

DOUBLE PROGRAM

B.E.(Chemical)/BSc(Biotech.) Academic Plan 2008

Year 1 - 24 units

<i>Term</i>	<i>Subject Area</i>	<i>Catalogue Number</i>	<i>Course Description</i>	<i>Units</i>
Sem 1	CHEM	1100	Chemistry IA	3.0
Sem 1	BIOTECH	1000	Introduction to Biotechnology	3.0
Sem 1	MATHS	1011	Mathematics IA * <i>or</i>	
Sem 1	MATHS	1013	Mathematics IMA *	3.0
Sem 1	BIOLOGY	1101	Biology I: Molecules, Genes and Cells A	3.0
				12.0
Sem 2	CHEM	1200	Chemistry IB	3.0
Sem 2	MATHS	1012	Mathematics IB * <i>or</i>	
Sem 2	MATHS	1011	Mathematics IA *	3.0
Sem 2	BIOLOGY	1201	Biology I: Human Perspectives	3.0
Sem 2	CHEM ENG	1007	Process Engineering 1	3.0
				12.0

* Students who have undertaken SACE Stage 2 Specialist Maths will be required to enrol in Mathematics IA followed by Mathematics IB.

* Students who have not taken SACE Stage 2 Specialist Maths will be required to enrol in Mathematics IMA followed by Mathematics IA and MATHS 1012 Mathematics IB. It is strongly recommended that students should enrol in Mathematics IB in summer semester 2009 to complete the requirements at Level 1. The satisfactory completion of Mathematics IMA is in addition to the normal requirements of the B.E. Plan but a requirement for students who do not have SACE Stage 2 Specialist Maths. Enrolment in summer will enable students to complete the program in the minimum amount of time.

Year 2 - 27 units

<i>Term</i>	<i>Subject Area</i>	<i>Catalogue Number</i>	<i>Course Description</i>	<i>Units</i>
Sem 1	CHEM ENG	2001	Chemical Process Principles II	3.0
Sem 1	CHEM ENG	2003	Introductory Process Fluid Mechanics	3.0
Sem 1	MICRO	2002	Microbiology II (Biotech)	4.0
Sem 1	BIOCHEM	2100	Biochemistry IIA	4.0
				14.0
Sem 2	CHEM ENG	1009	Materials I	3.0
Sem 2	APP MTH	2004	Numerical Methods in Engineering (Chemical)	2.0
Sem 2	BIOTECH	2005	Principles of Biotechnology II	4.0
Sem 2	CHEM ENG	2002	Process Heat Transfer	2.0
Sem 2	CHEM ENG	2006	Plant and Process Engineering	2.0
				13.0

Year 3 - 24 units

<i>Term</i>	<i>Subject Area</i>	<i>Catalogue Number</i>	<i>Course Description</i>	<i>Units</i>
Sem 1	CHEM ENG	3003A	Chemical Engineering Projects III Part 1	2.0
Sem 1	CHEM ENG	3018	Fluid and Particle Mechanics	3.0
Sem 1	CHEM ENG	3010	Introduction to Biochemical Engineering	2.0
Sem 1	CHEM ENG	3017	Kinetics and Reactor Design	3.0
Sem 1	CHEM ENG	3001	Materials III (CH)	2.0
				12.0
Sem 2	CHEM ENG	3003B	Chemical Engineering Projects III Part 2	2.0
Sem 2	BIOCHEM	2200	Biochemistry IIB	4.0
Sem 2	CHEM ENG	3015	Process Control and Instrumentation	2.0
Sem 2	CHEM ENG	3014	Process Design and Plant Engineering	2.0
Sem 2	CHEM ENG	3005	Separation Processes	2.0
				12.0

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Year 4 - 24 units

<i>Term</i>	<i>Subject Area</i>	<i>Catalogue Number</i>	<i>Course Description</i>	<i>Units</i>
Sem 1	PHARM	3010	Pharmacology A III	6.0
Sem 1	BIOCHEM	3000	Molecular and Structural Biology III	6.0
				12.0
Sem 2	BIOTECH	3000	Biotechnology Practice III	6.0
Sem 2	BIOCHEM	3001	Cell and Development Biology III	6.0
				12.0

Year 5 - 24 units

<i>Term</i>	<i>Subject Area</i>	<i>Catalogue Number</i>	<i>Course Description</i>	<i>Units</i>
Sem 1	CHEM ENG	4010	Advanced Separation Techniques and Thermal Processes	2.0
Sem 1	CHEM ENG	4008	Biochemical Engineering	2.0
Sem 1	CHEM ENG	4025	Chemical Engineering Projects IV	2.0
Sem 1	CHEM ENG	4024	Environmental Engineering	2.0
Sem 1	CHEM ENG	4003	Process Dynamics and Control	2.0
				10.0
Sem 2	CHEM ENG	4027	Chemical Engineering Research Project (N)* or	
Sem 2	CHEM ENG	4026	Chemical Engineering Research Project (H)*	2.0
Sem 2	CHEM ENG	4018	Industrial Economics and Management	2.0
Sem 2	CHEM ENG	4014	Plant Design Project	6.0
				10.0
			Elective courses to the value of at least 4 units	4.0

* Students accepted into the Honours stream will take Chemical Engineering Research Project (H) and other students will take Chemical Engineering Research Project (N).

ELECTIVES

<i>Term</i>	<i>Subject Area</i>	<i>Catalogue Number</i>	<i>Course Description</i>	<i>Units</i>
Sem 1	CHEM ENG	4009	Advanced Chemical Engineering	2.0
Sem 1	CHEM ENG	4002A	Chemical Engineering Research Elective II Part 1 +	2.0
Sem 1	CHEM ENG	4021	Combustion Processes	2.0
Sem 1	GENETICS	2100	Genetics II: Foundation of Genetics *	4.0
Sem 1	CHEM ENG	4004	Minerals Processing	2.0
Sem 1	CHEM ENG	4020A	Chemical Engineering Research Elective Part 1	1.0
Sem 2	CHEM ENG	4002B	Chemical Engineering Research Elective II Part 2 +	2.0
Sem 2	CHEM ENG	4020B	Chemical Engineering Research Elective Part 2	1.0

* Can be any first semester Level II elective from the Bachelor of Sc.(Biotechnology) program to the value of 4 units with the approval of the Head of the School of Chemical Engineering.

+ Approval is needed from the Head of the School of Chemical Engineering to enrol in this course.

Either pre-requisites, co-requisites or restrictions may be placed on courses (refer to 2008 Calendar or 2008 On-line Course Planner)