Environmental Management Systems	10