

First year concurrent BE / BiomedE programs - 2006

Starting in session 1, 2006, students in most engineering programs will be able to take advantage of the flexible first year structure. The programs with and without the flexible first year are:

Programs with the flexible first year

3048	Chemical Eng / Biomedical Eng
3728	Computer Eng / Biomedical Eng
3727	Electrical Eng / Biomedical Eng
3683	Mechanical Eng / Biomedical Eng
3688	Mechatronic Eng / Biomedical Eng
3723	Telecommunications / Biomedical

Programs without a flexible first year

3757	Bioinformatics / Biomedical Eng
3749	Software Eng / Biomedical Eng
3138	Materials Eng / Biomedical Eng

The remainder of this document relates to the **flexible program only**. Students in a program without a flexible first year should go to the appropriate program (links to 3757, 3749, 3138). All students should also consult the online handbook (link)

Program Structure (flexible)

As outlined in the table, the first year comprises 5 required subjects and 3 electives.

Year 1

		uoc	hpw
MATH1131	Mathematics 1A or MATH1141 Higher Mathematics 1A	6	6
MATH1231	Mathematics 1B or MATH1241 Higher Mathematics 1B	6	6
PHYS1121	Physics 1A or PHYS1131 Higher Physics 1A	6	6
ENGG1811	Computing for Engineers or COMP1911 Computing 1	6	6
ENGG1000	Introduction to Engineering Design and Innovation	6	6
	Year 1 Electives*	18	

*These should be chosen from the Year 1 elective list. Students can use first year elective courses to satisfy core requirements for specific engineering programs, allowing them to have additional professional elective courses in subsequent years. Some elective courses assume that the student has taken the appropriate prerequisite course whereas some elective courses have exclusions, that is, other courses are excluded. Thus students should choose their electives appropriately to optimise their course options in subsequent years.

Year 1 Elective List

For each of the specialised programs, one of the Year 1 elective courses is nominated as a **Required Elective**, that is, it is a course that must be completed as part of the program, usually in Year 1 but in some cases may be delayed until Year 2.

Also, for each of the specialised programs, some Year 1 elective courses may be nominated as **Recommended Electives**, that is, they are suggested Year 1 elective courses but any other electives may be chosen in Year 1 without affecting progress in the program.

Code	Name	uoc	hpw	Sess	Required for these programs	Recommended for these programs
BIOM1010	Engineering in Medicine and Biology	6	4	2		All BE / BiomedE
BIOS1301	Ecology, Sustainability and Environmental Science	6	5			
BIOS1201	Molecules, Cells and Genes	6	5	1		
CEIC1000	Sustainable Product Engineering and Design	6	4	2		3048
CEIC1001	Engineering Chemistry	6	6	2		3048
CHEM1011	Fundamentals of Chemistry 1A or	6	6	1, 2		
CHEM1031	Higher Chemistry 1C		6	1		
CHEM1021	Fundamentals of Chemistry 1B or	6	6	2, s		
CHEM1041	Higher Chemistry 1D		6	2		

COMP1921	Data Structures and Algorithms	6	5.5	1, 2	3728	3727, 3723
CVEN1300 <i>or</i> MINE1300 <i>or</i> MMAN1300	Engineering Mechanics	6	5	2	3683, 3688	
	Engineering Mechanics		4	1, 2		
	Engineering Mechanics		5	1, 2		
CVEN1710	Environmental Principles and Systems	6	5	2		
ELEC1111	Electrical and Telecommunications Engineering	6	6	1, 2		3727, 3723, 3728
GEOS1111	Fundamentals of Geology	6	4	1		
GEOS3321	Fundamentals of Petroleum Geology		4	1		
GMAT1400	Land Studies	6	5	2		
GMAT1110	Surveying and GIS 1	6	5	1, 2		
MATH1081	Discrete Mathematics	6	6	1, 2		
MATS1101	Engineering Materials and Chemistry	6	5	1, 2	3048	3683, 3688
MINE1010	Mineral Resources Engineering	6	4	1		
MMAN1130	Design for Manufacture	6	7	1, 2		3683, 3688
PHYS1231	Higher Physics 1B	6	6	2, s	3727, 3723	3728
PSYC1001	Psychology 1A	6	6	1		
PTRL1010	Introduction to the Petroleum Industry	6	4	1		
SOLA1070	Sustainable Energy	6	3	1		

*Note that students in 3048 can also take CHEM1011/1021 or CHEM1031/1041 in place of the recommended combination of MATS1101/CEIC1001.

Year 1 plan

S1		uoc	hpw	S2		uoc	hpw
MATH11x1	(Higher) Mathematics 1A	6	6	MATH12x1	(Higher) Mathematics 1B	6	6
PHYS11x1/ Elective	(Higher) Physics 1A/ Elective*	6	6	PHYS11x1/ Elective	(Higher) Physics 1A/ Elective*	6	6
ENGG1811/ COMP1911/ Elective	Computing for Engineers/ Computing 1/ Elective*	6	6	ENGG1811/ COMP1911/ Elective	Computing for Engineers/ Computing 1/ Elective*	6	6
ENGG1000/ Elective	Design & Innovation/ Elective*	6	6	ENGG1000/ Elective	Design & Innovation/ Elective*	6	6

*A maximum of three electives may be selected in Year 1.

Years 2 to 5

For years 2 to 5, consult the full programs (links to 3048, 3723, 3727, 3727, 3683, 3688)