



Bachelor of Science: Biology
Program Requirements (120 credits)

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Christian Studies	9 credits
	REL 105 Introduction to the Bible REL 161 The Christian Faith 3 credits in Christian Studies (REL) at the senior level
English	3 credits
	EN 115 Introduction to Literature and Language
History or Philosophy	3 credits
	<i>One of the following:</i> HI 141 World History to 1500 HI 142 World History since 1500 PH 125 Introduction to Philosophy
Social Science	6 credits
	<i>Two of the following:</i> PS 121 Introduction to Psychology SO 121 Principles of Sociology 3 credits of Psychology, Sociology or Behavioural Science
Biology Requirements	15 credits
	BIO 131 Introduction to the Cellular Basis of Life BIO 133 Introduction to Plant and Organismal Biology BIO 211 Principles of Genetics BIO 213 Introduction to Ecology BIO 231 Cellular and Molecular Biology
Biochemistry	3 credits
	BCH 241 Biochemistry of Life Processes or BCH 297 Introduction to Biochemistry
Chemistry	9 credits
	CHE 101 General Chemistry I CHE 103 General Chemistry II CHE 251 Organic Chemistry I
Math/Statistics	6 credits
	BIO 310 Quantitative Methods for Biology <i>One of the following:</i> MA 111 Linear Algebra MA 149 Introductory Calculus or MA 151 Calculus I MA 153 Calculus II
Physics/Geography/Geology/Computer Science/Astronomy/Biomechanics	9 credits
	PHY 111 Mechanics <i>Two of the following:</i> CS 100 Introduction to Computers CS 115 Introduction to Computer Programming GEO 109 Introduction to Geology GEOG 120 Physical Geography KIN 385 Biomechanics PHY 123 Introductory Electromagnetism and Thermal Physics SC 120 Introduction to Astronomy
Electives	<i>To meet senior level requirements in the program, you are advised to make sure you take enough senior electives so that you have 72 senior credits total in your program. (We recommend 21 senior elective credits.)</i>
Arts Electives	3 credits (non-Science)
Open Electives	24 credits

BACHELOR OF SCIENCE STREAMS

30 credits from one of the following streams

<p>Cellular and Molecular Biology</p> <p>BIO 241 General Microbiology BIO 329 Molecular Genetics BIO 345 Research Methods CHE 253 Organic Chemistry II <i>One of the following:</i> BCH 397 Advanced Biochemistry BCH 367 Laboratory Techniques in Biochemistry and Molecular Biology BCH 357 Chemical Pharmacology CHE 335 Introduction to Nanoscience and Technology <i>Three of the following:</i> BIO 320 Bioethics BIO 327 Medical Genetics BIO 425 Reading Course in Epidemiology BIO 445 Immunology BIO 455 Clinical Molecular Oncology BIO 493 Independent Research in Biology BIO 495/BIO 497 Independent Research Study in Biology (Cell-based) KIN 255 Growth and Development PS 441 Clinical Pharmacology ZOO 261 Human Physiology I ZOO 263 Human Physiology II 6 senior level Science credits from BCH, BIO, KIN*, MED, ZOO *Note: Not all KIN courses can be used as Science credits; check the course descriptions.</p>	<p>Health Sciences</p> <p>BIO 345 Research Methods in Biology ZOO 261 Human Physiology I ZOO 263 Human Physiology II ZOO 265 Human Anatomy <i>Three of the following:</i> BIO 241 General Microbiology BIO 269 Nutrition BIO 320 Bioethics BIO 327 Medical Genetics BIO 445 Immunology BIO 495/BIO 497 Independent Research in Biology (Health-based) KIN 255 Growth and Development KIN 323 Integrative Physiology KIN 367 Exercise Physiology MED 231 Medical Terminology MED 275 Health and Wellness MED 469 Topics in Health and Medicine ZOO 323 Integrative Physiology ZOO 361 Pathophysiology 9 senior level Science credits from BCH, BIO, KIN*, MED, ZOO *Note: Not all KIN courses can be used as Science credits; check the course descriptions.</p>
<p>Ecology</p> <p>BIO 345 Research Methods BIO 351 Conservation Biology <i>Two of the following:</i> BIO 301 Principles of Evolutionary Biology ECOL 317 Aquatic Communities and Ecosystems ECOL 319 Terrestrial Ecosystems ECOL 335 Introduction Environmental Science ECOL 337 Current Topics in Ecology ECOL 383 Animal Behaviour <i>Three of the following:</i> BIO 241 General Microbiology BIO 339 Biotechnology BIO 389 Field Course in Conservation Biology BIO 495/BIO 497 – Independent Research (Ecology-based) BOT 203 The Biology of Plants ECOL 317 Aquatic Communities and Ecosystems ECOL 319 Terrestrial Communities and Ecosystems ECOL 335 Introduction to Environmental Science ECOL 337 Current Topics in Ecology ECOL 383 Animal Behaviour ZOO 275 Invertebrate Zoology ZOO 277 Biology of Vertebrates Ecology-based travel study trip 9 senior level Science credits in BCH, BIO, BOT, ECOL, ZOO</p>	<p>Kinesiology</p> <p>KIN 201 Introduction to Kinesiology ZOO 261 Human Physiology I ZOO 263 Human Physiology II ZOO 265 Human Anatomy <i>Three of the following:</i> BIO 269 Nutrition KIN 323 Integrative Physiology KIN 334/PS 334 Sports Psychology KIN 367 Exercise Physiology KIN 385 Biomechanics HI 365 Sports and Society MED 231 Medical Terminology MED 275 Health & Wellness ZOO 323 Integrative Physiology ZOO 361 Pathophysiology 9 senior level credits in BCH, BIO, BOT, MED, ZOO</p>
<p>General Biology</p> <p>30 senior level Science credits in BCH, BIO, BOT, ECOL, *KIN, MED, ZOO <i>These courses may include:</i> BIO 241 General Microbiology BIO 327 Medical Genetics BIO 351 Conservation Biology BOT 203 The Biology of Plants KIN 201 Introduction to Kinesiology KIN 385 Biomechanics ZOO 261 Human Physiology I ZOO 263 Human Physiology II ZOO 277 Biology of Vertebrates ZOO 379 Introduction to Marine Biology *Note: Not all KIN courses can be used as Science credits; check the course descriptions.</p>	

General Requirements for Completion and Graduation:

- Completion of Core Requirements
- Completion of a total of 120 credits (as outlined above)
- A minimum of 72 credits must be taken at the 200 level or higher
- A Cumulative Grade Point Average (CGPA) of at least 2.0, with a CGPA of at least 2.0 in science discipline courses combined (i.e., BIO, BOT, BCH, ZOO, ECOL, MED, KIN 201, 255, 335, 323, 367, 385; no other KIN and not SC, PHY, MA, CHE)

Please Note: This Program Requirement information is subject to change without notice.