Course progression map for 2018 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: 19 May 2022

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

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 or ENG1002
ENG1005 Mathematics for engineering or ENG1003
Foundation unit or ENG1060 Computing for engineers
CHE2164 Thermodynamics 1
If two foundation units are required then overload is required for ENG1090 or PHS1001, whichever is not yet completed

Semester 2
ENG1002 Engineering design: cleaner, safer, smarter or ENG1001
ENG1003 Engineering mobile applications or ENG1005
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
BPS3311 Industrial formulation
BPS3331 Pharmaceutical product development and manufacture

Semester 2
BPS2022 Drug discovery and design
BPS2042 Drug development
BPS3322 Drug delivery nanotechnology
BPS3332 Applied pharmacokinetics and pharmacodynamics

YEAR 4
Semester 1
CHE3161 Chemistry and chemical thermodynamics
CHE3165 Separation processes
First Year engineering elective or ENG1060 Computing for engineers (if not completed)
ENG2005 Advanced engineering mathematics

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.
CHE4164 (18 cp) will be replaced by CHE4166 (6 cp) and CHE4165 (6 cp) from 2022. You must now also complete CHE4161. See footnote.

Semester 2
CHE4310 Chemical engineering project
Replace with ENG4701. See footnote

YEAR 5
Semester 1
CHE4180 Chemical engineering project
CHE4161 Engineers in society
CHE4162 Particle technology
CHE3167 Transport phenomena and numerical methods

Semester 2
ENG4702 Final year project B
See footnote
CHE4170 Design project
CHE4171 Biochemical engineering
From 2022, replace with one level 3, 4 or 5 chemical engineering unit from this list below.

Chemical engineering
Formulation science

6 CP CORE – LEVEL 3, 4 OR 5 CHEMICAL ENGINEERING UNIT
Due to overlapping contents with BPS1031/BPS1032, CHE2165 or CHE4170 was to be completed in place of CHE4170. See footnote.

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.
- CHE4164 and CHE4165 are integrated industrial project units for select students only. The units are undertaken in place of the final year project units ENG4701 and ENG4702. Depending on placement location, you may have to overload a semester or extend an additional semester in order to complete your course.
- You should not overload in the semester of undertaking CHE4170.
- All students 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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