

Honours in Biopharmaceutical Sciences (132 credits)	Honours in Biopharmaceutical Sciences (123 credits) Program abolished
Requirements 2003-2005	New course codes 2006
Compulsory first-year credits: 34 Suggested course stream for full-time students	Compulsory first-year credits: 30 Suggested course stream for full-time students
Fall:	Fall:
BIO1120 Introduction to Organismal Biology -4	BIO1130 Introduction to Organismal Biology 3
CHM1310 Principles of Chemistry -4	CHM1311 Principles of Chemistry 3
ENG1**** 1000 or 2000 level 3	ENG1**** 1000 or 2000 level 3
MAT1320 Calculus I 3	MAT1330 Calculus for the Life Sciences I 3
PHY1301 Principles of Physics I 3	PHY1321 Principles of Physics I 3
Winter:	Winter:
BIO1110 Introduction to Cell Biology -4	BIO1140 Introduction to Cell Biology 3
CHM1320 Organic Chemistry I -4	CHM1321 Organic Chemistry I 3
MAT1323 Calculus and Matrix Algebra 3	MAT1332 Calculus for the Life Sciences II 3
PHY1302 Principles of Physics II 3	PHY1322 Principles of Physics II 3
Three credits non-science electives 3	Three credits non-science electives 3
Compulsory second-year credits: 34	Compulsory second-year credits: 27
Fall:	Fall:
BIO2127 Introduction to Plant Science: Biodiversity to Biotechnology 5	BIO2137 Introduction to Plant Science: Biodiversity to Biotechnology 3
CHM2120 Organic Chemistry II 3	CHM2120 Organic Chemistry II 3
CHM2126 Laboratory of Organic Chemistry II -2	CHM2123 Laboratory of Organic Chemistry II 3
CHM2132 Physical Chemistry for the Life Sciences 3	CHM2132 Physical Chemistry for the Life Sciences 3
MAT2378 Probability and Statistics for the Natural Sciences 3	MAT2378 Probability and Statistics for the Natural Sciences 3
Winter:	Winter:
BCH2140 Introduction to Biochemistry 3	BCH2333 Introduction to Biochemistry 3
BCH2336 Biochemistry Laboratory I -2	
BIO2123 Genetics -4	BIO2133 Genetics 3
PHI2396 Bioethics 3	PHI2396 Bioethics 3
Three credits non-science electives 3	Three credits non-science electives 3
Option: Genomics	Option: Genomics
Compulsory credits: 34	Compulsory credits: 30
Fall:	Fall:
BCH3170 Molecular Biology 3	BCH3170 Molecular Biology 3
or	or
BIO3170 Molecular Biology 3	BIO3170 Molecular Biology 3
BCH3356 Molecular Biology Laboratory 3	BCH3356 Molecular Biology Laboratory 3
or	or
BIO3151 Molecular Biology Laboratory 3	BIO3151 Molecular Biology Laboratory 3
BPS3101 Genomics 3	BPS3101 Genomics 3
BPS4000 Séminaire/Seminar 2	BPS4900 Séminaire/Seminar 3
Winter:	Winter:

BCH3120 General Intermediary Metabolism	3	BCH3120 General Intermediary Metabolism	3
BIO2125 Animal Form and Function	5	BIO2135 Animal Form and Function	3
BIO3102 Molecular Evolution	3	BIO3102 Molecular Evolution	3
BPS4101 Human Genome Structure and Function	3	BPS4101 Human Genome Structure and Function	3
BPS4104 Bioinformatics Laboratory	3	BPS4104 Bioinformatics Laboratory	3
PHA4107 Introductory Pharmacology – Drugs and Living System	3	PHA4107 Introductory Pharmacology – Drugs and Living System	3
Electives: Genomics Option	27	Electives: Genomics Option	27
Fall:		Fall:	
BCH4122 Macromolecules	3	BCH4122 Macromolecules	3
BIO3124 General Microbiology	3	BIO3124 General Microbiology	3
BIO3126 General Microbiology Laboratory	3	BIO3126 General Microbiology Laboratory	3
BIO3140 Plant Physiology and Biochemistry	3	BIO3140 Plant Physiology and Biochemistry	3
BIO3147 Developmental Biology	3	BIO3147 Developmental Biology	3
BIO3153 Cell Biology	3	BIO3153 Cell Biology	3
BIO3301 Animal Physiology I	3	BIO3301 Animal Physiology I	3
BIO4174 Biotechnology	3	BIO4174 Biotechnology	3
CHM3120 Intermediate Organic Chemistry	3	CHM3120 Intermediate Organic Chemistry	3
CHM4139 Enzyme and Bio-organic Chemistry	3	CHM4139 Enzyme and Bio-organic Chemistry	3
CS11303 Introduction to Computing Concepts	4	CS11308 Introduction to Computing Concepts	3
MIC5124 Immunology	3	MIC5124 Immunology	3
MIC5326 Virology	3	MIC5326 Virology	3
MIC5500 Pathogens and the Environment	3	MIC5500 Pathogens and the Environment	3
PHS3240 Mammalian Physiology	3	PHS3240 Mammalian Physiology	3
Winter:		Winter:	
BCH3125 Protein Structure and Function	3	BCH3125 Protein Structure and Function	3
BCH4125 Cellular Regulation and Control	3	BCH4125 Cellular Regulation and Control	3
BIO3152 Cell Biology Laboratory	3	BIO3152 Cell Biology Laboratory	3
BIO3302 Animal Physiology II	3	BIO3302 Animal Physiology II	3
BIO4109 Advanced Topics in Animal Development	3	BIO4109 Advanced Topics in Animal Development	3
BIO4115 Molecular Genetics	3	BIO4115 Molecular Genetics	3
BIO4129 The Bacterial Cell	3	BIO4129 The Bacterial Cell	3
BIO4144 Plant Biochemistry and Molecular Biology	3	BIO4144 Plant Biochemistry and Molecular Biology	3
BPS4102 Pharmaceuticals: Federal and International Regulations	3	BPS4102 Pharmaceuticals: Federal and International Regulations	3
BPS4123 Phytochemicals and Natural Product Drugs	3	BPS4123 Phytochemicals and Natural Product Drugs	3
BPS4125 Medicinal Chemistry	3	BPS4125 Medicinal Chemistry	3
MIC5224 Pathogenic Bacteriology	3	MIC5224 Pathogenic Bacteriology	3
Option: Medicinal Chemistry		Option: Medicinal Chemistry	
Compulsory credits:	37	Compulsory credits:	36
Fall:		Fall:	
BCH3170 Molecular Biology	3	BCH3170 Molecular Biology	3
or		or	
BIO3170 Molecular Biology	3	BIO3170 Molecular Biology	3
BCH3356 Molecular Biology Laboratory	3	BCH3356 Molecular Biology Laboratory	3
or		or	
BIO3151 Molecular Biology Laboratory	3	BIO3151 Molecular Biology Laboratory	3
BPS4000 Séminaire/Seminar	2	BPS4900 Séminaire/Seminar	3
CHM2154 Analytical Chemistry	3	CHM2354 Analytical Chemistry	3
CHM3120 Intermediate Organic Chemistry	3	CHM3120 Intermediate Organic Chemistry	3
CHM3122 Applications of Spectroscopy in Chemistry	3	CHM3122 Applications of Spectroscopy in Chemistry	3
CHM3126 Laboratory of Organic Chemistry	3	CHM3126 Laboratory of Organic Chemistry	3
CHM4116 Advanced Instrumental Analysis Laboratory	3	CHM4116 Advanced Instrumental Analysis Laboratory	3

Winter:		Winter:	
BCH3120 General Intermediary Metabolism	3	BCH3120 General Intermediary Metabolism	3
BPS4125 Medicinal Chemistry	3	BPS4125 Medicinal Chemistry	3
CHM2118 Laboratory of Analytical Chemistry	2	CHM2118 Laboratory of Analytical Chemistry	2
CHM2311 Introduction to Structure and Bonding	3	CHM2311 Introduction to Structure and Bonding	3
PHA4107 Introductory Pharmacology – Drugs and Living System	3	PHA4107 Introductory Pharmacology – Drugs and Living System	3
Electives: Medicinal Chemistry Group A	21 9	Electives: Medicinal Chemistry Group A	21 9
CHM4139 Enzyme and Bio-organic Chemistry	3	CHM4139 Enzyme and Bio-organic Chemistry	3
CHM4141 Computational Chemistry I	3	CHM4141 Computational Chemistry I	3
CHM4325 Advanced Organic Synthesis and Reaction Mechanisms.	3	CHM4325 Advanced Organic Synthesis and Reaction Mechanisms.	3
CHM4328 Special Topics in Organic Chemistry	3	CHM4328 Special Topics in Organic Chemistry	3
Group B	12	Group B	12
BCH3125 Protein Structure and Function	3	BCH3125 Protein Structure and Function	3
BCH4122 Macromolecules	3	BCH4122 Macromolecules	3
BCH4125 Cellular Regulation and Control	3	BCH4125 Cellular Regulation and Control	3
BIO4115 Molecular Genetics	3	BIO4115 Molecular Genetics	3
BIO4174 Biotechnology	3	BIO4174 Biotechnology	3
BPS4129 Chemical Biology	3	BPS4129 Chemical Biology	3
BPS3101 Genomics	3	BPS3101 Genomics	3
BPS4123 Phytomedicines and Natural Product Drugs	3	BPS4123 Phytomedicines and Natural Product Drugs	3
BPS4126 Synthetic and Medicinal Chemistry Laboratory	3	BPS4126 Synthetic and Medicinal Chemistry Laboratory	3
CHM2130 Physical Chemistry: Introduction to the molecular properties of matter	3	CHM2330 Physical Chemistry: Introduction to the molecular properties of matter	3
CHM3125 Polymer and applied Chemistry	3	CHM4155 Polymer and applied Chemistry	3
CHM3150 Transition Metal Chemistry	3	CHM3350 Transition Metal Chemistry	3
CHM4315 Advanced Analytical Chemistry	3	CHM4315 Advanced Analytical Chemistry	3
CHM4317 Organometallic Chemistry	3	CHM4317 Organometallic Chemistry	3
CHM4319 Bio-Inorganic Chemistry	3	CHM4319 Bio-Inorganic Chemistry	3
CHM**** Three credits from group A	3	CHM**** Three credits from group A	3
CSII303 Introduction to Computing Concepts	4	CSII303 Introduction to Computing Concepts	3(4)
Student intending to pursue graduate studies in a chemistry Department are strongly encouraged to choose CHM2130 As an option from group B.		Student intending to pursue graduate studies in a chemistry Department are strongly encouraged to choose CHM2330 As an option from group B.	
Honours Research Project		Honours Research Project	
Genomics: One of the following two options for the Honours Research Project.		Genomics: One of the following two options for the Honours Research Project.	
BPS4006 Projet de recherche / Honours Project	9	BPS4006 Projet de recherche / Honours Project	9
or		or	
BPS4127 Advanced Techniques in Biosciences	3	BPS4127 Advanced Techniques in Biosciences	3
or		or	
Additional six credits at the 3000 and/or 4000-level from the list of science electives.	6	Additional six credits at the 3000 and/or 4000-level from the list of science electives.	6
Medicinal Chemistry: One of the following two options for the honours research project.		Medicinal Chemistry: One of the following two options for the honours research project	
BPS4005 Projet de recherche / Honours Project	9	BPS4006 Projet de recherche / Honours Project	9
BPS4903 Séminaire / Seminar	1		
or		or	

BPS4126 Synthetic and Medicinal Chemistry Laboratory and Six additional credits from group A and B	3 6	BPS4126 Synthetic and Medicinal Chemistry Laboratory and Six additional credits from group A and B	3 6
Cooperative Program :		Cooperative Program :	
BPS4917 Projet de recherche/ Honours Project	5	BPS4019 Projet de recherche / Honours Project	6
BPS4903 Séminaire/Seminar	4	plus	
Plus six crédits additionnels des groupes A et B	3	Plus six crédits additionnels des groupes A et B	3