

Course progression maps for 2027 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: 15 September 2026

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 <u>and</u> VCE Units 3 & 4 Physics >25 study score: You must enrol in Foundation mathematics (ENG1090) <u>and</u> Foundation physics (PHS1001)					
Year	Period	Units			
1	Sem 1 Feb	ENG1013 Engineering smart systems	PHS1001 Foundation physics <i>Corequisite: ENG1090 *</i>	ENG1090 Foundation mathematics	BMS1121 Biomedicine and global challenges
	Sem 2 July	ENG1011 Engineering methods	ENG1005 Engineering mathematics <i>Required: ENG1090 *</i>	ENG1014 Engineering numerical analysis <i>Corequisite: ENG1005</i>	BMS1142 Biomedical data and population health
* 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	BMS1121 Biomedicine and global challenges
	Sem 2 July	ENG1011 Engineering methods	ENG1005 Engineering mathematics <i>Required: ENG1090 *</i>	ENG1014 Engineering numerical analysis <i>Corequisite: ENG1005</i>	BMS1142 Biomedical data and population health

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 <i>Required: ENG1090 *</i>	BMS1121 Biomedicine and global challenges
	Sem 2 July	ENG1011 Engineering methods	ENG1005 Engineering mathematics <i>Required: ENG1090 *</i>	ENG1014 Engineering numerical analysis <i>Corequisite: ENG1005</i>	BMS1142 Biomedical data and population health

You have completed VCE Units 3 & 4 Physics >25 study score <u>and</u> 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 <i>Required: ENG1090 *</i>	ENG1014 Engineering numerical analysis <i>Corequisite: ENG1005</i>	BMS1121 Biomedicine and global challenges
	Sem 2 July	ENG1012 Engineering design	ENG1013 Engineering smart systems	First Year engineering breadth study	BMS1142 Biomedical data and population health

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.
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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			BMS1121 Biomedicine and global challenges
Year 1 Semester 2 July				BMS1142 Biomedical data and population health
Year 2 Semester 1 February	ENG2005 Advanced engineering mathematics	CHM1011 Chemistry 1 or CHM1051 Chemistry 1 advanced	BMS1111 Foundations of biology and scientific practice	If two foundation units are required, you must overload to complete ENG1012 Engineering design
Year 2 Semester 2 July	CHE2161 Mechanics of fluids	CHE2162 Material and energy balances	BMS1132 The molecular life of cells	
Year 3 Semester 1 February	CHE2164 Thermodynamics 1	CHE4162 Particle technology	BMS2111 Human structure and function	
Year 3 Semester 2 July	CHE2163 Heat and mass transfer	BMS2142 Genetic and biochemical basis of disease	BMS2132 Bugs, drugs and immunity in health and disease	
Year 4 Semester 1 February	CHE3161 Chemistry and chemical thermodynamics	CHE3165 Separation processes	CHE3167 Transport phenomena and numerical methods	BMS2121 Integrated metabolism: Regulation, disease and therapeutics
Year 4 Semester 2 July	CHE3166 Process design	CHE3162 Process control	CHE3164 Reaction engineering	Level 3 discipline-specific elective
Year 5 Semester 1 February	ENG4701 Final year project A	Complete one Professional Practice domain unit	BMS3111 Biomedical innovations for global health challenges	ENG0001 Continuous Professional Development (0 credit points)
Year 5 Semester 2 July	ENG4702 Final year project B	CHE4170 Design project (12 points)	BMS3122 Biomedical research translation	

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- CHM1011, CHM1051, CHE2161** - If you have completed one of 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.
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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			BMS1121 Biomedicine and global challenges
Year 1 Semester 2 July				BMS1142 Biomedical data and population health
Year 2 Semester 1 February	ENG2005 Advanced engineering mathematics	CIV2206 Structural mechanics	BMS1111 Foundations of biology and scientific practice	If two foundation units are required, you must overload to complete ENG1012 Engineering design
Year 2 Semester 2 July	CIV2235 Structural materials	CIV2242 Geomechanics 1	BMS1132 The molecular life of cells	
Year 3 Semester 1 February	CIV2263 Water systems	CIV2282 Transport and traffic engineering	CIV3294 Structural design	BMS2121 Integrated metabolism: Regulation, disease and therapeutics
Year 3 Semester 2 July	CIV3221 Building structures and technology	CIV3283 Road engineering	CIV3247 Geomechanics 2	BMS2142 Genetic and biochemical basis of disease
Year 4 Semester 1 February	CIV3285 Engineering hydrology	CIV4249 Foundation engineering	BMS2111 Human structure and function	
Year 4 Semester 2 July	CIV4288 Water treatment	Complete one Professional Practice domain unit	BMS2132 Bugs, drugs and immunity in health and disease	
Year 5 Semester 1 February	ENG4701 Final year project A	CIV4280 Bridge design and assessment	BMS3111 Biomedical innovations for global health challenges	
Year 5 Semester 2 July	ENG4702 Final year project B	CIV4212 Civil and environmental engineering practice	BMS3122 Biomedical research translation	Level 3 discipline-specific elective
				ENG0001 Continuous Professional Development (0 credit points)

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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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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			BMS1121 Biomedicine and global challenges
Year 1 Semester 2 July				BMS1142 Biomedical data and population health
Year 2 Semester 1 February	ECE2071 Systems programming	ECE2131 Electrical circuits	BMS1111 Foundations of biology and scientific practice	If two foundation units are required, you must overload to complete ENG1012 Engineering design
Year 2 Semester 2 July	ECE2072 Digital systems	ENG2005 Advanced engineering mathematics	BMS1132 The molecular life of cells	
Year 3 Semester 1 February	ECE3051 Electrical energy systems	ECE3073 Computer systems	ECE3141 Information and networks	BMS2121 Integrated metabolism: Regulation, disease and therapeutics
Year 3 Semester 2 July	ECE2111 Signals and systems	ECE2191 Probability and AI for engineers	ECE3121 Engineering electromagnetics	BMS2142 Genetic and biochemical basis of disease
Year 4 Semester 1 February	Core List A elective	Complete one Professional Practice domain unit	BMS2111 Human structure and function	
Year 4 Semester 2 July	ECE3133 Control systems	ECE3161 Analogue electronics	BMS2132 Bugs, drugs and immunity in health and disease	
Year 5 Semester 1 February	ENG4701 Final year project A	Core List A or B elective	BMS3111 Biomedical innovations for global health challenges	
Year 5 Semester 2 July	ENG4702 Final year project B	ECE4191 Engineering integrated design	BMS3122 Biomedical research translation	Level 3 discipline-specific elective

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- 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.
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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			BMS1121 Biomedicine and global challenges
Year 1 Semester 2 July				BMS1142 Biomedical data and population health
Year 2 Semester 1 February	MTE2101 Atomic- scale structure of materials	MTE2103 Mechanical properties of materials	BMS1111 Foundations of biology and scientific practice	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	BMS1132 The molecular life of cells	
Year 3 Semester 1 February	MTE2102 Phase equilibria and phase transformations	MTE3104 Electronic and photonic materials	MTE3102 Plasticity of metals and alloys	BMS2121 Integrated metabolism: Regulation, disease and therapeutics
Year 3 Semester 2 July	MTE2204 Materials in a complex world 1: People, projects and data	MTE3202 Magnetic and spintronic materials	MTE3203 Introduction to ceramics: Properties, processing and applications	BMS2142 Genetic and biochemical basis of disease
Year 4 Semester 1 February	MTE3103 Materials life cycle	MTE4102 Advanced materials processing and manufacturing	BMS2111 Human structure and function	
Year 4 Semester 2 July	MTE3201 Materials in a complex world 2: Characterisation, identification and selection	Level 4 or 5 MTE-coded materials engineering technical elective	BMS2132 Bugs, drugs and immunity in health and disease	
Year 5 Semester 1 February	ENG4701 Final year project A	MTE4101 Integrated design project	BMS3111 Biomedical innovations for global health challenges	
Year 5 Semester 2 July	ENG4702 Final year project B	Complete one Professional Practice domain unit	BMS3122 Biomedical research translation	Level 3 discipline-specific elective
				ENG0001 Continuous Professional Development (0 credit points)

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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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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			BMS1121 Biomedicine and global challenges
Year 1 Semester 2 July				BMS1142 Biomedical data and population health
Year 2 Semester 1 February	ENG2005 Advanced engineering mathematics	MMA2002 Solid mechanics 1	BMS1111 Foundations of biology and scientific practice	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	BMS1132 The molecular life of cells	
Year 3 Semester 1 February	MEC3455 Solid mechanics 2	MMA2001 Design 1	MEC3001 Material properties and selection	BMS2121 Integrated metabolism: Regulation, disease and therapeutics
Year 3 Semester 2 July	MEC3453 Mechanical dynamics 2	MEC3416 Mechanical design 2	MMA2005 Modelling and control	BMS2142 Genetic and biochemical basis of disease
Year 4 Semester 1 February	MEC4408 Thermodynamics 2 and heat transfer	MEC3451 Fluid mechanics 2	BMS2111 Human structure and function	
Year 4 Semester 2 July	MMA3001 Numerical methods and machine learning	MMA4001 Finite element analysis	BMS2132 Bugs, drugs and immunity in health and disease	
Year 5 Semester 1 February	ENG4701 Final year project A	Complete one Professional Practice domain unit	BMS3111 Biomedical innovations for global health challenges	ENG0001 Continuous Professional Development (0 credit points)
Year 5 Semester 2 July	ENG4702 Final year project B	MEC4407 Mechanical design 3	BMS3122 Biomedical research translation	
			Level 3 discipline-specific elective	

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