MONASH University

Course progression map for 2017 commencing students

This progression map provides advice on the suitable sequencing of units and guidance on how to plan unit enrolment for each semester of study. It should be used in conjunction with the requirements of the course as specified in the Handbook. The map is subject to updates. Update version: 18 October 2021

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	ENG1001 Engineering design: lighter, faster, stronger or ENG1002	ENG1003 Engineering mobile apps or ENG1005	Foundation unit or ENG1060 Computing for engineers	BMS1011 Biomedical chemistry	
YEAR 1 Semester 2	ENG1002 Engineering design: cleaner, safer, smarter or ENG1001	ENG1005 Mathematics for engineering or ENG1003	Engineering elective or ENG1060 Computing for engineers (if not taken in Sem 1)	BMS1042 Public health and preventative medicine	
YEAR 2 Semester 1	CHE2161 Mechanics of fluids	CHM1011 Chemistry 1	BMS1031 Medical Biophysics	BMS1021 Cells, tissues and organisms	If two foundation units are required then overload is required for PHS1080 Foundation physics *This unit is replaced by PHS1001 Foundation physics from 2018*
YEAR 2 Semester 2	CHE2162 Material and energy balances	ENG2005 Advanced engineering mathematics	BMS1052 Human neurobiology	BMS1062 Molecular biology	
YEAR 3 Semester 1	CHE2164 Thermodynamics 1	BMS2021 Human molecular biology	BMS2011 Structure of the human body	BMS2031 Body systems	
YEAR 3 Semester 2	CHE2163 Heat and mass transfer	BMS2042 Human genetics	BMS2052 Microbes in health and diseases	BMS2062 Introduction to bioinformatics	
YEAR 4 Semester 1	CHE3161 Chemistry and chemical thermodynamics	CHE3165 Separation processes	BMS3031 Molecular mechanisms of disease		CHE3167 Transport phenomena and numerical methods (for students planning to enrol in CHE4164)
YEAR 4 Semester 2	CHE3166 Process design	CHE3164 Reaction engineering	BMS3052 Biomedical basis and epidemiology of human disease		
YEAR 5 Semester 1 **OR**	CHE4164 Integrated industrial project (18 points) For selected students taking a period of integrated industrial training in the first semester of their final year. This will replace the two core units below [CHE4161 and CHE4180 (or ENG4701 and ENG4702)]				
YEAR 5 Semester 1	CHE4180 Chemical engineering project Replace with ENG4701 from 2021. *See footnote*	CHE4162 Particle technology	CHE3167 Transport phenomena and numerical methods	CHE4161 Engineer in society	
YEAR 5 Semester 2	ENG4702 Final year project B *See footnote*	CHE3162 Process control	CHE4170 Design project (12 points)		

Note:

· From 2021, ENG4701 and ENG4702 will replace the 12 credit points CHE4180, therefore extending the final year project over two semesters. Please seek course advice if needed.
· Depending on placement location, students who choose CHE4164 may have to overload a semester or extend an additional semester in order to complete their course requirement.
· Students should not overload in the semester of undertaking CHE4170.
· All Bachelor of Engineering (Honours) students are required to complete Continuous Professional Development (CPD) in order to graduate. For CPD advice, refer to the CPD webpage

MONASH University

Course progression map for 2017 commencing students

This progression map provides advice on the suitable sequencing of units and guidance on how to plan unit enrolment for each semester of study. It should be used in conjunction with the requirements of the course as specified in the Handbook. The map is subject to updates. Update version: 18 October 2021

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	ENG1001 Engineering design: lighter, faster, stronger or ENG1002	ENG1003 Engineering mobile apps or ENG1005	Foundation unit or ENG1060 Computing for engineers	BMS1011 Biomedical chemistry	
YEAR 1 Semester 2	ENG1002 Engineering design: cleaner, safer, smarter or ENG1001	ENG1005 Mathematics for engineering or ENG1003	Engineering elective or ENG1060 Computing for engineers (if not taken in Sem 1)	BMS1042 Public health and preventative medicine	
YEAR 2 Semester 1	CIV2225 Design of steel and timber structures * Replace with CIV2235 from 2021	CIV2206 Mechanics of solids Unit title change from 2019	BMS1031 Medical Biophysics	BMS1021 Cells, tissues and organisms	If two foundation units are required then overload is required for PHS1080 Foundation physics *This unit is replaced by PHS1001 Foundation physics from 2018*
YEAR 2 Semester 2	CIV2242 Geomechanics 1	ENG2005 Advanced engineering mathematics	BMS1052 Human neurobiology	BMS1062 Molecular biology	
YEAR 3 Semester 1	CIV2263 Water systems	BMS2021 Human molecular biology	BMS2011 Structure of the human body	BMS2031 Body systems	
YEAR 3 Semester 2	CIV2282 Transport and traffic engineering	BMS2042 Human genetics	BMS2052 Microbes in health and diseases	BMS2062 Introduction to bioinformatics	
YEAR 4 Semester 1	CIV3248 Groundwater and environmental geomechanics	CIV3221 Building structures and technology	BMS3031 Molecular mechanisms of disease		
YEAR 4 Semester 2	CIV3247 Geomechanics 2	CIV3204 Engineering investigation See footnote	BMS3052 Biomedical basis and epidemiology of human disease		
YEAR 5 Semester 1	CIV4210 Project A Replace with ENG4701 from 2022. See footnote	CIV3285 Engineering hydrology	CIV4286 Project management for civil engineers	CIV4280 Bridge design and assessment	
YEAR 5 Semester 2	CIV4287 Road engineering Replace with ENG4702 from 2022. See footnote	CIV3284 Design of concrete and masonry structures Replace with CIV3294 from 2022	CIV4212 Civil and environmental engineering practice	CIV4288 Water treatment	

Note:
- **FROM 2022:** Following a recent advice by Engineers Australia, you must complete 12 CP of a final year project in order to meet professional accreditation requirements. Please seek course advice from the Student Services at the Faculty of Engineering.
- **CIV4210** – If you are course-completing in 2022/S1, complete CIV4210 (for 6CP FYP) or CIV4211 (if undertaking 12CP FYP). Otherwise, replace CIV4210 with ENG4701 from 2022.
- **CIV3204** – If you have not completed CIV3204 by 2021, replace CIV3204 with CIV3283 Road engineering from 2022.
- **CIV4287** – If you have completed CIV3204 but not CIV4287 by 2021, replace CIV4287 with ENG4702 from 2022. CIV3283 is highly recommended to be taken as a level 3 civil engineering technical elective.
- The placement of units may be rearranged to support sequencing for double degree courses but care should be taken to ensure sequenced units are maintained in sequence.
- 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.
- For enrolment advice, please refer to the Course Advisers webpage.

MONASH University

Course progression map for 2017 commencing students

This progression map provides advice on the suitable sequencing of units and guidance on how to plan unit enrolment for each semester of study. It should be used in conjunction with the requirements of the course as specified in the [Handbook.](#) The map is subject to updates. Update version: 18 October 2021

[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	ENG1001 Engineering design: lighter, faster, stronger or ENG1002	ENG1003 Engineering mobile apps or ENG1005	Foundation unit or ENG1060 Computing for engineers	BMS1011 Biomedical chemistry	
YEAR 1 Semester 2	ENG1002 Engineering design: cleaner, safer, smarter or ENG1001	ENG1005 Mathematics for engineering or ENG1003	Engineering elective or ENG1060 Computing for engineers (if not taken in Sem 1)	BMS1042 Public health and preventative medicine	
YEAR 2 Semester 1	ENG2005 Advanced engineering mathematics	ECE2071 Computer organisation and programming	BMS1031 Medical Biophysics	BMS1021 Cells, tissues and organisms	If two foundation units are required then overload is required for PHS1080 Foundation physics *This unit is replaced by PHS1001 Foundation physics from 2018*
YEAR 2 Semester 2	ECE2191 Probability models in engineering	ECE2072 Digital systems	BMS1052 Human neurobiology	BMS1062 Molecular biology	
YEAR 3 Semester 1	ECE2131 Electrical circuits	BMS2021 Human molecular biology	BMS2011 Structure of the human body	BMS2031 Body systems	
YEAR 3 Semester 2	ECE2111 Signals and systems	BMS2042 Human genetics	BMS2052 Microbes in health and diseases	BMS2062 Introduction to bioinformatics	
YEAR 4 Semester 1	ECE3073 Computer systems	ECE3141 Information and networks	BMS3031 Molecular mechanisms of disease		
YEAR 4 Semester 2	ECE3121 Engineering electromagnetics	ECE3091 Engineering design *Replace with ECE4191 from 2022. See footnote*	BMS3052 Biomedical basis and epidemiology of human disease		
YEAR 5 Semester 1	ECE4094 Project A *Replace with ENG4701 from 2021/22*	ECE3161 Analogue electronics	ECE3051 Electrical energy systems	Level 4 or 5 ECE-coded core elective	
YEAR 5 Semester 2	ECE4095 Project B *Replace with ENG4702 from 2022*	ECE4132 Control system design**	Level 4 or 5 ECE-coded core elective	ECE4099 Professional Practice	

* This unit replaces ECE4151 Electrical energy systems
** This unit replaces ECE3132 Control systems design

ECE3091 – Replace with ECE4191 if you have not completed ECE3091 by 2021. ECE4191 should be undertaken in your final year of study by swapping placement on the course map with ECE4132 or the level 4 ECSE technical elective.

All Bachelor of Engineering (Honours) students are required to complete [Continuous Professional Development (CPD)](#) in order to graduate. For CPD advice, refer to the [CPD webpage](#)

MONASH University

Course progression map for 2017 commencing students

This progression map provides advice on the suitable sequencing of units and guidance on how to plan unit enrolment for each semester of study. It should be used in conjunction with the requirements of the course as specified in the Handbook. The map is subject to updates. Update version: 18 October 2021

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	ENG1001 Engineering design: lighter, faster, stronger or ENG1002	ENG1003 Engineering mobile apps or ENG1005	Foundation unit or ENG1060 Computing for engineers	BMS1011 Biomedical chemistry	
YEAR 1 Semester 2	ENG1002 Engineering design: cleaner, safer, smarter or ENG1001	ENG1005 Mathematics for engineering or ENG1003	Engineering elective or ENG1060 Computing for engineers (if not taken in Sem 1)	BMS1042 Public health and preventative medicine	
YEAR 2 Semester 1	MTE2541 Crystal structures, thermodynamics and phase equilibria See footnote 1	MTE2544 Functional materials Replace with MTE2202 from 2021 (Semester 2 offering)	BMS1031 Medical Biophysics	BMS1021 Cells, tissues and organisms	If two foundation units are required then overload is required for PHS1080 Foundation physics This unit is replaced by PHS1001 Foundation physics from 2018
YEAR 2 Semester 2	MTE2542 Microstructural development Replace with MTE2102 from 2021 (Semester 1 offering)	ENG2005 Advanced engineering maths	BMS1052 Human neurobiology	BMS1062 Molecular biology	
YEAR 3 Semester 1	MTE2546 Mechanics of materials Replace with MTE2103 from 2021.	BMS2021 Human molecular biology	BMS2011 Structure of the human body	BMS2031 Body systems	
YEAR 3 Semester 2	MTE2545 Polymers and ceramics 1 See footnote 2	BMS2042 Human genetics	BMS2052 Microbes in health and diseases	BMS2062 Introduction to bioinformatics	
YEAR 4 Semester 1	MTE3543 Microstructure to applications: The mechanics of materials See footnote 3	MTE3542 Microstructural design in structural materials Replace with MTE3102 from 2022.	BMS3031 Molecular mechanisms of disease		
YEAR 4 Semester 2	MTE3547 Materials characterisation and modelling See footnote 1	MTE3546 Polymers and ceramics 2 Replace with MTE3203 from 2022. See footnote 2	BMS3052 Biomedical basis and epidemiology of human disease		
YEAR 5 Semester 1	MTE4525 Project 1 Replace with ENG4701 from 2021/22	MTE3541 Materials durability Replace with MTE3103 from 2022.	MTE4572 Polymer and composite processing and engineering See footnote 3	MTE4571 Materials engineering design and practice See footnote 3	
YEAR 5 Semester 2	MTE4526 Project 2 Replace with ENG4702 from 2022	MTE3545 Functional materials and devices Replace with MTE3202 from 2022.	MTE4573 Processing and engineering of metals and ceramics See footnote 3	Level 4 or 5 MTE-coded materials engineering core elective	

Note:
1. **MTE2101 and MTE3101 will be replacing MTE2541 and MTE3547** respectively. If you have completed MTE2541 prior to 2021, you must complete MTE3547 (last offering 2021). Otherwise, complete MTE2101 and MTE3101 combination.
2. **MTE2201 and MTE3203 will be replacing MTE2545 and MTE3546** respectively. If you have completed MTE2545 prior to 2021, you must complete MTE3546 (last offering 2021). Otherwise, complete MTE2201 and MTE3203 combination.
3. You must complete the **(MTE3543+MTE4571+MTE4572+MTE4573)** combination (last offerings 2022). Otherwise, complete **(MTE3201+MTE4101+MTE4102+MTE4201)** combination.
· The placement of units may be rearranged to support sequencing for double degree courses but care should be taken to ensure sequenced units are maintained in sequence.
· All Bachelor of Engineering (Honours) students are required to complete Continuous Professional Development (CPD) in order to graduate. For CPD advice, refer to the CPD webpage
· For enrolment advice, please refer to the Course Advisers webpage

While the information provided herein was correct at the time of viewing and/or printing, Monash University reserves the right to alter procedures, fees and regulations should the need arise. Students should carefully read all official correspondence, other sources of information for students and the official university noticeboards to be aware of changes to the information contained herein. The inclusion in a publication of details of a course in no way creates an obligation on the part of the university to teach it in any given year, or to teach it in the manner described. The university reserves the right to discontinue or vary courses at any time without notice. Students should always check with the relevant faculty officers when planning their courses. Some courses and units are described which may alter or may not be offered due to insufficient enrolments or changes to teaching personnel.

Course progression map for 2017 commencing students

This progression map provides advice on the suitable sequencing of units and guidance on how to plan unit enrolment for each semester of study. It should be used in conjunction with the requirements of the course as specified in the Handbook. The map is subject to updates. Update version: 18 October 2021

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	ENG1001 Engineering design: lighter, faster, stronger or ENG1002	ENG1003 Engineering mobile apps or ENG1005	Foundation unit or ENG1060 Computing for engineers	BMS1011 Biomedical chemistry	
YEAR 1 Semester 2	ENG1002 Engineering design: cleaner, safer, smarter orENG1001	ENG1005 Mathematics for engineering or ENG1003	Engineering elective or ENG1060 Computing for engineers (if not taken in Sem 1)	BMS1042 Public health and preventative medicine	
YEAR 2 Semester 1	MEC2403 Mechanics of materials	MEC2401 Dynamics 1	BMS1031 Medical Biophysics	BMS1021 Cells, tissues and organisms	If two foundation units are required then overload is required for PHS1080 Foundation physics *This unit is replaced by PHS1001 Foundation physics from 2018*
YEAR 2 Semester 2	MEC2404 Mechanics of fluids	ENG2005 Advanced engineering mathematics	BMS1052 Human neurobiology	BMS1062 Molecular biology	
YEAR 3 Semester 1	MEC2402 Engineering design 1 *Unit title change in 2021*	BMS2021 Human molecular biology	BMS2011 Structure of the human body	BMS2031 Body systems	
YEAR 3 Semester 2	MEC2405 Thermodynamics	BMS2042 Human genetics	BMS2052 Microbes in health and diseases	BMS2062 Introduction to bioinformatics	
YEAR 4 Semester 1	MEC3451 Fluid mechanics 2	MEC3456 Engineering computational analysis	BMS3031 Molecular mechanisms of disease		
YEAR 4 Semester 2	MEC3416 Engineering design 2 *Unit title change in 2021*	MEC3457 Systems and control	BMS3052 Biomedical basis and epidemiology of human disease		
YEAR 5 Semester 1	MEC4401 Final year project *Replace with ENG4701 from 2021/22*	MEC4408 Thermodynamics and heat transfer	MEC3455 Solid Mechanics	MEC4404 Professional practice	
YEAR 5 Semester 2	MEC4402 Final year project – Thesis *Replace with ENG4702 from 2022*	MEC4426 Computer-aided design	MEC3453 Dynamics 2	MEC4407 Engineering design 3 *Unit title change from 2021*	

All Bachelor of Engineering (Honours) students are required to complete Continuous Professional Development (CPD) in order to graduate. For CPD advice, refer to the CPD webpage