



Bachelor of Engineering (Honours)/Bachelor of Environmental Science (International students)

Program code 1555	Entry requirements 6.5	Prerequisites NIL
Available at Nathan Campus	IELTS (Academic) (more)	Assumed knowledge Any General or Applied English subject (Units 3 and 4, C)
Duration 5 years full-time	CRICOS code 091200E	Mathematical Methods (Units 3 and 4, C)
Credit points 400	Commencing in Trimester 1 and Trimester 2	Apply Now
Indicative fee \$40,500.00* per year (more) * 2024 indicative annual fee		

Degree requirements: Students who started Trimester 2 - 2022

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

For the award of *Bachelor of Engineering (Honours)/Bachelor of Environmental Science [BEng(Hons)/BEnvSc]*, you must successfully complete 400 credit points, made up of the core courses AND

- 20 credit points of foundation courses for your chosen Engineering major;
- 10 credit points of foundation courses for your chosen Environmental Science major;
- 160 credit points for an Engineering major;
- 60 credit points for an Environmental Science major;
- 30 credit points of listed electives.

For International students required to complete the English Language Enhancement course

For the award of *Bachelor of Engineering (Honours)/Bachelor of Environmental Science [BEng(Hons)/BEnvSc]*, you must successfully complete 400 credit points, made up of the core courses AND

- 10 credit points for the English Language Enhancement course (5903LHS)
- 20 credit points of foundation courses for your chosen Engineering major;
- 10 credit points of foundation courses for your chosen Environmental Science major;
- 160 credit points for an Engineering major;
- 60 credit points for an Environmental Science major;
- 20 credit points for a Listed elective.

Other program requirements

You must successfully complete:

- no more than 150 credit points of Level 1 courses (the first digit of a course code denotes the level);
- at least 60 credit points of Level 3 courses or higher.

You must also complete a minimum of 12 weeks (60 days) of approved experience in an Engineering practice environment (or a satisfactory alternative) during your degree studies.

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 Assessment Board on the basis of the Program Grade Point Average for the engineering components of the program and the performance in the final year IAP course.

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

Students who have repeated the IAP course will be eligible for no higher than Class III Honours. A second fail in the IAP course 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 Mark - 80%
- **Class IIA Honours:**
 - Program Grade Point Average - 5.650 (minimum)
 - Minimum IAP Mark - 70%
- **Class IIB Honours:**
 - Program Grade Point Average - 5.000 (minimum)
 - Minimum IAP Mark - 60%
- **Class III Honours:**
 - Program Grade Point Average - < 5.000
 - Minimum IAP 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. The Bachelor of Engineering (Honours) is accredited as an AQF Level 8 - Bachelor Honours Degree. The Bachelor of Environmental Science is accredited as an AQF Level 7 - Bachelor Degree.

English Language Enhancement

All undergraduate International students are required to complete an **English Language Enhancement Course** unless specific criteria are met as specified in Section 5.0 **Qualifications Procedure**.

The following course must be completed in the first trimester of study:

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

Advice regarding the requirement to complete the English Language Enhancement Course is available via the *myGriffith* portal (in the To Do List).

Students whose first language is English are not permitted to undertake this 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 the **Bachelor of Engineering (Honours)** and **Bachelor of Environmental Science** 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 2 - 2022

Course offering information in program structures is a guide only. Please check the actual offering information in the Course Catalogue.

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

English Language Enhancement course

Students required to undertake the English Language Enhancement course must complete 5903LHS in their first trimester of study.

Students that complete 5903LHS will only be required to complete 20 credit points of Listed electives.

Trimester	Course code	Requirement	Course title	CP
Tri 1,2	5903LHS	English Enhancement	Language and Communication for Sciences	10
			OR	
Tri 2		Listed Elective 3	Listed elective	10

Year 1

You must complete the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1,3	1010ENG	Hons Core to Program	Engineering Mathematics 1	10
Tri 1,2	1018ENG	Hons Core to Program	Engineering Science	10
Tri 1,3	1022ENG	Hons Core to Program	Engineering Design Practice	10
Tri 2,3	1020ENG	Hons Core to Program	Engineering Mathematics 2	10
Tri 1,3	1017ENG	Hons Core to Program	Engineering Materials	10
Tri 3	1701ENG	Hons Core to Program	Creative Engineering (not offered from 2023)	10
			OR	
Tri 2	1508ENG	Hons Core to Program	Digital Design and Modelling (see Note 1)	10
			OR	
Tri 2	1108ENG	Hons Core to Program	Digital and Data Skills (see Note 1)	10

Note 1: Students who have not completed 1701ENG Creative Engineering by the end of 2022 must complete one of the following two courses to satisfy their degree requirements:

- 1508ENG CAD for Design (recommended for Mechanical, Electrical & Electronic Engineering majors)
- 1108ENG Digital and Data Skills (recommended for Environmental and Civil Engineering majors)

You must complete 20 credit points of **foundation courses for your chosen Engineering major**:

Civil Engineering

Trimester	Course code	Requirement	Course title	CP
Tri 2	1108ENG	Mandatory Prereq	Digital and Data Skills	10
			OR	
Tri 2	1105ENG	Mandatory Prereq	Numerical and Computing Skills (not offered from 2023)	10
Tri 2	1501ENG	Mandatory Prereq	Engineering Mechanics	10

Environmental Engineering

Trimester	Course code	Requirement	Course title	CP
Tri 2	1108ENG	Mandatory Prereq	Digital and Data Skills	10
			OR	
Tri 2	1105ENG	Mandatory Prereq	Numerical and Computing Skills (not offered from 2023)	10
Tri 2	1501ENG	Mandatory Prereq	Engineering Mechanics	10

Electronic Engineering

Trimester	Course code	Requirement	Course title	CP
Tri 2	1305ENG	Mandatory Prereq	Engineering Programming (not offered from 2023)	10
			OR	
Tri 1	2322ENG	Mandatory Prereq	Engineering C	10
Tri 2	1301ENG	Mandatory Prereq	Electric Circuits	10

Mechanical Engineering

Trimester	Course code	Requirement	Course title	CP
Tri 2	1305ENG	Mandatory Prereq	Engineering Programming (not offered from 2023)	10
			OR	
Tri 2	1008ENG	Mandatory Prereq	Programming and Computing for Engineers	10
Tri 2	1501ENG	Mandatory Prereq	Engineering Mechanics	10

Years 2-5

You must complete 10 credit points of **foundation courses for your chosen Environmental Science major**:

Trimester	Course code	Requirement	Course title	CP
Tri 2	1444ENV	Listed Elective 2	Global Environmental Challenges (for Environmental Management major) (not offered from 2021)	10
			OR	
Tri 2	1024ENG	Listed Elective 2	Intro to Digital and Spatial Analysis	10
Tri 2	1042SCG	Listed Elective 2	Genetics and Evolutionary Biology (for Ecology & Conservation major)	10
Tri 2	1022SCG	Listed Elective 2	Chemistry 1B (Nathan) (for Soil & Water Science Major) (see Note 1)	10
			OR	
Tri 2	1024SCG	Listed Elective 2	Chemistry II (Gold Coast) (for Soil & Water Science Major) (see Note 1)	10
Tri 1	1037ENV	Listed Elective 2	Understanding Australian Cities (for Urban Environments major)	10

Note 1: Soil and Water major is only suitable for students who have completed chemistry to Year 12 level at Secondary School.

You must complete the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1	2205NSC	Core to Program	Calculus II	10
Tri 1,3	1021SCG	Listed Elective 3	Chemistry 1A (Nathan) (see Note 1)	10
			OR	
Tri 1,3	1023SCG	Listed Elective 3	Chemistry I (Gold Coast) (see Note 1)	10
			OR	
Tri 1			Listed elective (see Note 1)	10
Tri 1,3	1041SCG	Core to Program	Biological Systems	10
Tri 1	1043SCG	Core to Program	Introduction to Environmental Sustainability	10
Tri 2	1044SCG	Core to Program	Earth Systems	10
Tri 1,2			Engineering major	160
Tri 1,2			Environmental Science Major	60
Tri 1,2			Listed Elective	20
Tri 2	3004ENG	Hons Core to Program	Project Management Principles	10
Tri 1,2	4000ENG	Hons Core to Program	Research Methods and Statistics	10

Note 1: Students completing the **Environmental Engineering major** must complete a Listed first year Environmental Science elective.

Bachelor of Engineering (Honours) - Majors (4 available)

Civil Engineering

You must complete the following foundation courses:

Trimester	Course code	Requirement	Course title	CP
Tri 2	1105ENG	Mandatory Prereq	Numerical and Computing Skills (withdrawn from 2022)	10
			OR	
Tri 2	1108ENG	Mandatory Prereq	Digital and Data Skills (for Civil or Environmental Engineering majors)	10
Tri 2	1501ENG	Mandatory Prereq	Engineering Mechanics	10

Year 2

You must complete the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1	2002ENG	Hons Core to Major	Fluid Mechanics and Hydraulics	10
Tri 1	2101ENG	Hons Core to Major	Mechanics of Materials I	10
Tri 1	2104ENG	Hons Core to Major	Construction Methods and Practices	10
Tri 2	2004ENG	Hons Core to Major	Hydrology	10

Year 3

You must complete the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 2	2102ENG	Hons Core to Major	Soil Mechanics	10
Tri 2	2103ENG	Hons Core to Major	Structural Design	10
Tri 2	3113ENG	Hons Core to Major	Civil Engineering Design Project	10

Year 4

You must complete the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1	3101ENG	Hons Core to Major	Structural Analysis	10
Tri 2	3103ENG	Hons Core to Major	Concrete Structures	10
Tri 1	3102ENG	Hons Core to Major	Geotechnical Engineering	10

Year 5

You must complete the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1	6002ENG	Hons Core to Major	IAP (see Note 1)	40
Tri 2	6106ENG	Hons Core to Major	Transportation Engineering	10
Tri 2	6209ENG	Hons Core to Major	System Design Project (Nathan)	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).

Electronic Engineering

You must complete the following foundation courses:

Trimester	Course code	Requirement	Course title	CP
Tri 2	1305ENG	Mandatory Prereq	Engineering Programming (withdrawn from 2022)	10
			OR	
Tri 2	1008ENG	Mandatory Prereq	Programming and Computing for Engineers	10
Tri 2,3	1301ENG	Mandatory Prereq	Electric Circuits	10

Year 2

You must complete the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1	2319ENG	Hons Core to Major	Introduction to Electronics	10
Tri 1	2315ENG	Hons Core to Major	Digital Electronics	10
Tri 1	2305ENG	Hons Core to Major	Signals and Systems	10
Tri 2	2323ENG	Hons Core to Major	Data and Computer Communications	10

Year 3

You must complete the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 2	2301ENG	Hons Core to Major	Semiconductor Devices and Circuits	10
Tri 2	3303ENG	Hons Core to Major	Digital Signal Processing	10
Tri 2	2303ENG	Hons Core to Major	Embedded Systems	10
			OR	
Tri 2	3323ENG	Hons Core to Major	Microcontroller Techniques (withdrawn from 2022)	10
Tri 2	2307ENG	Hons Core to Major	Electromagnetic Fields and Propagating Systems	10

Year 4

You must complete the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1	3304ENG	Hons Core to Major	Control Systems	10
Tri 1	3301ENG	Hons Core to Major	Practical Electronics	10
Tri 1	3302ENG	Hons Core to Major	Computer Systems	10
Tri 2	3324ENG	Hons Core to Major	Communication Systems and Circuits	10

Year 5

You must complete the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1	6002ENG	Hons Core to Major	IAP (see Note 1)	40
Tri 2	2323ENG	Hons Core to Major	Data and Computer Communications	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).

Environmental Engineering

You must complete the following foundation courses:

Trimester	Course code	Requirement	Course title	CP
Tri 2	1105ENG	Mandatory Prereq	Numerical and Computing Skills (withdrawn from 2022)	10
			OR	
Tri 2	1108ENG	Mandatory Prereq	Digital and Data Skills (for Civil or Environmental Engineering majors)	10
Tri 2	1501ENG	Mandatory Prereq	Engineering Mechanics	10

Year 2

You must complete the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1,3	1021SCG	Hons Core to Major	Chemistry 1A	10
Tri 1	2002ENG	Hons Core to Major	Fluid Mechanics and Hydraulics	10
Tri 1	2202ENG	Hons Core to Major	Environmental Microbiology and Ecology	10
Tri 1	2004ENG	Hons Core to Major	Hydrology	10

Year 3

You must complete the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 2	2102ENG	Hons Core to Major	Soil Mechanics	10
Tri 2	2201ENG	Hons Core to Major	Engineering Thermodynamics	10
Tri 1	4007ENG	Hons Core to Major	Heat and Mass Transfer Engineering	10

Year 4

You must complete the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1	3201ENG	Hons Core to Major	Water and Wastewater Treatment Fundamentals	10
Tri 1	3202ENG	Hons Core to Major	Solid Waste Engineering	10
Tri 2	3113ENG	Hons Core to Major	Civil Engineering Design Project	10

Year 5

You must complete the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1	6002ENG	Hons Core to Major	IAP (see Note 1)	40
Tri 2	6209ENG	Hons Core to Major	System Design Project	10
Tri 2	6205ENG	Hons Core to Major	Hydrologic and Hydraulic Modelling	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).

Mechanical Engineering

You must complete the following foundation courses:

Trimester	Course code	Requirement	Course title	CP
Tri 2	1305ENG	Mandatory Prereq	Engineering Programming (withdrawn from 2022)	10
			OR	
Tri 2	1008ENG	Mandatory Prereq	Programming and Computing for Engineers	10
Tri 2	1501ENG	Mandatory Prereq	Engineering Mechanics	10

Year 2

You must complete the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1	2517ENG	Hons Core to Major	Kinematics and Dynamics	10
Tri 1	2101ENG	Hons Core to Major	Mechanics of Materials I	10
Tri 1	2502ENG	Hons Core to Major	Mechanical Engineering Design	10

Year 3

You must complete the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1	2002ENG	Hons Core to Major	Fluid Mechanics and Hydraulics	10
Tri 1	3304ENG	Hons Core to Major	Control Systems	10
Tri 2	2105ENG	Hons Core to Major	Mechanics of Materials 2	10
Tri 2	2501ENG	Hons Core to Major	Manufacturing Technology	10
Tri 2	2201ENG	Hons Core to Major	Engineering Thermodynamics	10
Tri 1	4007ENG	Hons Core to Major	Heat and Mass Transfer Engineering	10

Year 4

You must complete the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 2	3508ENG	Hons Core to Major	Materials and Manufacturing	10
Tri 2	3511ENG	Hons Core to Major	Design of Machine Elements	10
Tri 2	2318ENG	Hons Core to Major	Electromechanics	10

Year 5

You must complete the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1	6002ENG	Hons Core to Major	IAP (see Note 1)	40

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).

Bachelor of Environmental Science - Majors (4 available)

Ecology and Conservation

You must complete the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1	2291ENV	Core to Major	Applied Data Science	10
Tri 1	2261ENV	Core to Major	Plant Diversity (not offered from 2021)	10
			OR	
Tri 2	2702ENV	Core to Major	Botany	10
Tri 2	2051ENV	Core to Major	Ecology	10
Tri 2	2251ENV	Core to Major	Animal Diversity (not offered from 2021)	10
			OR	
Tri 1	2303ENV	Core to Major	Zoology	10
Tri 1	3241ENV	Core to Major	Quantitative Ecology (not offered from 2021)	10
			OR	
Tri 1	3606ENV	Core to Major	Conservation Biology	10
Tri 2	3308ENV	Core to Major	Emerging Topics in Conservation	10
			OR	
Tri 2	3306ENV	Core to Major	Environmental Management	10

Environmental Management

You must complete the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1	2416ENV	Core to Major	Environmental Anthropology	10
Tri 1,3	2107ENV	Core to Major	Introduction to Geographic Information Systems	10
Tri 2	2221ENV	Core to Major	Environmental Politics and Policy (not offered in 2020, 2021, 2022 and 2023)	10
			OR	
Tri 1,3	2004GIR	Core to Major	The Government Business Nexus: Intervening, Lobbying and Responding	10
			OR	
Tri 2	2313AFE	Core to Major	Environmental and Energy Economics (Online)	10
Tri 2	2281ENV	Core to Major	Economics and the Environment	10
Tri 1	3307ENV	Core to Major	Environmental and Social Futures (not offered in 2021)	10
			OR	
Tri 1,3	4118ENV	Core to Major	Policymaking and Planning for Climate Change	10
Tri 2	3306ENV	Core to Major	Environmental Management	10

Soil and Water Science

You must complete the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1	2291ENV	Core to Major	Applied Data Science	10
Tri 1	2071ENV	Core to Major	Soils and Geomorphology	10
Tri 2	2209ENV	Core to Major	Environmental Chemistry	10
Tri 2	2304ENV	Core to Major	Rivers and Catchments	10
Tri 1	3431ENV	Core to Major	Water Pollution Chemistry	10
Tri 2	3441ENV	Core to Major	Land Degradation and Catchment Management	10

Urban Environments

You must complete the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1,3	2107ENV	Core to Major	Introduction to Geographic Information Systems	10
Tri 1	2315ENV	Core to Major	Urban Ecology and Biodiversity	10
Tri 2	2414ENV	Core to Major	Urban Environmental Systems	10
Tri 2,3	2212ENV	Core to Major	Ecotox and Impact Assessment	10
			OR	
Tri 2	2304ENV	Core to Major	Rivers and Catchments	10
Tri 1,3	4118ENV	Core to Major	Policymaking and Planning for Climate Change	10
Tri 2	3418ENV	Core to Major	Spatial Modelling (not offered from 2021)	10
			OR	
Tri 2	3033ESC	Core to Major	Environmental Data Analytics	10

Electives (1 available)

Listed electives

Trimester	Course code	Requirement	Course title	CP
Tri 2	1042SCG	Listed Elective 3	Genetics and Evolutionary Biology	10
Tri 2	1044SCG	Listed Elective 3	Earth Systems	10
Tri 2	1444ENV	Listed Elective 3	Global Environmental Challenges (not offered from 2021)	10
			courseLineOperator	
Tri 2	1024ENG	Listed Elective 3	Intro to Digital and Spatial Analysis (not for Civil Eng Major students)	10
Tri 1	1037ENV	Listed Elective 3	Understanding Australian Cities	10
Tri 2	1022SCG	Listed Elective 3	Chemistry 1B	10
			courseLineOperator	
Tri 2	1024SCG	Listed Elective 3	Chemistry II	10
Tri 1,2,3	3900ESC	Listed Elective 3	Work Integrated Learning Placement	20
Tri 1,2,3	3911ESC	Listed Elective 3	Work Integrated Learning Special Topic	10