

BACHELOR OF SCIENCE in BIOLOGY

Revised 10/21 ARH

Concepts in Biology 1 (BIOL 114) and *Concepts in Biology 2* (BIOL 115) should be taken during the freshman year; *Microbiology* (BIOL 242) and *Cell Biology* (BIOL 271) should be taken during the sophomore year. In addition to the specified courses listed on this page, the student selects 12 credit hours of approved elective courses in biology.

Chemistry and mathematics courses should be scheduled as early as possible in the program of study. *Applied Statistics for the Behavioral Sciences* (PSYCH 160) may be substituted for *Introduction to Statistics* (MATH 141) provided that a foundational math course is taken in the first year.

<p>Biology Core Requirements (27 cr hrs)</p> <p>BIOL 114 Concepts in Biology 1 4 BIOL 115 Concepts in Biology 2 4 BIOL 242 Microbiology 4 BIOL 271 Cell Biology 4 BIOL 332 Genetics 3 *BIOL 351 Ecology 4</p> <p>*Fall only course</p>	<p>Chemistry Requirement (16/20 cr hrs)</p> <p>CHEM 115 Chem for the Sciences 1 4 CHEM 116 Chem for the Sciences 2 4 CHEM 230 Fund of Org Chem 4 OR CHEM 231 Organic Chemistry 1* AND 4 CHEM 232 Organic Chemistry 2* 4</p> <p>CHEM 341 Biochemistry 1 4</p> <p>*Chem 231 and Chem 232 are recommended for students intending to go to graduate or professional school.</p>
<p>Physiology Requirement (Select BIOL 479 AND one lecture course from among BIOL 472, 474, 477, 478, and 480)</p> <p>BIOL 479 Integrated Physiology Lab 1 with one of the following: BIOL 472 Animal Cell Physiology 3 BIOL 474 Human Physiology 3 BIOL 477 Plant Physiology 3 BIOL 478 Microbial Physiology 3 BIOL 480 Comparative Animal Physiol 3</p>	<p>Physics Requirement (8 cr hrs; select one pair)</p> <p>PHYS 201 Introductory Physics 1 4 PHYS 202 Introductory Physics 2 4 OR PHYS 211 General Physics 1 4 PHYS 212 General Physics 2 4</p>
<p>Biology Elective Requirement Select 12 cr hrs of biology and/or marine science electives listed on p. 2, and list them below.</p> <p>_____ 3 _____ 3 _____ 3 _____ 3</p>	<p>Mathematics Requirement (6 cr hrs; select one pair)</p> <p>MATH 123 Essentials of Calculus 3 MATH 141 Introduction to Statistics 3 OR MATH 125 Calculus 1 3 MATH 141 Introduction to Statistics 3 OR MATH 125 Calculus 1 3 MATH 126 Calculus 2 3</p>

Biology Elective Courses		Marine Science Courses	
BIOL 200 Dendrology	3	MARSCI 221 Marine Invertebrates	3
BIOL 211 Invertebrate Zoology	3	MARSCI 241 Marine Biology	3
BIOL 212 Vertebrate Zoology	3	MARSCI 250 Wetlands Ecology	3
BIOL 222 Comp Biol Plants	3	MARSCI 260 Marine Ecology	3
BIOL 233 Human Genetics	3	MARSCI 300 Behavior Marine Org	3
BIOL 252 Field Zoology	3	MARSCI 330 Tropical Invertebrates	3
BIOL 253 Freshwater Biology	3	MARSCI 334 Marine Embryology	3
BIOL 263 Field Botany	3	MARSCI 342 Marine Botany	3
BIOL 333 Molecular Biology	3	MARSCI 343 Ichthyology	3
BIOL 334 Molecular Biology Lab	1	MARSCI 344 Anat Marine Chordates	3
BIOL 342 Medical Microbiology	3	MARSCI 345 Marine Ornithology	3
BIOL 343 Immunology	3	MARSCI 394 Comp Phys Marine Org	3
BIOL 350 Plant Pathology	3	MARSCI 431 Ecol Marine Plankton	3
BIOL 361 Comp Vert Anatomy	3	MARSCI 432 Marine Evol Ecol	3
BIOL 364 Vertebrate Histology	3	MARSCI 441 Biology of Mollusks	3
BIOL 390 UG Research in Biol 1	3	MARSCI 464 Biol Oceanography	3
BIOL 391 UG Research in Biol 2	3	MARSCI 470 Research Diver Meth	3
BIOL 411 Radiation Biology	3	MARSCI 490 Aquaculture	3
BIOL 420 Global Change Biology	3	MARSCI 491 Coral Reef Ecology	3
BIOL 430 Evolution	3	MARSCI 492 Marine Mammals	3
BIOL 431 Developmental Biology	3	MARSCI 493 Behavioral Ecology	3
BIOL 432 Microbial & Molec Genet	3		
BIOL 435 Bioinformatics	3		
BIOL 442 Virology	3	Restrictions on Courses	
BIOL 443 Advanced Immunology	3	1. A maximum of 3 cr hrs of BIOL	
BIOL 444 Tissue Culture	3	490 may be applied as biology	
BIOL 445 Pharm for Health Sciences	3	elective credit toward the degree.	
BIOL 450 Mycology	3		
BIOL 451 Conservation Biology	3	2. A maximum of 6 cr hrs from	
BIOL 452 Limnology	3	among BIOL 390, 391, 490, 493 and	
BIOL 455 Environmental Microbiology	3	494 may be applied as biology	
BIOL 457 Entomology	3	elective credit.	
BIOL 459 Ornithology	3		
BIOL 460 Population Biology	3	*Current Topics in Biology may be	
BIOL 461 Animal Behavior	3	repeated only once if the topic is	
BIOL 470 Medical Parasitology	3	different, giving a maximum of 6	
BIOL 476 Neurophysiology	3	credits.	
BIOL 489 Current Topics in Biol*	3		
BIOL 490 Internship Biol/AHS	3		
BIOL 493 Honors Indep Study 1	3		
BIOL 494 Honors Indep Study 2	3		

General Education Requirements

<p>Goal 1: Communication (7 points; 3 departments)</p> <p>ENG 101 Foundations of Coll Writ 3</p> <p>BIOL 290 Writing in Biology* 2</p> <p>CHEM 341 Biochemistry 1 1</p> <p>_____</p> <p>_____</p>	<p>Goal 6: Social Sciences (5 points; 2 departments)</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>Goal 2: Information Literacy (2 points; 1 department)</p> <p>BIOL 290 Writing in Biology* 1</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>Goal 7: Arts and Humanities (5 points; 2 departments)</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>Goal 3: Analytical and Quantitative Skills (5 points; 2 departments)</p> <p>CHEM 115 Chem for the Sci 1 1</p> <p>BIOL 114 Concepts in Biology 1 1</p> <p>MATH 141 Intro Stats 3</p> <p>MATH 123 Essentials of Calculus 3</p> <p>(MATH 125 Calculus 1 2)</p>	<p>Goal 8: Second Language (2 points; 1 department)</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>Goal 4: Cultures and Diversity (5 points; 2 departments)</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>Goal 9: Healthy Living (2 points; 1 department)</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>Goal 5: Natural Sciences (5 points; 2 departments)</p> <p>BIOL 114 Concepts in Biology 1 3</p> <p>CHEM 115 Chem for the Sci 1 3</p> <p>_____</p> <p>_____</p>	<p>Goal 10: Citizenship (2 points; 1 department)</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>

* recommended second writing course

Credit Counting Worksheet

Course	Name	Credits	Course	Name	Credits
Credits from page 1 _____					
Below list all courses not listed on page 1					
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
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_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

*Sum total of all courses must add up to 120 cr hrs or more.