

## BIOLOGICAL SCIENCES DEGREE: Environmental Biology Emphasis Plan effective Fall 2006

01. Written and Oral Communication (8 hrs minimum; at least four courses)		Credit Hours
01. ENG 101	Composition One	3
02. ENG 102	Composition Two	3
03. Senior Capstone Experience	See Major Requirements (over)	
04. Upper level Writing Intensive (WI) course*		1-3
*Students may take a WI course either in the major or in another discipline.		
05. Speech Communication (Select 3 hrs) [BSC Department Requirement]		
SCM 111	Oral Communication	3
SCM 305	Interpersonal Communication	3
SCM 320	Business and Professional Speaking	3
SCM 330	Small Group Communication	3
3		
02. Basic Science and Mathematics (Select 3 hrs)		
01. Laboratory Sciences	See Major Requirements (over)	
02. Mathematics:	Calculus Competency**	
MAT 314 or	Calculus for Arts and Science	3
MAT 167	Calculus I with Analytical Geometry	3
** The pre-requisite for Calculus is high school Trigonometry. Students lacking the appropriate background may take MAT 101 College Algebra / MAT 101E Explorations in College Algebra OR MAT 103 Plane Trigonometry OR MAT 128 Precalculus Mathematics before enrolling in a Calculus course.		
Note that the Mathematics Department states that certain courses, including Mat 101, MAT 103, MAT 128, “are only open to freshmen. Other students desiring to take these courses must have approval from the Chair of the Department of Mathematics. Only two of the following courses can be taken for credit: MAT 101, MAT 103, MAT 128.”		
03. Computing Competency		See Other Required Courses (over)
03. Global History and Culture (12 hrs)		
01. <i>Social Sciences</i> (Select 3 hrs)		
ANT101	The Human Experience	3
GHY 101	World Regional Geography	3
SOC 101	Understanding Society	3
<i>Humanities</i> (9 hrs)		
02. ENG 203	World Literature	3
03. HIS 101 or	World Civilizations: Beginnings to 1500 C.E.	3
HIS 102	World Civilizations: 1500 to the Present	3
04. HIS 101 or HIS 102 or		3
PHI 151 or	Introduction to Philosophy	3
REL 131	Comparative Religion	3
04. Aesthetic Values (Select 3 hrs)		
ART 130	The Art Experience	3
DAN 130	Dance Appreciation	3
MUS 365	The Enjoyment of Music	3
THE 100	Theatrical Expressions	3
05. Decision Making and Responsibility (Select 3 hrs)		
ECO 101	Basic Economics	3
PHI 171	Ethics and Good Living	3
PSY 110	General Psychology	3
PS 101	American Government	3
COH 100	Concepts of Wellness	3
COH 101	Diversity and Social Justice	3

**Core Total: 31-33 hrs**

### Minimum of 124 Hours in Program

Minimum of 64 hours required from a four-year college; 45 hours at 300 or 400 level; last 32 hours taken at USM.

<b>06. Major/Emphasis Requirements (44-49 hrs)</b>				<b>Credit Hours</b>
01.	BSC 110/BSC 110L	Principles of Biological Science I		3/1
02.	BSC 111/BSC 111L	Principles of Biological Science II		3/1
03.	BSC 201/BSC 201L	General Zoology		2/1
04.	BSC 226/BSC 226L	General Botany		2/1
05.	BSC 305	Evolution		3
06.	BSC 340	Environmental Biology		3
07.	BSC 370	Genetics		4
08.	BSC 380/BSC 380L	General Microbiology		3/1
09.	Physiology (Select 3-4 hours)		<b>Credit Hours</b>	<b>Credit Hours</b>
	BSC 360	Cellular Physiology	3	BSC 452 Environmental Physiology 3
	BSC 431	Plant Physiology	3/1	BSC 453 Invertebrate Physiology 3
	BSC 450	Comp. Anim. Physiology	3	BSC 487/L Microbial Physiology 3/1
	BSC 451	Mammalian Physiology	3	
10.	Ecology (Select 3-4 hours)		<b>Credit Hours</b>	<b>Credit</b>
<b>Hours</b>	BSC 382	Microbial Ecology	3	BSC 472 Population Genetics 3
	BSC 435/L	Plant Ecology	3/1	BSC 483 Viral Ecology 3
	BSC 440/L	Ecology	3/1	BSC 489 Environmental Microbiology 3
	BSC 442/L	Behavioral Ecology	3/1	
11.	Organismal (Select 6-8 hours)		<b>Credit Hours</b>	<b>Credit Hours</b>
	BSC 407/L	Biology of Vertebrates	3/1	BSC 421/L Marine Invertebrate Zoology 3/3
	BSC 408/L	Invertebrate Zoology I	2/1	BSC 426/L Introduction to Mycology 3/1
	BSC 409/L	Invertebrate Zoology II	2/1	BSC 427/L Introduction to Phycology 2/1
	BSC 411/L	Entomology	2/1	BSC 429/L Comp. Morphology of Plants 3/1
	BSC 413/L	Arachnida Biology	2/1	BSC 430/L Aquatic & Marsh Plants 2/1
	BSC 414/L	Ichthyology	2/1	BSC 433/L Taxonomy of Local Flora 2/2
	BSC 415/L	Biology of Fishes	2/2	BSC 434/L Dendrology 2/2
	BSC 417/L	Herpetology	3/1	BSC 455/L Animal Behavior 3/1
	BSC 418/L	Avian Biology	3/1	BSC 458/L Marine Ichthyology 3/3
	BSC 419/L	Mammalogy	2/1	BSC 459/L Marine Mammals 3/2
12.	Communities and Ecosystems (Select 3-4 hours)		<b>Credit Hours</b>	<b>Credit Hours</b>
	BSC 406	Biogeography	3	BSC 443/L Freshwater Biology 3/1
	BSC 436/L	Conservation Biology	3/1	BSC 444/L Limnology 2/1
	BSC 441/L	Pop. & Community Ecology	2/1	BSC 445/L Marine Biology 3/1
13.	BSC 497	Senior Practicum [Senior Capstone Experience]		1
<b>07. Other Required Courses (28 hrs)</b>				<b>Credit Hours</b>
01.	CHE 106/CHE 106L	General Chemistry I		3/1
02.	CHE 107/CHE 107L	General Chemistry II		3/1
03.	CHE 255/CHE 255L	Organic Chemistry		3/1
04.	CHE 256/CHE 256L	Organic Chemistry		3/2
05.	PHY 111/PHY 111L	General Physics I		3/1
06.	PHY 112/PHY 112L	General Physics II		3/1
07.	Computing Competency (Select 3 hrs)			
	CSS 240	FORTTRAN Programming		3
	CSS 330	Introduction to Programming		3
	CSS 333	Problem Solving Using C, I		3
	CSS 211	Statistical Methods I		3
	PSY 360	Introduction to Statistics for the Behavioral Sciences		3

**08. Minor Area of Study (Optional)**

**09. Electives (14 - 21 hrs)**

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