



Recommended Enrolment Plans for Students Commencing the Bachelor of Engineering (Hons), and BE(Hons)/ME in Semester 1, 2022.

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 in Semester 1, 2022. This is intended to be used in conjunction with the resources provided at:

- BE(Hons): <https://www.eait.uq.edu.au/current-students/manage-your-program/undergraduate-program-study-plans-and-resources/first-year-bachelor-engineering-honours>
- BE(Hons)/ME: <https://www.eait.uq.edu.au/current-students/manage-your-program/bachelor-engineering-honours/be-me-recommended-enrolment-plans>

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 for 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; and you will see 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"); and some Majors and Minors have courses you can complete in first year.

Need to Make and Academic Advising Appointment?

If after reviewing these materials you need further assistance to choose your courses, you can make an appointment to meet with an academic advisor: <https://www.eait.uq.edu.au/first-year-engineering-academic-advice>



Which courses do I need to do in first year?

The courses you are required to do in first year, depends on your intended specialisation, and subjects you completed in year 12. This includes:

- “Core”: Courses that all engineering students need to complete
- “Specialisation”: Foundational first year engineering courses required to proceed to specialisations
- UQ equivalents of high school specialist mathematics, physics and chemistry if you did not complete them in year 12.

The table below summarises which courses you need to complete during first year based on chosen specialisation or flexible first year. The recommended enrolment plans provided following this table will help you sensibly order/sequence these courses.

		Flexible First Year	Chemical	Civil	Electrical	Mechanical	Mechatronic	Software
Core	ENGG1100	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	ENGG1001 or CSSE1001	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	Yes	-	-	Yes	Yes	Yes	Yes
	ENGG1500	Yes	Yes	-	-	Yes	-	-
	ENGG1700	Yes	-	Yes	-	Yes	Yes	-
	Other Courses	-	CHEM1100	-	-	-	-	MATH1061, INFS1200*
High School Courses or UQ Equivalents	High School Specialist Mathematics or MATH1050	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	High School Chemistry or CHEM1090	Yes	Yes	- *	- **	Yes	-	-
	High School Physics or PHYS1171	Yes	-	Yes	Yes	Yes	Yes	-

* MATH1061 and/or INFS1200 can be completed in second year

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

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

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 most appropriate course is MATH1050, refer to the plans below labelled “Not Completed Specialist Mathematics with a grade of C or above”.
- Where the most 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).

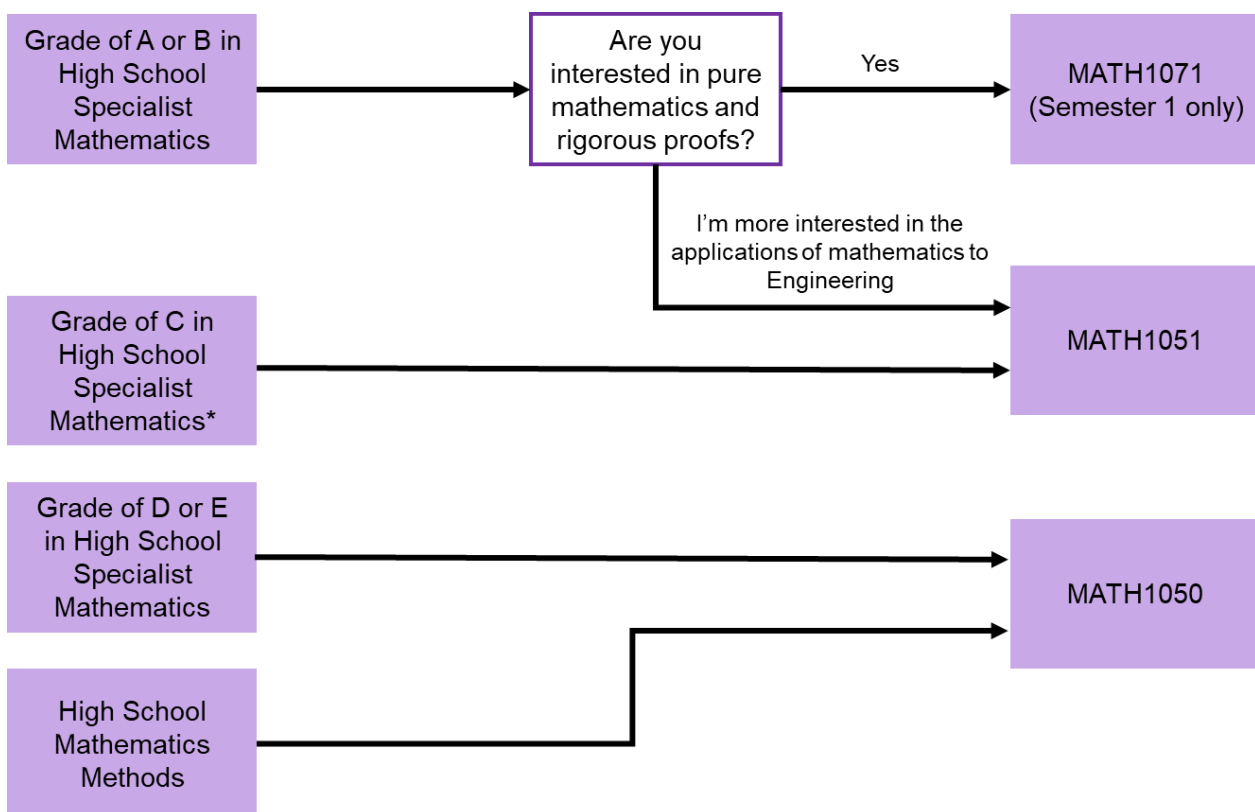


Figure 1: Guide to selecting your mathematics course in the first semester of the BE(Hons) based on high school mathematics, grade and interest. * Students with a Grade of C in High School Specialist Mathematics can choose to enrol in MATH1050 if they are not confident in their mathematics ability (i.e., 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)

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

- CSSE1001 teaches programming in a computing context; and 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; and 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 and Biomedical Engineering	Specialisation in Chemical engineering with a Major in Biomedical Engineering
Chemical and Bioprocess Engineering	Specialisation in Chemical engineering with a Major in Bioprocess Engineering
Chemical and Environmental Engineering	Specialisation in Chemical engineering with a Major in Environmental Engineering
Chemical and Materials Engineering	Specialisation in Chemical engineering with a Major in Materials Engineering
Chemical and Metallurgical Engineering	Specialisation in chemical engineering with a Major in Metallurgical Engineering
Chemical Engineering	Specialisation in Chemical Engineering
Civil and Environmental Engineering	Specialisation in Civil Engineering with a Major in Environmental Engineering
Civil Engineering	Specialisation in Civil Engineering
Electrical and 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
Electrical Engineering	Specialisation in Electrical Engineering
Mechanical and Aerospace Engineering	Specialisation in Mechanical Engineering
Mechanical and Materials Engineering	Specialisation in Mechanical Engineering
Mechanical Engineering	Specialisation in Mechanical Engineering
Mechatronic Engineering	Specialisation in Mechatronic Engineering
Software Engineering	Specialisation in Software Engineering



Flexible First Year

Not Completed High School Specialist Mathematics with a grade of C or above.				
Semester 1 (February)	ENGG1100	ENGG1001	MATH1050	ENGG1500
Semester 2 (July)	ENGG1300	MATH1051	MATH1052	ENGG1700
<ul style="list-style-type: none"> 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.				
Semester 1 (February)	ENGG1100	MATH1051	ENGG1700	ENGG1300
Semester 2 (July)	ENGG1001	MATH1052	ENGG1500	Elective
<ul style="list-style-type: none"> 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 or Physics.				
Semester 1 (February)	ENGG1100	MATH1050	PHYS1171	ENGG1700
Semester 2 (July)	ENGG1001	MATH1051	ENGG1500	ENGG1300
<ul style="list-style-type: none"> Do MATH1052 in Summer Semester, or Semester 1 of Year 2 (depending on specialisation). 				

Not Completed High School Specialist Mathematics or Chemistry.				
Semester 1 (February)	ENGG1100	MATH1050	CHEM1090	ENGG1700
Semester 2 (July)	ENGG1001	MATH1051	ENGG1500	ENGG1300
<ul style="list-style-type: none"> Do MATH1052 in Summer Semester, or Semester 1 of Year 2 (depending on specialisation). 				



Specialisation in Chemical Engineering

Not Completed High School Specialist Mathematics with a grade of C or above.				
Semester 1 (February)	ENGG1100	MATH1050	ENGG1500	CHEM1100
Semester 2 (July)	ENGG1001	MATH1051	MATH1052	Elective
<ul style="list-style-type: none">• 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.				
Semester 1 (February)	ENGG1100	MATH1051	ENGG1500	CHEM1100
Semester 2 (July)	ENGG1001	MATH1052	Elective	Elective
<ul style="list-style-type: none">• 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.				



Specialisation in Civil Engineering

Not Completed High School Specialist Mathematics with a grade of C or above.				
Semester 1 (February)	ENGG1100	MATH1050	ENGG1700	Elective
Semester 2 (July)	ENGG1001	MATH1051	MATH1052	Elective
<ul style="list-style-type: none"> No Physics? Taking PHYS1171 in Semester 1 is recommended. Major in Environmental Engineering? <ul style="list-style-type: none"> If you haven't completed high school chemistry, do CHEM1090 in Semester 1. Doing ENGG1500 and/or EARTH1501 (Semester 1 only) may give you more flexibility later in your degree. Major in Geotechnical Engineering? Doing EARTH1501 (Semester 1 only) 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:	CIVL2135 (Sem 1 only)			

Completed High School Specialist Mathematics with a grade of C or above.				
Semester 1 (February)	ENGG1100	MATH1051	ENGG1700	Elective
Semester 2 (July)	ENGG1001	MATH1052	Elective	Elective
<ul style="list-style-type: none"> No Physics? Taking PHYS1171 in Semester 1 is recommended. Major in Environmental Engineering? <ul style="list-style-type: none"> If you haven't completed high school chemistry, do CHEM1090 in Semester 1. Doing ENGG1500 and/or EARTH1501 (Semester 1 only) may give you more flexibility later in your degree. Major in Geotechnical Engineering? Doing EARTH1501 (Semester 1 only) may give you greater flexibility later in your degree 				
Accelerate Electives:	CIVL2135 (Sem 1 only)			



Specialisation in Electrical Engineering

Not Completed High School Specialist Mathematics with a grade of C or above.				
Semester 1 (February)	ENGG1100	CSSE1001 (Or ENGG1001)	MATH1050	ENGG1300
Semester 2 (July)	MATH1051	MATH1052	Elective	Elective
<ul style="list-style-type: none"> 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 will 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)*			

Completed High School Specialist Mathematics with a grade of C or above.				
Semester 1 (February)	ENGG1100	CSSE1001 (Or ENGG1001)	MATH1051	ENGG1300
Semester 2 (July)	MATH1052	Elective	Elective	Elective
<ul style="list-style-type: none"> 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)*			

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



Specialisation in Mechanical Engineering

Not Completed High School Specialist Mathematics with a grade of C or above.				
Semester 1 (February)	ENGG1100	MATH1050	ENGG1300	ENGG1500
Semester 2 (July)	ENGG1001	MATH1051	MATH1052	ENGG1700
<ul style="list-style-type: none"> 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.				
Semester 1 (February)	ENGG1100	ENGG1001	MATH1051	ENGG1700
Semester 2 (July)	MATH1052	ENGG1300	ENGG1500	Elective
<ul style="list-style-type: none"> 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. 				



Specialisation in Mechatronic Engineering

Not Completed High School Specialist Mathematics with a grade of C or above.				
Semester 1 (February)	ENGG1100	ENGG1001 or CSSE1001	MATH1050	ENGG1300
Semester 2 (July)	MATH1051	MATH1052	ENGG1700	Elective
<ul style="list-style-type: none"> 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)*			

Completed High School Specialist Mathematics with a grade of C or above.				
Semester 1 (February)	ENGG1100	ENGG1001 or CSSE1001	MATH1051	ENGG1300
Semester 2 (July)	MATH1052	ENGG1700	Elective	Elective
<ul style="list-style-type: none"> No Physics? Do PHYS1171 in Semester 1, and ENGG1300 in Semester 2. Major in Computer Engineering? Doing CSSE2010 and/or CSSE2002 may give you greater flexibility later in your degree. 				
Accelerate Electives:	CSSE2010 (Sem 1 and 2)*			

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



Specialisation in Software Engineering

Not Completed High School Specialist Mathematics with a grade of C or above.				
Semester 1 (February)	ENGG1100	CSSE1001 (Or ENGG1001)	MATH1050	ENGG1300
Semester 2 (July)	MATH1051	MATH1052	MATH1061	INFS1200
<ul style="list-style-type: none"> 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.				
Semester 1 (February)	ENGG1100	CSSE1001 (Or ENGG1001)	MATH1051	ENGG1300
Semester 2 (July)	MATH1052	MATH1061	INFS1200	Elective
<ul style="list-style-type: none"> 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)*		

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