



Bachelor of Engineering (Honours) in Mechanical Engineering (Domestic students)

Program code

1412

Commencing in

For Continuing Students Only

Available at

Duration

4 years full-time

8 years part-time

Credit points

320

Degree requirements: Students who started Semester 2 - 2016

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

To be eligible for the award of Bachelor of Engineering (Honours) in Mechanical Engineering [BEng(Hons)], a student must acquire 320 credit points as prescribed below:

- gain 300 credit points as prescribed
- gain 20 credit points for **Undergraduate free-choice elective/s**
- complete no more than 120 credit points at first year level
- complete at least 80 credit points of courses at final year level
- complete a minimum of 12 weeks (60 days) of approved experience in an engineering practice environment (or a satisfactory alternative) during their degree studies.

Exit point

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

- at least 210 credit points from the Bachelor of Engineering (Honours) in Mechanical Engineering course list including all first year level and second year level core courses
- no more than 30 credit points of **Undergraduate free-choice elective/s**
- 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: Students undertaking the **Bachelor of Engineering (Honours) in Electronic and Biomedical Engineering (1424)** or **Bachelor of Engineering (Honours) in Software Engineering (1478)** will need to have completed some Year 4 courses to meet the above requirements.

To exit, a student should apply for a program transfer.

Honours

Classification of Honours

Bachelor of Engineering (Honours) in Mechanical Engineering

Honours in this program is awarded on the basis of sustained performance in the final two years of the program and in accordance with the Honours Weighted Average (HWA). The Honours Weighted Average is calculated using specified courses including the research component and 20 credit points of listed electives from the list provided which are referred to as the **Honours Calculable Courses (HCC)** and these courses are identified in the course lists within the program structure.

The Honours Weighted Average is calculated by multiplying the 120 credit points of Honours Calculable Courses by the percentage mark and the relevant weighting assigned for each course, divided by 120 credit points multiplied by the relevant weighting factor.

Note: The listed elective courses available in the final year are considered suitable for Honours Calculable (List B) courses.

Where a student has completed more than 20 credit points from this list, the two best results will be used in the calculation for the Honours Classification.

Cut-offs for Honours Classification

- **Class I Honours:**
 - Overall HWA Range: 80 - 100%
 - Minimum Thesis Mark - 80%
- **Class IIA Honours:**
 - Overall HWA Range: 70 - 79%
 - Minimum Thesis Mark - 70%
- **Class IIB Honours:**
 - Overall HWA Range: 55 - 69.9%
 - Minimum Thesis Mark - 60%
- **Class III Honours:**
 - Overall HWA Range: < 54.9%
 - Minimum 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 Course** as an elective.

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

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 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 Semester 2 - 2016

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.

Course selection for students required to complete the English Language Enhancement course

Students entering the program in Trimester 2 will:

- complete **5903LHS Language and Communication for Sciences** in their first trimester of study in place of **1006ENG Design and Professional Skills** (not offered from 2017) or **1022ENG Engineering Design Practice** (offered from 2017) and complete **1006ENG Design and Professional Skills** (not offered from 2017) or **1022ENG Engineering Design Practice** (offered from 2017) in either Year 2; and
- complete 10 credit points less of **Undergraduate free-choice elective/s**.

Year 1

Students must complete the following courses:

Semester	Course code	Requirement	Course title	CP
Tri 2	1501ENG		Engineering Mechanics	10
Tri 2	1005ENG		Electronics for Engineers (not offered from 2017)	10
			OR	
Tri 2,3	1301ENG		Electric Circuits	10
Tri 2	1011SCG		Mathematics 1A (not offered from 2017)	10
			OR	
Tri 1,3	1010ENG		Engineering Mathematics 1	10
Tri 2	1006ENG		Design and Professional Skills (see Note 1) (not offered from 2017)	10
			OR	
Tri 1	1022ENG		Engineering Design Practice	10
			OR	
Tri 2	5903LHS		Language and Communication for Sciences	10

Note 1: Students not undertaking 1006ENG (not offered from 2017) or 1022ENG (offered from 2017) in Year 1 must undertake this course in Year 2.

Year 2

Students must complete the following courses:

Semester	Course code	Requirement	Course title	CP
Tri 1	1007ENG		Engineering Fundamentals (not offered from 2017)	10
			OR	
Tri 1,3	1701ENG		Creative Engineering (Withdrawn from 2022)	10
			OR	
Tri 1,3	1508ENG		Digital Design and Modelling	10
Tri 1	1502ENG		Engineering Materials (not offered from 2017)	10
			OR	
Tri 1,3	1017ENG		Engineering Materials	10
Tri 1	1012SCG		Mathematics 1B (offered for the last time in Tri 1 2017)	10
			OR	
Tri 2	1020ENG		Engineering Mathematics 2	10
Tri 1	1004ENG		Computing and Programming with MATLAB (not offered from Tri 2 2017)	10
			OR	
Tri 2	1305ENG		Engineering Programming (withdrawn from 2022)	10
			OR	
Tri 2	1008ENG		Programming and Computing for Engineers	10
Tri 2	2501ENG		Manufacturing Technology	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	3004ENG		Project Management Principles	10
			OR	
Tri 2	1006ENG		Design and Professional Skills (see Note 1) (not offered from 2017)	10
			OR	
Tri 1	1022ENG		Engineering Design Practice	10

Note 1: Students not undertaking 1006ENG (not offered from 2017) or 1022ENG (offered from 2017) in Year 1 must undertake this course in Year 2.

Year 3

Students must complete the following courses:

Semester	Type	Course code	Requirement	Course title	CP
Tri 1		2101ENG		Mechanics of Materials I	10
Tri 1		2502ENG		Mechanical Engineering Design	10
Tri 1		2203NSC		Mathematics 2A (not offered from 2018)	10
				OR	
Tri 1		2205NSC		Calculus II	10
Tri 1	HCC-A	3508ENG		Materials and Manufacturing	10
				OR	
Tri 2	HCC-A	2506ENG		Materials and Manufacturing (not offered from 2019) (see Note 1)	10
Tri 2		2105ENG		Mechanics of Materials 2	10
Tri 2	HCC-A	3505ENG		Heat and Mass Transfer	10
				OR	
Tri 2	HCC-A	4007ENG		Heat and Mass Transfer Engineering	10
Tri 2	HCC-B	6522ENG		Computational Statics and Dynamics	10
Tri 2	HCC-B	6509ENG		Electrotechnics (not offered from 2018)	10
				OR	
Tri 2	HCC-B	2318ENG		Electromechanics	10

Note 1: From 2018 students can undertake 3304ENG in Year 3 Trimester 1 and 2506ENG in Year 4 Trimester 2.

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

Year 4

Students must complete the following courses:

Semester	Type	Course code	Requirement	Course title	CP
Tri 1	HCC-A	4000ENG		Research Methods and Statistics	10
Tri 1		2002ENG		Fluid Mechanics and Hydraulics	10
Tri 1		3317ENG		Kinematics and Dynamics (not offered from 2018)	10
				OR	
Tri 1		2517ENG		Kinematics and Dynamics	10
Tri 1				Undergraduate free-choice elective/s (see Note 1)	10
				OR	
Tri 1	HCC-B			Mechanical Engineering elective (see Note 4) (offered from 2018)	10
Tri 2	HCC-A	3304ENG		Control Systems (see Note 3) (offered in Tri1 from 2018)	10
Tri 1	HCC-B	6508ENG		Fluids and CFD	10
Tri 2	HCC-B			Mechanical Engineering elective (see Note 4)	10
Tri 2				Undergraduate free-choice elective/s (see Note 1)	10
				OR	
Tri 2		3004ENG		Project Management Principles (see Note 2)	10

Note1: Students may choose **Undergraduate free-choice elective/s** from across the university or choose Engineering electives from the list below.

Note 2: Students not undertaking 3004ENG in Year 2 must undertake this course in Year 4.

Note 3: From 2018 students can undertake 3304ENG in Year 3 Trimester 1 and 2506ENG in Year 4 Trimester 2.

Note 4: From 2018 20 credit points of Listed electives will be calculated for HCC-B.

Type:

HCC-A = Honours Calculable Courses with a weighting factor of 1

HCC-B = Honours Calculable Courses with a weighting factor of 2

Year 5

Students must complete the following courses:

Semester	Type	Course code	Requirement	Course title	CP
Tri 1	HCC-B	6007ENG		IAP - Thesis (capstone course) (not offered from 2021) (see Note 1)	30
				AND	
Tri 1	HCC-B	6008ENG		IAP - Professional Practice (not offered from 2021) (see Note 1)	10
				OR	
Tri 1	HCC-B	6002ENG		IAP (offered from 2020) (see Note 1)	40

Note 1: Students who have completed either 6007ENG or 6008ENG should complete the corresponding course (6007ENG or 6008ENG) before 2021. Students who have not completed either 6007ENG or 6008ENG should enrol in 6002ENG.

Type:

HCC-A = Honours Calculable Courses with a weighting factor of 1

HCC-B = Honours Calculable Courses with a weighting factor of 2

Mechanical Engineering electives

Students may choose alternative elective courses to those listed below on approval from the Program Director. Up to 20 credit points of Listed Electives can be calculated as HCC-B. Where a student has completed more than 20 credit points from this list, the two best results will be used in the calculation for the Honours Classification. Please note, the following elective courses are subject to change.

Semester	Course code	Requirement	Course title	CP
Tri 2	6207ENG		Environmental Management Systems	10
Tri 2	7203ENG		Resource Planning and Management	10
Tri 2	7204ENG		Risk Analysis and Management	10
Tri 1,2	6521ENG		Vehicle Design and Analysis (not offered from 2017)	10
Tri 1	3510ENG		Continuum Damage and Fracture Mechanics (not offered from 2017)	10
Tri 2	6309ENG		Mechatronic Systems Design and Engineering	10
Tri 1	6525ENG		Digital Manufacturing	10
Tri 1	6505ENG		Manufacturing with Composites (not offered in 2019)	10
Tri 2	6506ENG		Heating Ventilation and Air Conditioning (not offered from 2017)	10
Tri 2	6523ENG		Lightweight Structures (not offered from 2017)	10
Tri 2	6524ENG		System Dynamics and Advanced Control	10
Tri 2	6311ENG		Energy Resources Management (Nathan Campus)	10