Course progression maps for 2026 commencing students

This progression map provides advice on the optimal sequencing of units and guidance on planning unit enrolment for each semester of study in conjunction with the required units outlined in the course 'Requirements' section of the Handbook. Please note that the map may be updated to reflect changes to course requirements. Be sure to review it for the latest information before re-enrolling. *Last updated: 16 October 2025*

E3004 Bachelor of Engineering (Honours) and Bachelor of Biomedical Science

Common First Year

You do not have VCE Units 3 & 4 Specialist Maths >30 study score and VCE Units 3 & 4 Physics >25 study score: You must enrol in Foundation mathematics (ENG1090) and Foundation physics (PHS1001)					
Year	**Period**	**Units**			
1	Sem 1 Feb	ENG1013 Engineering smart systems	PHS1001 Foundation physics *Corequisite: ENG1090 **	ENG1090 Foundation mathematics	BMS1011 Biomedical chemistry
	Sem 2 July	ENG1011 Engineering methods	ENG1005 Engineering mathematics *Required: ENG1090 **	ENG1014 Engineering numerical analysis *Corequisite: ENG1005*	BMS1062 Molecular biology
* If you require two foundation units, you will need to take the remaining core unit ENG1012 Engineering design in Year 2 (Semester 1) as an overload. This increases the total credit points needed for the double degree by 6 points. You cannot swap the semester of any of the units.					

You do not have VCE Units 3 & 4 Specialist Maths >30 study score: You must enrol in Foundation mathematics (ENG1090)					
1	Sem 1 Feb	ENG1012 Engineering design	ENG1013 Engineering smart systems	ENG1090 Foundation mathematics	BMS1011 Biomedical chemistry
	Sem 2 July	ENG1011 Engineering methods	ENG1005 Engineering mathematics *Required: ENG1090 **	ENG1014 Engineering numerical analysis *Corequisite: ENG1005*	BMS1062 Molecular biology

You do not have VCE Units 3 & 4 Physics >25 study score: You must enrol in Foundation physics (PHS1001)					
1	Sem 1 Feb	ENG1012 Engineering design	ENG1013 Engineering smart systems	PHS1001 Foundation physics *Required: ENG1090 **	BMS1011 Biomedical chemistry
	Sem 2 July	ENG1011 Engineering methods	ENG1005 Engineering mathematics *Required: ENG1090 **	ENG1014 Engineering numerical analysis *Corequisite: ENG1005*	BMS1062 Molecular biology

You have completed VCE Units 3 & 4 Physics >25 study score and VCE Units 3 and 4 Specialist Maths >30 study score: No foundation units are required					
1	Sem 1 Feb	ENG1011 Engineering methods	ENG1005 Engineering mathematics *Required: ENG1090 **	ENG1014 Engineering numerical analysis *Corequisite: ENG1005*	BMS1011 Biomedical chemistry
	Sem 2 July	ENG1012 Engineering design	ENG1013 Engineering smart systems	First Year engineering breadth study	BMS1062 Molecular biology

NOTE:

- It is important that you follow the course map unit sequence, as units are designed to build on prior knowledge. Taking units out of sequence can disrupt your progression and cause delays due to semester offerings and enrolment rules.
- **Foundation units:** You enrol in the foundation units ENG1090 and/or PHS1001 if you have not completed the Australian VCE (Units 3 & 4) or equivalent Specialist mathematics and/or Physics with the required study score.
- Each unit requires 12 hours of work per week. A full-time study week totals 48 hours. If you are unable to commit 48 hours of study due to external commitments, please speak with a course advisor about options to study less units per semester or take some units in the summer semester.
- For enrolment advice, please refer to the Course advisers webpage.

Course progression maps for 2026 commencing students

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E3004 Bachelor of Engineering (Honours) and Bachelor of Biomedical Science

Specialisation - Chemical Engineering

	Bachelor of Chemical Engineering (Honours)		Bachelor of Biomedical Science		
Year 1 Semester 1 February	Common First Year			BMS1011 Biomedical chemistry	
Year 1 Semester 2 July				BMS1062 Molecular biology	
Year 2 Semester 1 February	ENG2005 Advanced engineering mathematics	CHM1011 Chemistry 1 or CHM1051 Chemistry 1 advanced	BMS1031 Medical biophysics	BMS1021 Cells, tissues and organisms	If two foundation units are required, you must overload to complete ENG1012 Engineering design
Year 2 Semester 2 July	CHE2162 Material and energy balances	CHE2161 Mechanics of fluids	BMS1042 Public health and preventive medicine	BMS1052 Human neurobiology	
Year 3 Semester 1 February	CHE2164 Thermodynamics 1	BMS2021 Human molecular biology	BMS2011 Human anatomy	BMS2031 Human physiology	
Year 3 Semester 2 July	CHE2163 Heat and mass transfer	BMS2042 Human genetics	BMS2052 Microbes in health and disease	BMS2062 Introduction to bioinformatics	
Year 4 Semester 1 February	CHE3161 Chemistry and chemical thermodynamics	CHE3165 Separation processes	BMS3031 Molecular mechanisms of disease		MAP1001 Allies in Indigenous health (0 credit point – To be taken concurrently with BMS3031)
Year 4 Semester 2 July	CHE3166 Process design	CHE3164 Reaction engineering	BMS3052 Biomedical basis and epidemiology of human disease		
Year 5 Semester 1 February	ENG4701 Final year project A	CHE4162 Particle technology	Complete one Professional Practice domain unit	CHE3167 Transport phenomena and numerical methods	ENG0001 Continuous Professional Development (0 credit points)
Year 5 Semester 2 July	ENG4702 Final year project B	CHE4170 Design project (12 points)		CHE3162 Process control	

NOTE:

- It is important that you follow the course map unit sequence, as units are designed to build on prior knowledge. Taking units out of sequence can disrupt your progression and cause delays due to semester offerings and enrolment rules.
- **CHM1011, CHM1051, CHE2161** - If you have completed one the units as a First Year breadth study unit, it will count towards your chemical engineering study. You must still fulfil the First Year engineering breadth study requirement by completing another breadth study unit.
- CHE4170 - You should not overload in the semester when undertaking this unit.
- Engineering minors are not available in the Engineering double degree courses.
- You are required to complete at least 420 hours of Continuous Professional Development (CPD) in order to graduate. For further information refer to the CPD webpage.
- Each unit requires 12 hours of work per week. A full-time study week totals 48 hours. If you are unable to commit 48 hours of study due to external commitments, please speak with a course advisor about options to study less units per semester or take some units in the summer semester.
- For enrolment advice, please refer to the Course advisers webpage.

Course progression maps for 2026 commencing students

This progression map provides advice on the optimal sequencing of units and guidance on planning unit enrolment for each semester of study in conjunction with the required units outlined in the course 'Requirements' section of the Handbook. Please note that the map may be updated to reflect changes to course requirements. Be sure to review it for the latest information before re-enrolling. *Last updated: 16 October 2025*

E3004 Bachelor of Engineering (Honours) and Bachelor of Biomedical Science

Specialisation - Civil Engineering

	Bachelor of Civil Engineering (Honours)		Bachelor of Biomedical Science		
Year 1 Semester 1 February	Common First Year			BMS1011 Biomedical chemistry	
Year 1 Semester 2 July				BMS1062 Molecular biology	
Year 2 Semester 1 February	CIV2282 Transport and traffic engineering	CIV2206 Structural mechanics	BMS1031 Medical biophysics	BMS1021 Cells, tissues and organisms	If two foundation units are required, you must overload to complete ENG1012 Engineering design
Year 2 Semester 2 July	CIV2242 Geomechanics 1	ENG2005 Advanced engineering mathematics	BMS1042 Public health and preventive medicine	BMS1052 Human neurobiology	
Year 3 Semester 1 February	CIV2263 Water systems	BMS2021 Human molecular biology	BMS2011 Human anatomy	BMS2031 Human physiology	
Year 3 Semester 2 July	CIV2235 Structural materials	BMS2042 Human genetics	BMS2052 Microbes in health and disease	BMS2062 Introduction to bioinformatics	
Year 4 Semester 1 February	Complete one Professional Practice domain unit	CIV3294 Structural design	BMS3031 Molecular mechanisms of disease		MAP1001 Allies in Indigenous health (0 credit point – To be taken concurrently with BMS3031)
Year 4 Semester 2 July	CIV3247 Geomechanics 2	CIV3283 Road engineering	BMS3052 Biomedical basis and epidemiology of human disease		
Year 5 Semester 1 February	ENG4701 Final year project A	CIV3285 Engineering hydrology	CIV4249 Foundation engineering	CIV4280 Bridge design and assessment	ENG0001 Continuous Professional Development (0 credit points)
Year 5 Semester 2 July	ENG4702 Final year project B	CIV4212 Civil and environmental engineering practice	CIV3221 Building structures and technology	CIV4288 Water treatment	

NOTE:

- It is important that you follow the course map unit sequence, as units are designed to build on prior knowledge. Taking units out of sequence can disrupt your progression and cause delays due to semester offerings and enrolment rules.
- Engineering minors are not available in the Engineering double degree courses.
- You are required to complete at least 420 hours of Continuous Professional Development (CPD) in order to graduate. For further information refer to the CPD webpage.
- Each unit requires 12 hours of work per week. A full-time study week totals 48 hours. If you are unable to commit 48 hours of study due to external commitments, please speak with a course advisor about options to study less units per semester or take some units in the summer semester.
- For enrolment advice, please refer to the Course advisers webpage.

Course progression maps for 2026 commencing students

This progression map provides advice on the optimal sequencing of units and guidance on planning unit enrolment for each semester of study in conjunction with the required units outlined in the course 'Requirements' section of the Handbook. Please note that the map may be updated to reflect changes to course requirements. Be sure to review it for the latest information before re-enrolling. *Last updated: 16 October 2025*

E3004 Bachelor of Engineering (Honours) and Bachelor of Biomedical Science

Specialisation - Electrical and Computer Systems Engineering

	Bachelor of Electrical and Computer Systems Engineering (Honours)		Bachelor of Biomedical Science		
Year 1 Semester 1 February	Common First Year			BMS1011 Biomedical chemistry	
Year 1 Semester 2 July				BMS1062 Molecular biology	
Year 2 Semester 1 February	ECE2071 Systems programming	ECE2131 Electrical circuits	ENG2005 Advanced engineering mathematics	BMS1021 Cells, tissues and organisms	If two foundation units are required, you must overload to complete ENG1012 Engineering design
Year 2 Semester 2 July	ECE2072 Digital systems	ECE2111 Signals and systems	BMS1042 Public health and preventive medicine	BMS1052 Human neurobiology	
Year 3 Semester 1 February	BMS1031 Medical biophysics	BMS2021 Human molecular biology	BMS2011 Human anatomy	BMS2031 Human physiology	
Year 3 Semester 2 July	ECE2191 Probability and AI for engineers	BMS2042 Human genetics	BMS2052 Microbes in health and disease	BMS2062 Introduction to bioinformatics	
Year 4 Semester 1 February	ECE3051 Electrical energy systems	ECE3073 Computer systems	BMS3031 Molecular mechanisms of disease		MAP1001 Allies in Indigenous health (0 credit point – To be taken concurrently with BMS3031)
Year 4 Semester 2 July	ECE3121 Engineering electromagnetics	ECE3161 Analogue electronics	BMS3052 Biomedical basis and epidemiology of human disease		
Year 5 Semester 1 February	ENG4701 Final year project A	ECE3141 Information and networks	Complete one Professional Practice domain unit	Core List A elective	ENG0001 Continuous Professional Development (0 credit points)
Year 5 Semester 2 July	ENG4702 Final year project B	ECE4191 Engineering integrated design	ECE4132 Control system design	Core List A or B elective	

NOTE:

- It is important that you follow the course map unit sequence, as units are designed to build on prior knowledge. Taking units out of sequence can disrupt your progression and cause delays due to semester offerings and enrolment rules.
- **ECE2072 -** If you have completed this unit as a First Year breadth study unit, it will count towards your ECSE study. You must still fulfil the First Year engineering breadth study requirement by completing another breadth study unit.
- Engineering minors are not available in the Engineering double degree courses.
  You are required to complete at least 420 hours of Continuous Professional Development (CPD) in order to graduate. For further information refer to the CPD webpage.
- Each unit requires 12 hours of work per week. A full-time study week totals 48 hours. If you are unable to commit 48 hours of study due to external commitments, please speak with a course advisor about options to study less units per semester or take some units in the summer semester.
- For enrolment advice, please refer to the Course advisers webpage.

Course progression maps for 2026 commencing students

This progression map provides advice on the optimal sequencing of units and guidance on planning unit enrolment for each semester of study in conjunction with the required units outlined in the course 'Requirements' section of the Handbook. Please note that the map may be updated to reflect changes to course requirements. Be sure to review it for the latest information before re-enrolling. *Last updated: 16 October 2025*

E3004 Bachelor of Engineering (Honours) and Bachelor of Biomedical Science

Specialisation - Materials Engineering

	Bachelor of Materials Engineering (Honours)		Bachelor of Biomedical Science		
Year 1 Semester 1 February	Common First Year			BMS1011 Biomedical chemistry	
Year 1 Semester 2 July				BMS1062 Molecular biology	
Year 2 Semester 1 February	MTE2101 Atomic- scale structure of materials	MTE2103 Mechanical properties of materials	BMS1031 Medical biophysics	BMS1021 Cells, tissues and organisms	If two foundation units are required, you must overload to complete ENG1012 Engineering design
Year 2 Semester 2 July	MTE2201 Plastics and the planet: Health, impact and sustainability	ENG2005 Advanced engineering mathematics	BMS1042 Public health and preventive medicine	BMS1052 Human neurobiology	
Year 3 Semester 1 February	MTE2102 Phase equilibria and phase transformations	BMS2021 Human molecular biology	BMS2011 Human anatomy	BMS2031 Human physiology	
Year 3 Semester 2 July	MTE2204 Materials in a complex world 1: People, projects and data	BMS2042 Human genetics	BMS2052 Microbes in health and disease	BMS2062 Introduction to bioinformatics	
Year 4 Semester 1 February	MTE3104 Electronic and photonic materials	MTE3102 Plasticity of metals and alloys	BMS3031 Molecular mechanisms of disease		MAP1001 Allies in Indigenous health (0 credit point – To be taken concurrently with BMS3031)
Year 4 Semester 2 July	MTE3202 Magnetic and spintronic materials	MTE3203 Introduction to ceramics: Properties, processing and applications	BMS3052 Biomedical basis and epidemiology of human disease		
Year 5 Semester 1 February	ENG4701 Final year project A	MTE4101 Integrated design project	MTE4102 Advanced materials processing and manufacturing	MTE3103 Materials life cycle	ENG0001 Continuous Professional Development (0 credit points)
Year 5 Semester 2 July	ENG4702 Final year project B	MTE3201 Materials in a complex world 2: Characterisation, identification and selection	Complete one Professional Practice domain unit	Level 4 or 5 MTE-coded materials engineering technical elective	

NOTE:

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- Engineering minors are not available in the Engineering double degree courses.
- You are required to complete at least 420 hours of Continuous Professional Development (CPD) in order to graduate. For further information refer to the CPD webpage.
- Each unit requires 12 hours of work per week. A full-time study week totals 48 hours. If you are unable to commit 48 hours of study due to external commitments, please speak with a course advisor about options to study less units per semester or take some units in the summer semester.
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MONASH University

Course progression maps for 2026 commencing students

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E3004 Bachelor of Engineering (Honours) and Bachelor of Biomedical Science

Specialisation - Mechanical Engineering

	Bachelor of Mechanical Engineering (Honours)		Bachelor of Biomedical Science		
Year 1 Semester 1 February	Common First Year			BMS1011 Biomedical chemistry	
Year 1 Semester 2 July				BMS1062 Molecular biology	
Year 2 Semester 1 February	MMA2002 Solid mechanics 1	MMA2001 Design 1	BMS1031 Medical biophysics	BMS1021 Cells, tissues and organisms	If two foundation units are required, you must overload to complete ENG1012 Engineering design
Year 2 Semester 2 July	MMA2003 Thermofluids 1	MMA2004 Dynamics 1	BMS1042 Public health and preventive medicine	BMS1052 Human neurobiology	
Year 3 Semester 1 February	ENG2005 Advanced engineering mathematics	BMS2021 Human molecular biology	BMS2011 Human anatomy	BMS2031 Human physiology	
Year 3 Semester 2 July	MMA3001 Numerical methods and machine learning	BMS2042 Human genetics	BMS2052 Microbes in health and disease	BMS2062 Introduction to bioinformatics	
Year 4 Semester 1 February	MEC3451 Fluid mechanics 2	MEC3001 Material properties and selection	BMS3031 Molecular mechanisms of disease		MAP1001 Allies in Indigenous health (0 credit point – To be taken concurrently with BMS3031)
Year 4 Semester 2 July	MEC3416 Mechanical design 2	MMA2005 Modelling and control	BMS3052 Biomedical basis and epidemiology of human disease		
Year 5 Semester 1 February	ENG4701 Final year project A	MEC3455 Solid mechanics 2	MEC4408 Thermodynamics 2 and heat transfer	Complete one Professional Practice domain unit	ENG0001 Continuous Professional Development (0 credit points)
Year 5 Semester 2 July	ENG4702 Final year project B	MMA4001 Finite element analysis	MEC4407 Mechanical design 3	MEC3453 Mechanical dynamics 2	

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- You are required to complete at least 420 hours of Continuous Professional Development (CPD) in order to graduate. For further information refer to the CPD webpage.
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