

Bachelor of Engineering (Honours)

Mechatronic Engineering Mining Engineering Major

Undergraduate Program - Consists of 64 units
Suggested Study Plans from **2025** Commencement Onwards



THE UNIVERSITY
OF QUEENSLAND
AUSTRALIA

CREATE CHANGE

Program and Course requirements

For the **Bachelor of Engineering (Honours)** full program and course requirements, [click here](#). Make sure to check your program's rules to ensure you are compliant with requirements.

Prerequisite Courses

Students are expected to be aware if a course has prerequisites and must have successfully completed any required prerequisites before enrolling. A prerequisite course provides the foundational knowledge needed to progress to the next course and may be high school subjects or university-level study/courses.

Prerequisites are listed on the course profile and the course page on the [Programs and Courses website](#).

Electives

Depending on your program, you may need to complete compulsory and elective courses.

Electives are courses you can choose, while compulsory courses are mandatory courses that you must study. You must successfully complete all the required units of elective and compulsory courses to meet the program requirements. Your program rules outline how many electives you can study and the types of electives you can choose from.

Search [Programs and Courses website](#) for your program to confirm program rules and elective options.

Academic Advice

Academic advisors provide specialist help in course selection and can look at your individual study history to make personalised recommendations on your study plan.

If you need assistance with your program, you can [seek Academic Advice](#).

Additional Information

Course profiles are underlined and hyperlinked to their relevant course page which can be accessed by clicking the underlined text.

Students must follow the [program rules and requirements](#) listed on the my.UQ website. Future course offerings are subject to change. [Seek academic advice](#) if you are undertaking a dual degree, have any questions or if you fail any courses.

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The following is a colour reference guide, including notes around course offerings and units:

Core Courses	Specialisation	Program Electives
General Electives	Major	



Course offered in both Semester 1 & 2

X units

This course does not consist of 2 units

YEAR 1

Sem 1 Feb	ENGG1100 Professional Engineering	MATH1051 Calculus and Linear Algebra I	ENGG1300 Introduction to Electrical Systems	GENERAL ELECTIVE OR PROGRAM ELECTIVE
Sem 2 July	ENGG1001 Programming for Engineers	MATH1052 Multivariate Calc & Ordinary Differential Equations	ENGG1700 Statics and Materials	GENERAL ELECTIVE OR PROGRAM ELECTIVE

YEAR 2

Sem 1 Feb	MATH2001 Calculus & Linear Algebra II	METR2800 Mechatronic System Design Project 1	MECH2300 Structures and Materials	ELEC2300 Fundamentals of Electromagnetism/mechanics
Sem 2 July	MATH2010 ¹ STAT2201 ¹	MECH2100 Machine Element Design	MECH2210 Intermediate Mechanical and Space Dynamics	ELEC2004 Circuits, Signals and Systems

YEAR 3

Sem 1 Feb	CSSE2010 Introduction to Computer Systems	METR3100 Control System Implementation	METR4201 Control Engineering 1	ELEC3004 Signals, Systems and Control
Sem 2 July	METR4202 Robotics and Automation	MECH3200 Advanced Dynamics and Vibrations	MINE3110 Integrated Orebody Knowledge	MINE4126 Mining Systems and Automation

YEAR 4

Sem 1 Feb	METR4911 Thesis/Design Project	ENGG4901 ² Professional Practice and the Business Environment A	MINE4127 Mine Planning and Sustainability	MINE6112 Applied Mining Geomechanics
Sem 2 July		METR4810 Mechatronic System Design Project II	MINE4124 Mine Design and Feasibility	MINE4129 Mine Process Optimisation

NOTES

¹ MATH2010: Analysis of Ordinary Differential Equations; STAT2201: Analysis of Engineering & Scientific Data

² Offered in Semester 2 under the course code ENGG4902, Professional Practice and the Business Environment B

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Bachelor of Engineering (Honours)

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Core Courses	Specialisation	Program Electives
General Electives	Major	



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YEAR 1				
Sem 2 July	ENGG1100 Professional Engineering	MATH1051 Calculus and Linear Algebra I	ENGG1300 Introduction to Electrical Systems	GENERAL ELECTIVE OR PROGRAM ELECTIVE
Sem 1 Feb	ENGG1001 Programming for Engineers	MATH1052 Multivariate Calc & Ordinary Differential Equations	ENGG1700 Statics and Materials	GENERAL ELECTIVE OR PROGRAM ELECTIVE

YEAR 2				
Sem 2 July	MATH2001 Calculus & Linear Algebra II	MECH2210 Intermediate Mechanical and Space Dynamics	ELEC2004 Circuits, Signals and Systems	MINE3110 Integrated Orebody Knowledge
Sem 1 Feb	MATH2010 ¹ STAT2201 ¹	CSSE2010 Introduction to Computer Systems	METR2800 Mechatronic System Design Project 1	MECH2300 Structures and Materials

YEAR 3				
Sem 2 July	MECH2100 Machine Element Design	METR4810 Mechatronic System Design Project II	MECH3200 Advanced Dynamics and Vibrations	MINE4126 Mining Systems and Automation
Sem 1 Feb	METR3100 Control System Implementation	METR4201 Control Engineering 1	ELEC2300 Fundamentals of Electro-magnetism/mechanics	ELEC3004 Signals, Systems and Control

YEAR 4				
Sem 2 July	METR4912 Thesis/Design Project	METR4202 Robotics and Automation	MINE4124 Mine Design and Feasibility	MINE4129 Mine Process Optimisation
Sem 1 Feb		ENGG4901 ² Professional Practice and the Business Environment A	MINE4127 Mine Planning and Sustainability	MINE6112 Applied Mining Geomechanics

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