

Recommended Enrolment Plans

For Students Commencing the Bachelor of Engineering (Hons) and Bachelor of Engineering (Hons)/Master of Engineering

Valid for Semester 1, 2025

This document provides course selection information and recommended enrolment plans for students commencing the Bachelor of Engineering (Hons) [BE(Hons)] and integrated Bachelor of Engineering (Hons)/Master of Engineering [BE(Hons)/ME] in Semester 1, 2025. This is intended to be used in conjunction with the resources provided at:

- [Bachelor of Engineering \(Hons\)](#)
- [Bachelor of Engineering \(Hons\)/Master of Engineering](#)

If you are enrolling in a **Bachelor of Engineering (Hons) dual degree**, please refer to the [Recommended Enrolment Plans for Students Commencing the Bachelor of Engineering \(Hons\) dual degrees](#).

Not sure which engineering specialisation you want to do?

No worries! You can do the 'Flexible First Year' option that allows you to do courses related to each specialisation, and then choose your specialisation at the end of first year. You don't need to decide whether you want to do a Major or Minor until the end of second year of your program.

Already know which engineering specialisation you want to do?

If you already know which engineering specialisation you want to do, you can focus your courses from first year. An enrolment plan is provided for each of the six specialisations for those who have, and who have not, completed High School Specialist Mathematics (or equivalent).

You will also see that some specialisations have space for electives. There are footnotes suggesting some courses you may consider in these elective slots. In particular, there may be second year courses you can complete in first year to allow you to immerse yourself in your chosen discipline ("Accelerate Electives"). In addition, some Majors and Minors have courses you can complete in first year.

Need help? Make an Academic Advising Appointment.

If after reviewing these materials you need some help to choose your courses, you can [make an academic advising appointment](#).

What courses do you need to do?

		Flexible First Year	Chemical	Civil	Electrical	Mechanical	Mechatronic	Software
Core	ENGG1100 Professional Engineering	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	ENGG1001 or CSSE1001 "Programming"	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	MATH1051 or MATH1071	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	MATH1052 or MATH1072	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Specialisation	ENGG1300 Intro to Electrical Systems	Yes ¹			Yes	Yes	Yes	Yes
	ENGG1500 Thermodynamics	Yes ¹	Yes			Yes		
	ENGG1700 Statics and Materials	Yes ¹		Yes		Yes	Yes	
	Other Courses		CHEM1100					MATH1061 INFS1200 ²
High School Courses or UQ Equivalents	High School Specialist Mathematics or MATH1050	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	High School Chemistry or CHEM1090	See discipline info to the right	Yes	- ³	- ⁴	Yes		
	High School Physics or PHYS1171			Yes	Yes	Yes	Yes	

¹ See the next page for some limitations

² MATH1061 and/or INFS1200 can be completed in 2nd year

³ High School Chemistry or CHEM1090 is required in civil engineering if you plan on doing the Major in Environmental Engineering

⁴ High School Chemistry or CHEM1090 is required in electrical engineering if you plan on doing the Major in Biomedical Engineering

Flexible First Year - ENGG1300, ENGG1500 and ENGG1700

All specialisations have space to allow for at least **TWO** of ENGG1300, ENGG1500 or ENGG1700

If you want to do all **THREE** then in every specialisation (except Mechanical Engineering) one of ENGG1300 or ENGG1500 or ENGG1700 **must count as a General Elective.**

Mechanical Engineering is the only specialisation that requires all three of ENGG1300 and ENGG1500 and ENGG1700

Your available choices will depend on which of the following groups you belong to and whether **you want to keep the option of completing a Major or Minor open.**

I have completed at least two of the following:

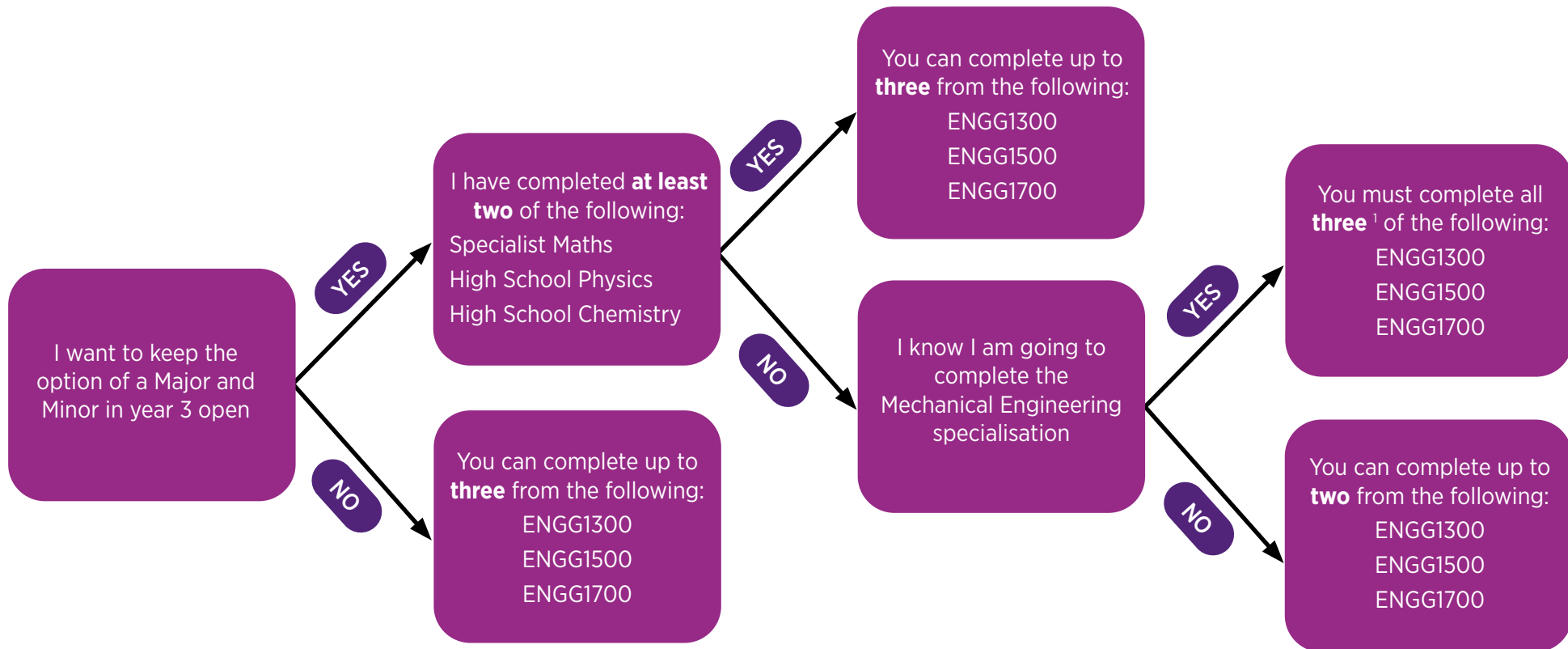
Specialist Maths
High School Physics
High School Chemistry

- a) You **have completed Specialist Maths** AND **have completed BOTH** High School Physics AND High School Chemistry
- b) You **have completed Specialist Maths** AND **have completed ONE** of High School Physics OR High School Chemistry
- c) You **have NOT completed Specialist Maths** AND **have completed BOTH** High School Physics AND High School Chemistry

I have completed one of the following:

Specialist Maths
High School Physics
High School Chemistry

- d) You **have NOT completed Specialist Maths** and **have completed ONE** of High School Physics OR High School Chemistry



¹ Suggest ENGG1500 and ENGG1700 completed in year 1 and ENGG1300 in year 2

Selecting your Semester 1 Mathematics Course

All students should enrol in one of **MATH1050**, **MATH1051** or **MATH1071** in their first semester of the BE(Hons). Figure 1 below provides a guide to identifying which course to enrol in based on the mathematics you completed at high school in Queensland (or [interstate/international equivalent](#)).

- Where the appropriate course is MATH1050, refer to the plans below labelled “Not Completed Specialist Mathematics with a grade of C or above”.
- Where the appropriate course is MATH1051, refer to the plans below labelled “Completed Specialist Mathematics with a grade of C or above”.
- Where the most appropriate course is MATH1071, refer to the plans below labelled “Completed Specialist Mathematics with a grade of C or above”; and substitute MATH1071 in the place of MATH1051 (similarly, if you choose to do MATH1072 in semester 2, substitute this in the place of MATH1052).

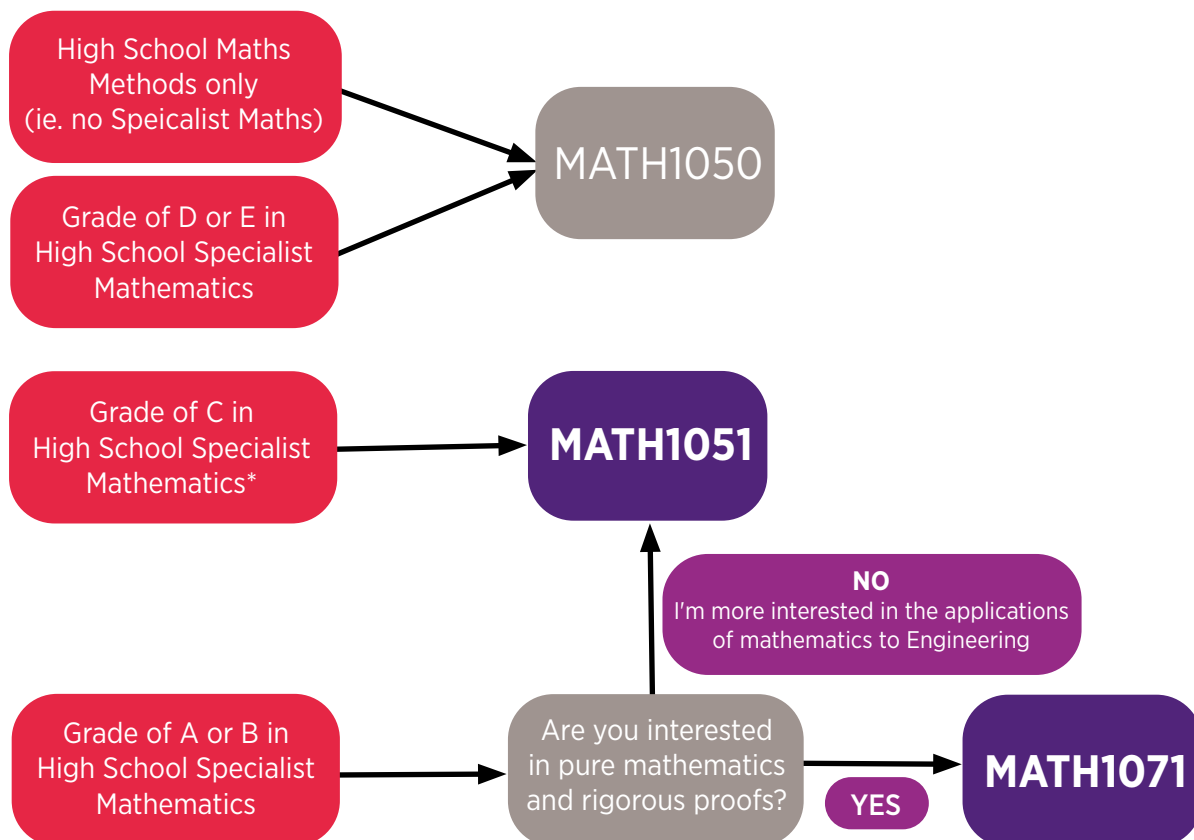


Figure 1 Guide to selecting your mathematics course in the first semester of the BE(Hons) based on high school mathematics, grade and interest.

* Students with a Grade of C in High School Specialist Mathematics can choose to enrol in MATH1050 if they are not confident in their mathematics ability (i.e., it’s a long time since you completed high school). If this applies to you, and you are finding MATH1051 difficult, you can change your enrolment to MATH1050 during the first two weeks of semester.

Selecting your Programming Course (ENGG1001 or CSSE1001)

ENGG1001 Programming for Engineers (Sem 1 & Sem 2)

OR

CSSE1001 Introduction to Software Engineering (Sem 1 & Sem 2)

All students are required to complete a programming course in their first year. Both ENGG1001 and CSSE1001 teach foundations of programming in Python. These courses are considered equivalent, and you can proceed to any specialisation with either course.

- **CSSE1001** teaches programming in a computing context. It is recommended if you are intending on continuing to Specialisations in **Electrical or Software Engineering**.
- **ENGG1001** teaches programming in the context of engineering modelling problems. It is recommended if you are intending on continuing to Specialisations in **Civil, Chemical or Mechanical Engineering; or are in the Flexible First Year**.
- If you are intending on continuing to a Specialisation in **Mechatronic Engineering**, choose whichever course interests you the most.

Which enrolment plan should I follow if I'm in the BE(Hons)/ME?

Students in the BE(Hons)/ME will choose a "Field of Study" rather than a Specialisation (with optional majors), and these use slightly different naming conventions. The table below indicates which enrolment plan you should follow in first year based on your intended field of study.

Available Fields of Study	In first year, follow the recommended enrolment plan for:
Not Sure	Flexible First Year
Chemical Engineering	Specialisation in Chemical Engineering ¹
Chemical & Biomedical Engineering	Specialisation in Chemical Engineering with a Major in Biomedical Engineering
Chemical & Bioprocess Engineering	Specialisation in Chemical Engineering with a Major in Bioprocess Engineering
Chemical & Environmental Engineering	Specialisation in Chemical Engineering with a Major in Environmental Engineering
Chemical & Metallurgical Engineering	Specialisation in Chemical Engineering with a Major in Metallurgical Engineering
Civil Engineering	Specialisation in Civil Engineering ²
Civil & Environmental Engineering	Specialisation in Civil Engineering with a Major in Environmental Engineering
Electrical Engineering	Specialisation in Electrical Engineering
Electrical & Biomedical Engineering	Specialisation in Electrical Engineering with a Major in Biomedical Engineering
Electrical and Computer Engineering	Specialisation in Electrical Engineering with a Major in Computer Engineering
Mechanical Engineering	Specialisation in Mechanical Engineering ³
Mechanical & Aerospace Engineering	Specialisation in Mechanical Engineering with a Major in Aerospace Engineering
Mechanical & Materials Engineering	Specialisation in Mechanical Engineering with a Major in Materials Engineering
Mechatronic Engineering	Specialisation in Mechatronic Engineering ⁴
Software Engineering	Specialisation in Software Engineering ⁵

¹ Follow this study plan for all other majors associated with the Chemical Engineering Specialisation

² Follow this study plan for all other majors associated with the Civil Engineering Specialisation

³ Follow this study plan for all other majors associated with the Mechanical Engineering Specialisation

⁴ Follow this study plan for all other majors associated with the Mechatronic Engineering Specialisation

⁵ Follow this study plan for all other majors associated with the Software Engineering Specialisation

Bachelor of Engineering (Honours) Flexible First Year

Recommended Enrolment Plan

Valid from 2025

The table below shows the required:

Core Courses	Specialisation	Engineering Electives
Prep Courses		

Not Completed High School Specialist Mathematics with a grade of C or above.

Y1	Sem 1	ENGG1100	ENGG1001	MATH1050	ENGG1500
	Sem 2	ENGG1300	MATH1051	MATH1052	ENGG1700

- If you achieve a grade of 4 in MATH1050, it is strongly recommended to do MATH1052 in Summer Semester, or Semester 1 of Year 2 (depending on specialisation), i.e. after completing MATH1051.

Completed High School Specialist Mathematics with a grade of C or above, and Physics and Chemistry.

Y1	Sem 1	ENGG1100	MATH1051	ENGG1700	ENGG1300
	Sem 2	ENGG1001	MATH1052	ENGG1500	Elective

- No Chemistry?** Do CHEM1090 in Semester 1, and ENGG1300 in Semester 2.
- No Physics?** Do PHYS1171 in Semester 1, and ENGG1300 in Semester 2.

Not Completed High School Specialist Mathematics and Physics.

Y1	Sem 1	ENGG1100	MATH1050	PHYS1171	Seek academic advice
	Sem 2	ENGG1001	MATH1051	Seek academic advice	Seek academic advice

- Do MATH1052 in Summer Semester, or Semester 1 of Year 2 (depending on specialisation).

Not Completed High School Specialist Mathematics and Chemistry.

Y1	Sem 1	ENGG1100	MATH1050	CHEM1090	Seek academic advice
	Sem 2	ENGG1001	MATH1051	Seek academic advice	Seek academic advice

- Do MATH1052 in Summer Semester, or Semester 1 of Year 2 (depending on specialisation).

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.

Bachelor of Engineering (Honours) Specialisation in Chemical Engineering

Recommended Enrolment Plan

Valid from 2025

The table below shows the required:

Core Courses	Specialisation	Engineering Electives
Prep Courses		

Not Completed High School Specialist Mathematics with a grade of C or above.

Y1	Sem 1	ENGG1100	MATH1050	ENGG1500	CHEM1100
	Sem 2	ENGG1001	MATH1051	MATH1052	Elective

- **No Chemistry?** Do CHEM1090 in Semester 1, and CHEM1100 in Semester 2.
- **Major in Biomedical or Bioprocess Engineering?** Doing BIOE1001 in Semester 1 (and CHEM1100 in Semester 2) may give you more flexibility later in your degree.
- **Major in Materials Engineering?** Doing ENGG1700 in Semester 2 may give you more flexibility later in your degree.
- **Major in Metallurgical Engineering?** Doing METL2201 in Semester 2 may give you more flexibility later in your degree.
- **If you achieve a grade of 4 in MATH1050**, it is strongly recommended to do MATH1052 in Summer, or Semester 1 of Year 2 (i.e. after completing MATH1051).

Completed High School Specialist Mathematics with a grade of C or above.

Y1	Sem 1	ENGG1100	MATH1051	ENGG1500	CHEM1100
	Sem 2	ENGG1001	MATH1052	Elective	Elective

- **No Chemistry?** Do CHEM1090 in Semester 1, and CHEM1100 in Semester 2.
- **Major in Biomedical or Bioprocess Engineering?** Doing BIOE1001 in Semester 1 (and CHEM1100 in Semester 2) may give you more flexibility later in your degree.
- **Major in Materials Engineering?** Doing ENGG1700 in Semester 2 may give you more flexibility later in your degree.
- **Major in Metallurgical Engineering?** Doing METL2201 in Semester 2 may give you more flexibility later in your degree.

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.

Bachelor of Engineering (Honours) Specialisation in Civil Engineering

Recommended Enrolment Plan

Valid from 2025

The table below shows the required:

Core Courses	Specialisation	Engineering Electives
Prep Courses		

Not Completed High School Specialist Mathematics with a grade of C or above.

Y1	Sem 1	ENGG1100	MATH1050	ENGG1700	Elective
	Sem 2	ENGG1001	MATH1051	MATH1052	Elective

- **No Physics?** Taking PHYS1171 in Semester 1 is recommended.
- **Major in Environmental Engineering?**
 - If you haven't completed high school chemistry, do CHEM1090 in Semester 1.
 - Doing ENGG1500 (Semester 1 or Semester 2) may give you more flexibility later in your degree.
- **If you achieve a grade of 4 in MATH1050**, it is strongly recommended to do MATH1052 in Summer Semester (i.e. after completing MATH1051).

Accelerate Electives:	CIVL2135 (Semester 1 only)			
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Completed High School Specialist Mathematics with a grade of C or above.

Y1	Sem 1	ENGG1100	MATH1051	ENGG1700	Elective
	Sem 2	ENGG1001	MATH1052	Elective	Elective

- **No Physics?** Taking PHYS1171 in Semester 1 is recommended.
- **Major in Environmental Engineering?**
 - If you haven't completed high school chemistry, do CHEM1090 in Semester 1.
 - Doing ENGG1500 (Semester 1 or Semester 2) may give you more flexibility later in your degree.

Accelerate Electives:	CIVL2135 (Semester 1 only)			
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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.

Bachelor of Engineering (Honours) Specialisation in Electrical Engineering

Recommended Enrolment Plan

Valid from 2025

The table below shows the required:

Core Courses	Specialisation	Engineering Electives
Prep Courses		

Not Completed High School Specialist Mathematics with a grade of C or above.

Y1	Sem 1	ENGG1100	CSSE1001 or ENGG1001	MATH1050	Elective
	Sem 2	MATH1051	MATH1052	ENGG1300	Elective

- **No Physics?** Do PHYS1171 in Semester 1, and ENGG1300 in Semester 2.
- **Major in Biomedical Engineering?** Doing BIOE1001 in Semester 1 (and CSSE1001 or ENGG1001 in Semester 2) may give you more flexibility later in your degree.
- **Major in Computer Engineering?** Doing CSSE2010 and/or CSSE2002 may give you more flexibility later in your degree.
- **If you achieve a grade of 4 in MATH1050**, it is strongly recommended to do MATH1052 in Summer Semester (i.e. after completing MATH1051).

Accelerate Electives:	CSSE2010 (Sem 1 and 2)*			
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Completed High School Specialist Mathematics with a grade of C or above.

Y1	Sem 1	ENGG1100	CSSE1001 or ENGG1001	MATH1051	ENGG1300
	Sem 2	MATH1052	Elective	Elective	Elective

- **No Physics?** Do PHYS1171 in Semester 1, and ENGG1300 in Semester 2.
- **Major in Biomedical Engineering?** Doing BIOE1001 in Semester 1 (and CSSE1001 or ENGG1001 in Semester 2) may give you more flexibility later in your degree.
- **Major in Computer Engineering?** Doing CSSE2010 and/or CSSE2002 may give you more flexibility later in your degree.

Accelerate Electives:	CSSE2010 (Sem 1 and 2)*			
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* While CSSE2010 is available in both Semester 1 and 2, it should only be taken after CSSE1001 (or ENGG1001) has been completed.

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.

Bachelor of Engineering (Honours) Specialisation in Mechanical Engineering

Recommended Enrolment Plan

Valid from 2025

The table below shows the required:

Core Courses	Specialisation	Engineering Electives
Prep Courses		

Not Completed High School Specialist Mathematics with a grade of C or above.

Y1	Sem 1	ENGG1100	MATH1050	ENGG1700	ENGG1500
	Sem 2	ENGG1001	MATH1051	MATH1052	ENGG1300

- **No Physics?** Do PHYS1171 in Semester 1; ENGG1300 in Semester 2; and MATH1052 in Summer Semester or Semester 1 of Year 2.
- **No Chemistry?** Do CHEM1090 in Semester 1; ENGG1500 in Semester 2; and MATH1052 in Summer Semester or Semester 1 of Year 2.
- **If you achieve a grade of 4 in MATH1050**, it is strongly recommended to do MATH1052 in Summer Semester, or Semester 1 of Year 2 (i.e. after completing MATH1051).

Completed High School Specialist Mathematics with a grade of C or above.

Y1	Sem 1	ENGG1100	ENGG1001	MATH1051	ENGG1300 or ENGG1700
	Sem 2	MATH1052	ENGG1300 or ENGG1700	ENGG1500	Elective

- **No Physics?** Do PHYS1171 in Semester 1, and ENGG1001 in Semester 2.
- **No Chemistry?** Do CHEM1090 in Semester 1, and ENGG1001 in Semester 2.
- **Major in Biomedical Engineering?** Doing BIOE1001 in Semester 1 (and ENGG1001 in Semester 2) may give you more flexibility later in your degree.

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.

Bachelor of Engineering (Honours) Specialisation in Mechatronic Engineering

Recommended Enrolment Plan

Valid from 2025

The table below shows the required:

Core Courses	Specialisation	Engineering Electives
Prep Courses		

Not Completed High School Specialist Mathematics with a grade of C or above.

Y1	Sem 1	ENGG1100	ENGG1001 or CSSE1001	MATH1050	ENGG1700
	Sem 2	MATH1051	MATH1052	ENGG1300	Elective

- **No Physics?** Do PHYS1171 in Semester 1, and ENGG1300 in Semester 2.
- **Major in Computer Engineering?** Doing CSSE2010 or CSSE2002 may give you greater flexibility later in your degree.
- **If you achieve a grade of 4 in MATH1050**, it is strongly recommended to do MATH1052 in Summer Semester (i.e. after completing MATH1051).

Accelerate Electives:	CSSE2010 (Sem 1 and 2)*			
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Completed High School Specialist Mathematics with a grade of C or above.

Y1	Sem 1	ENGG1100	ENGG1001 or CSSE1001	MATH1051	ENGG1300
	Sem 2	MATH1052	ENGG1700	Elective	Elective

- **No Physics?** Do PHYS1171 in Semester 1, and ENGG1300 in Semester 2.
- **Major in Computer Engineering?** Doing CSSE2010 or CSSE2002 may give you greater flexibility later in your degree.

Accelerate Electives:	CSSE2010 (Sem 1 and 2)*			
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* While CSSE2010 is available in both semester 1 and 2, it should only be taken after CSSE1001 (or ENGG1001) has been completed.

Bachelor of Engineering (Honours) Specialisation in Software Engineering

Recommended Enrolment Plan

Valid from 2025

The table below shows the required:

Core Courses	Specialisation	Engineering Electives
Prep Courses		

Not Completed High School Specialist Mathematics with a grade of C or above.

Y1	Sem 1	ENGG1100	CSSE1001	MATH1050	ENGG1300
	Sem 2	MATH1051	MATH1052	MATH1061	INFS1200

- If you achieve a grade of 4 in MATH1050, it is strongly recommended to do MATH1052 in Summer Semester (i.e. after completing MATH1051).

Completed High School Specialist Mathematics with a grade of C or above.

Y1	Sem 1	ENGG1100	CSSE1001	MATH1051	ENGG1300
	Sem 2	MATH1052	MATH1061	INFS1200	Elective

- Major in Computer Engineering?** Doing CSSE2010 or CSSE2002 may give you greater flexibility later in your degree.

Accelerate Electives:	CSSE2002 (Sem 1 and 2)*	CSSE2010 (Sem 1 and 2)*		
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* While CSSE2010 and CSSE2002 are available in both Semester 1 and 2, they should only be taken after CSSE1001 (or ENGG1001) has been completed.