

# Biology

Bachelor of Science

The Biology program provides students with a comprehensive understanding of living things with examination of plants, animals and microbes on a microscopic and macroscopic level. Students receive hands-on training using sampling and identification techniques in the lab and in the field.

## Career Options:

- Medical, Dentistry or Veterinary Careers (with graduate training)
- Public Health Careers
- Academic Research in University Settings
- Research and Product Development in Medical Supply and Pharmaceutical Industries

## Major Requirements:

Life Science w/Lab  
Methods in Biology  
Cell Biology  
Evolution  
Genetics  
Ecology  
Ecological Methods  
Senior Seminar 4  
General Chemistry I w/Lab  
General Chemistry II w/Lab  
Organic Chemistry I w/Lab  
Organic Chemistry II w/Lab  
or Biochemistry w/Lab  
Physics I w/Lab

Elementary Statistics  
College Algebra and Trigonometry or Calculus  
At least one course from each of the following categories (two must include Lab):

1. *Animal Form & Function*: Developmental Biology, Developmental Biology Lab, Physiological Ecology, Pathophysiology, Histology
2. *Animal Diversity*: Animal Behavior, Invertebrate Zoology, Vertebrate Zoology
3. *Taxonomic Diversity*: Biology of Plants, Microbiology, Molecular Evolution/Biotechnology

*Recommended: General Physics II w/Lab*

## Minor Requirements:

Life Science w/Lab  
Methods in Biology  
Cell Biology  
Evolution

A minimum of one course from two of the following four tiers including one course with a laboratory:

1. *Animal Form & Function*: Developmental Biology, Developmental Biology Lab, Physiological Ecology, Pathophysiology, Histology
2. *Animal Diversity*: Animal Behavior, Invertebrate Zoology, Vertebrate Zoology
3. *Taxonomic Diversity*: Biology of Plants, Microbiology, Molecular Evolution/Biotechnology
4. *Biology Core*: Genetics, Ecology, Ecological Methods

## Department Contact:

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## General Education Requirements

<b>I. Interdisciplinary Requirements</b>	<b>Credits</b>	<b>IV. Humanities Courses</b>	<b>Credits</b>
Ethics	3	Religion	3
International Studies	3	English Composition	6
<hr/>		Literature	3
Total Hours	6	Art, Music or Entertainment/Theatre	3
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<b>II. Science Courses</b>	<b>Credits</b>	Total Hours	15
Mathematics	3	<b>TOTAL GENERAL EDUCATION HOURS</b>	<b>41</b>
Biology, including lab	4		
Physics, Earth Science or Chemistry, incl. lab	4		
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Total Hours	11		
		Unless otherwise specified, transferred credits may be used to fulfill the general requirements at the Registrar's discretion.	
<b>III. Social Science Courses</b>	<b>Credits</b>		
History, Political Science	3		
Communication, Economics, Geography or Criminal Justice	3		
Psychology or Sociology	3		
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Total Hours	9		

## Major Requirements

	<b>Credits</b>		<b>Credits</b>
BIO 101 Life Science	3	MAT 113 College Algebra	3
BIO 102 Life Science Lab	1	or MAT 115 Trigonometry	3
BIO 123 Methods in Biology	2	or MAT 121 Calculus I	3
BIO 200 Cell Biology	3	MAT 213 Elementary Statistics	3
BIO 222 Evolution	3	PHY 211 General Physics I	3
BIO 303 Genetics	4	PHY 212 General Physics I Lab	1
BIO 401 Ecology	3		
BIO 402 Ecological Methods	2	At least one course including the laboratory from each of the following three categories:	
BIO 499 Senior Seminar	3	1. <i>Animal Form &amp; Function:</i>	
CHM 111 General Chemistry I	3	BIO 308 Developmental Biology	3
CHM 112 General Chemistry I Lab	1	BIO 406 Pathophysiology	3
CHM 121 General Chemistry II	3	BIO 408 Histology	3
CHM 122 General Chemistry II Lab	1	or BIO 404 Physiological Ecology	3
CHM 301 Organic Chemistry I	3	2. <i>Animal Diversity:</i>	
CHM 302 Organic Chemistry I Lab	1	BIO 300 Animal Behavior	3
CHM 311 Organic Chemistry II	3	BIO 311 Invertebrate Zoology	3
or CHM 321 Biochemistry	3	BIO 314 Vertebrate Zoology	3
CHM 312 Organic Chemistry II Lab	1	3. <i>Taxonomic Diversity:</i>	
or CHM 322 Biochemistry Lab	2	BIO 304 Biology of Plants	3
		BIO 316 Microbiology	3
		or BIO 407 Molecular Evolution/ Biotechnology	4

A customized plan will be developed for each student.

### General Graduation Guidelines:

Total of 120 semester hours, 39 of which must be numbered 300 or 400.

(Other programs may require coursework beyond 120 semester hours.)

At least 9 semester hours of courses designated as writing intensive.

A declared major.

A cumulative GPA average of C (2.00) and at least a C average in the graduation major.