

# B.A. IN BIOLOGY

Code	Title	Credits
<b>Major in Biology (B.A.)</b>		
BIO 124 & BIO 124D	Integrative Biology: Genes, Cells, Change and Integrative Biology: Genes, Cells, Change Lab	4
BIO 128 & BIO 128D	Integrative Biology: Metabolism, Energy, Biodiversity and Integrative Biology: Metabolism, Energy, Biodiversity Lab	4
BIO 218	Biology in a Changing World	3
BIO 399	Introduction to Research	2
BIO 495	Biology Seminar	2
BIO 499	Symposium	0
Choose an applied experience:		2-4
BIO 481	Internship in Biology	
BIO 496 & BIO 497	Biology Research and Advanced Biology Research	
<b>Choose one course from each of the following three areas, at least one of which must be a designated research course</b>		
<b>Environmental area courses:</b>		<b>4-5</b>
BIO 316 & BIO 317	Wildlife Ecology and Wildlife Ecology Lab	
BIO 318KZ & BIO 496	Ecology in the Tropics: Natural History and Future Prospects and Biology Research <sup>6,7</sup>	
BIO 328 & BIO 329	Invertebrate Biology and Invertebrate Biology Lab	
BIO 330 & BIO 331	Ecology and Ecology Lab <sup>1</sup>	
BIO 342 & BIO 343	Aquatic Biology and Aquatic Biology Lab	
BIO 346 & BIO 347	Animal Behavior and Animal Behavior Lab	
BIO 372 & BIO 373	Plant Taxonomy and Ecology and Plant Taxonomy and Ecology Lab	
BIO 380 & BIO 383	Environmental Plant Biology and Environmental Plant Biology Lab <sup>1</sup>	
Courses from Au Sable Institute of Environmental Studies		
<b>Organismic area courses:</b>		<b>4</b>
BIO 214 & BIO 215	Human Anatomy and Human Anatomy Lab	
BIO 216 & BIO 217	Human Physiology and Human Physiology Lab <sup>3</sup>	
BIO 238 & BIO 239	Human Anatomy and Physiology and Human Anatomy and Physiology Lab	
BIO 326 & BIO 327	Vertebrate Histology and Vertebrate Histology Lab	
BIO 338 & BIO 339	Endocrinology and Endocrinology Lab	

## B.A. in Biology 2

BIO 358 & BIO 359	Neurobiology and Neurobiology Lab	
BIO 368 & BIO 369	Structure and Development of Vertebrates and Structure and Development of Vertebrates Lab	
BIO 376 & BIO 377	Animal Physiology and Animal Physiology Lab	
<b>Cell and molecular area courses:</b>		<b>4</b>
BIO 234 & BIO 235	Microbiology and Microbiology Lab	
BIO 332 & BIO 333	Genetics and Genetics Lab	
BIO 354 & BIO 355	Cell Biology and Cell Biology Lab <sup>1, 8</sup>	
BIO 362 & BIO 363	Developmental Biology and Developmental Biology Lab <sup>1</sup>	
BIO 384 & BIO 387	Immunology and Immunology Lab <sup>1</sup>	
BIO 396 & BIO 397	Molecular Biology and Molecular Biology Lab <sup>1, 4</sup>	
CHE 304 & CHE 397	Essentials of Biochemistry and Biochemistry II Lab <sup>4, 5</sup>	
CHE 388 & CHE 389	Biochemistry I and Biochemistry I Lab <sup>2</sup>	
Electives from 200 level or above biology courses		16
Two chemistry courses, excluding CHE 200		8
<b>Code</b>	<b>Title</b>	<b>Credits</b>
Major		53-56
General Education *		44-52
Electives		17-22
<b>Total Credits</b>		<b>122</b>

<sup>1</sup> This is a designated research course.

<sup>2</sup> CHE 226/CHE 227 is a prerequisite for this course.

<sup>3</sup> BIO 214/BIO 215 is a prerequisite for this course.

<sup>4</sup> CHE 224/CHE 225 is a prerequisite for this course.

<sup>5</sup> Students requiring CHE 397 for their degree will require an override to take this course concurrently with CHE 304.

<sup>6</sup> When taken with BIO 318KZ, BIO 496 does not count toward the research option in the applied experience.

<sup>7</sup> GES 104 is a prerequisite for BIO 318KZ.

<sup>8</sup> BIO 332/BIO 333 or CHE 224/CHE 225 or PSY 101 and NSC 130/NSC 130D is a prerequisite for this course.

\* Courses whose number is followed by a letter fulfill a General Education requirement. Students may not declare a B.A. in Biology and a B.S. in Biology. Students may not declare a B.A. in Biology and a Minor in Biology.