

Concentration in Physics-Mathematics (105 credits)	Concentration in Physics-Mathematics (93 credits) Program abolished
Requirements 2003-2005	New course codes 2006
Compulsory first-year credits -33	Compulsory first-year credits 30
Suggested course stream for full-time students	Suggested course stream for full-time students
Fall:	Fall:
MAT1320 Calculus I 3	MAT1320 Calculus I 3
PHY1101 Fundamentals of Physics I 3	PHY1121 Fundamentals of Physics I 3
PHY1201 Physics Laboratory 3	
Four credits from:	Three credits from:
ITH1220 Introduction to Computer Science I -4	ITI1120 Introduction to Computer Science I 3
CSI1303 Introduction to Computing Concepts -4	CSI1308 Introduction to Computing Concepts 3
GNG1101 Fundamentals of Engineering Computation -4	GNG1106 Fundamentals of Engineering Computation 3
Winter:	Winter:
MAT1322 Calculus II 3	MAT1322 Calculus II 3
PHY1102 Fundamentals of Physics II 3	PHY1122 Fundamentals of Physics II 3
Fall or Winter:	Fall or Winter:
MAT1341 Introduction to Linear Algebra 3	MAT1341 Introduction to Linear Algebra 3
Eleven credits (minimum) from the following list or from other courses approved by the Department: 11	Twelve credits (minimum) from the following list or from other courses approved by the Department: 12
Fall:	Fall:
BIO1109 Principles of Biology 3	BIO1109 Principles of Biology 3
BIO1120 Introduction to Organismal Biology 4	BIO1130 Introduction to Organismal Biology 3
CHM1310 Principles of Chemistry 4	CHM1311 Principles of Chemistry 3
CHM2116 Laboratory of Environmental Chemistry 2	
CHM2352 Descriptive Inorganic Chemistry 3	CHM2353 Descriptive Inorganic Chemistry 3
GEO1115 Introduction to Earth Materials 3	GEO1115 Introduction to Earth Materials 3
GNG1100 Engineering Mechanics -4	GNG1105 Engineering Mechanics 3
GNG1102 Fundamentals of Computer Hardware -2	
Winter:	Winter:
BIO1110 Introduction to Cell Biology -4	BIO1140 Introduction to Cell Biology 3
CHG1120 Chemical Engineering Fundamentals -4	CHG1125 Chemical Engineering Fundamentals 3
CHM1320 Organic Chemistry I -4	CHM1321 Organic Chemistry I 3
CHM2311 Introduction to Structure and Bonding 3	CHM2311 Introduction to Structure and Bonding 3
ITH1221 Introduction to Computer Science II -4	ITI1121 Introduction to Computer Science II 3
GEO1111 Introduction to Earth Systems 3	GEO1111 Introduction to Earth Systems 3
Compulsory second-year credits 36	Compulsory second-year credits 27
Fall:	Fall:
MAT2122 Calculus III 3	
MAT2141 Honours Linear Algebra I 3	MAT2141 Linear Algebra I 3
or	
MAT2341 Linear Algebra 3	

MAT2371 Introduction to probability	3	MAT2371 Introduction to probability	3
or		or	
MAT2377 Probability and Statistics for Engineers (winter)	3	MAT2377 Probability and Statistics for Engineers (winter)	3
MAT2324 Ordinary Differential Equations and Laplace Transformation	3	MAT2324 Ordinary Differential Equations and Laplace Transformation	3
or		or	
MAT2334 Ordinary Differential Equations and Numerical Methods	4	MAT2384 Ordinary Differential Equations and Numerical Methods	3
PHY2004 Practical Physics	6	PHY2904 Practical Physics	3
PHY2310 Applied Optics	3	PHY2311 Waves and Optics	3
PHY2330 Mechanics	3	PHY2333 Mechanics	3
Winter :		Winter :	
MAT2125 Mathematical analysis I	3		
or			
MAT2143 Group Theory and Applications	3	MAT2143 Algebraic Structures	3
or			
MAT2343 Elements of Discrete Mathematics	3		
PHY2323 Electricity and Magnetism	3	PHY2323 Electricity and Magnetism	3
PHY2337 Mechanics II	3		
PHY2361 Modern Physics	3	PHY2361 Modern Physics	3
3 credits outside the Faculties of Science or Engineering	3	3 credits outside the Faculties of Science or Engineering	3
Eighteen credits (minimum) in physics and mathematics electives at the 3000 or 4000-level with no less than nine credits in each subject, including at least one lecture course in physics.	18	Eighteen credits (minimum) in physics and mathematics electives at the 3000 or 4000-level with no less than nine credits in each subject, including at least one lecture course in physics.	18
Six credits (minimum) in science or engineering at the 3000 or 4000-level	6	Six credits (minimum) in science or engineering at the 3000 or 4000-level	6
9 credits outside the Faculties of Science or Engineering	9	9 credits outside the Faculties of Science or Engineering	9