

Course progression map for 2021 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 does not substitute for the list of required units as described in the course 'Requirements' section of the [Handbook](#). Please note that the map is subject to updates. Update version: 11 December 2020

E3008 Bachelor of Engineering (Honours) and Bachelor of Pharmaceutical Science

Engineering specialisation – Chemical engineering

Pharmaceutical science specialisation - Formulation science

YEAR 1 Semester 1	BPS1011 Human physiology I: Cells to systems	BPS1021 Medical chemistry I: Structure	BPS1031 Physical chemistry I: Equilibria and change	BPS1041 Scientific inquiry	
YEAR 1 Semester 2	BPS1012 Human physiology I: Body systems	BPS1022 Medical chemistry II: Reactivity and biomolecules	BPS1032 Physical chemistry II: Solutions, surfaces and solids	BPS1042 Pharmaceutical science in context	
YEAR 2 Semester 1	ENG1001 Engineering Design: lighter, faster, stronger	ENG1002 Engineering design: cleaner, safer, smarter	Foundation unit or First Year engineering elective (<i>if no foundation units are required</i>)	CHE2164 Thermodynamics 1	If two foundation units are required then overload is required for ENG1090 or PHS1001 , whichever is not yet completed
YEAR 2 Semester 2	ENG1005 Mathematics for engineering	ENG1060 Computing for engineers	CHE2163 Heat and mass transfer	CHE2162 Material and energy balances	
YEAR 3 Semester 1	BPS2031 Analytical methods I: Principles and applications	BPS2041 Drug delivery and Pharmacokinetics	BPS3051 Pharmaceutical product development	BPS3061 Industrial formulation	
YEAR 3 Semester 2	BPS2022 Drug discovery and design OR BPS2032 Analytical Methods II	BPS2042 Drug development	BPS3032 Applied Pharmacokinetics dynamics and nanotechnology	BPS3062 Professional experience OR BPS3012 Applied pharmaceutical science: from concept to market	
YEAR 4 Semester 1	CHE3161 Chemistry and chemical thermodynamics	CHE3165 Separation processes	ENG1003 Engineering mobile applications	ENG2005 Advanced engineering mathematics	CHE3167 Transport phenomena and numerical methods (for students planning to enrol in CHE4164)
YEAR 4 Semester 2	CHE3166 Process design	CHE2161 Mechanics of fluids	CHE3162 Process control	CHE3164 Reaction engineering	
YEAR 5 Semester 1	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 three core units below [CHE4181 , CHE4182 and CHE4161]				ENG0001 Continuous Professional Development (0 credit points)
OR					
YEAR 5 Semester 1	CHE4181 Chemical engineering project A	CHE4162 Particle technology	CHE4161 Engineers in society	CHE3167 Transport phenomena and numerical methods	
YEAR 5 Semester 2	CHE4182 Chemical engineering project B	CHE4170 Design project		CHE4171 Biochemical engineering	

Chemical engineering	Formulation science
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Note:

- If you choose CHE4164 and depending on placement location, you may have to overload a semester or extend an additional semester in order to complete your course requirement.
- You should not overload in the semester of undertaking CHE4170.
- 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](#).

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