Department of Biological and Allied Health Sciences
Bloomsburg University

Name _____
Entering Semester _____

BA Biology & BS Secondary Education

Revised 07/2009 MDW

Concepts in Biology I (50-114) and *Concepts in Biology II* (50-115) should be taken during the freshman year; *Microbiology* (50-242) and *Cell Biology* (50-271) should be taken during the sophomore year. A minimum of thirty-five (35) credit hours in biology is required.

Chemistry and Mathematics courses should be scheduled as early as possible in the program of study. Required courses in Chemistry, Physics, and Geosciences fulfill the Natural Science and Mathematics general education requirement.
Basic Statistics (48-160) may be substituted for Introduction to *Statistics* (53-141).

Biology Core Requirement (26 cr hrs)

50-114	Concepts in Biology I	4	☐
50-115	Concepts in Biology II	4	☐
50-242	Microbiology	4	☐
50-271	Cell Biology	4	☐
50-332	Genetics	3	☐
50-351	Ecology	3	☐

Physiology Requirement (4 cr hr—Select 50-479 **AND** one lecture course from among 50-472, 50-474, 50-477, 50-478, and 50-480.)

50-479	Integrated Physiology Lab	1	☐
50-472	Animal Cell Physiology **OR**	3	☐
50-474	Human Physiology **OR**		
50-477	Plant Physiology **OR**		
50-478	Microbial Physiology **OR**		
50-480	Comparative Animal Physiology		

Biology & Other Science Electives (9-13 cr hrs) Selections on reverse

Physical Sciences Requirement (16 cr hrs)

52-115	Chem for the Sciences 1	4	☐
52-116	Chem for the Sciences 2	4	☐
52-230	Fund Organ Chem	4	☐
54-111	Intro Physics I	4	☐

Professional Education (38 cr hrs)

60-204	Educational Computing & Technology **OR**	3	☐
60-350	Instructional Design Systems **OR**		
60-351	Virtual Learning Communities		
60-206	Teachers, Schools, & Society	2	☐
60-251	Psychological Foundations of Education	3	☐
60-291	Principles of Teaching	3	☐
60-311	Classroom Measurement & Assessment*	3	☐
65-453	Teaching of Science*	3	☐

* 79-320 Field-Based Inclusion Practicum (6 cr) can substitute for 60-311 and 65-453

60-406	Multicultural Education	3	☐
70-275	Linking Assessment	3	☐
70-358	Methods of Instruction	3	☐
60-497	Student Teaching (1st Exp)	6	☐
60-398	Student Teaching (2nd Exp)	6	☐

Mathematics Requirement (3 cr hrs)

53-141	Introduction to Statistics	3	☐

Biology & Other Science Electives: 9-13 cr hrs required**, minimum 9 cr biology** and/or marine science courses.

FIELD COURSES*: Select one.

50-200	Dendrology	3	☐
50-252	Field Zoology	3	☐
50-253	Freshwater Biology	3	☐
50-263	Field Botany	3	☐
50-452	Limnology	3	☐
50-457	Entomology	3	☐
50-459	Ornithology	3	☐

*Offered summer sessions mainly with some during fall or spring semesters. Seasons preclude most of these being taught outside Summer sessions.

MOLECULAR SELECTION: Select one.

50-333	Molecular Biology	3	☐
52-341	Biochemistry I	4	☐

BIOLOGY & MARINE SCIENCE SELECTION:

50-211	Invertebrate Zoology	3	☐
50-212	Vertebrate Zoology	3	☐
50-222	Comp Biol Plants	3	☐
50-233	Human Genetics	3	☐
50-331	Embryology	3	☐
50-342	Medical Microbiology	3	☐
50-343	Immunology	3	☐
50-350	Plant Pathology	3	☐
50-361	Comp Vert Anatomy	3	☐
50-364	Vertebrate Histology	3	☐
50-390	Undergrad Research Biol	3	☐
50-391	Undergrad Research Biol	3	☐
50-411	Radiation Biology	3	☐
50-430	**Evolution Strongly recommended.**	3	☐
50-432	Microb & Molec Genet	3	☐
50-435	Bioinform & Genomic	3	☐
50-442	Virology of Mammals	3	☐
50-444	Plant & Animal Tiss Cult	1	☐
50-450	Mycology	3	☐
50-451	Conservation Biology	3	☐
50-455	Environ Microbiology	3	☐
50-460	Population Biology	3	☐
50-461	Animal Behavior	3	☐
50-462	Plant Anatomy	3	☐
50-476	Neurophysiology	3	☐
50-481	Senior Seminar	1	☐
50-484	Methods Biotech	3	☐
50-489	Current Topics	3	☐
50-490	Internship Biol/AHS	3-15	☐
50-493	Honors Indep Study I	3	☐
50-494	Honors Indep Study II	3	☐
50-____	Second field Course (see previous list)	3	☐

55-221	Marine Invertebrates	3	☐
55-241	Marine Biology	3	☐
55-250	Wetland Ecology	3	☐
55-260	Marine Ecology	3	☐
55-298	Phys Marine Inverteb	3	☐
55-300	Behavior Marine Organ	3	☐
55-320	Marine Microbiology	3	☐
55-330	Tropical Invertebrates	3	☐
55-342	Marine Botany	3	☐
55-343	Marine Icthyology	3	☐
55-345	Marine Ornithology	3	☐
55-394	Comp Phys Mar Organ	3	☐
55-431	Ecol Marine Plankton	3	☐
55-432	Marine Evol Ecology	3	☐
55-441	Biology of Molluscs	3	☐
55-464	Biol Oceanography	3	☐
55-470	Research Diver Meth	3	☐
55-490	Marine Aquaculture	3	☐
55-491	Coral Reef Ecology	3	☐
55-492	Marine Mammals	3	☐
55-493	Behavioral Ecology	3	☐

Restrictions on Non-classroom Courses.
A maximum of 3 cr hrs of 50-490 may be applied as biology elective credit toward the degree.
A maximum of 6 cr hr from among 50-389, 50-391, 50-493, and 50-494 may be applied as biology elective credit toward the degree.

General Education Requirements

Two cultural diversity courses (6 cr hr) are required. One is 70-101 *Introduction to the Exceptional Individual*; the second is 60-406 *Multicultural Education*. Designate these with a **+** symbol. ☐

Foreign Language Requirement. All BA majors in Biology must fulfill a foreign language requirement. Apply these credits to the Communication Elective or to Group A below. Any of the following courses may be used to satisfy the requirement: 10-101 French 1, 10-102 French 2, 10-203 French 3; 10-204 French 4; 11-101 German 1, 11-102 German 2, 11-203 German 3, 11-204 German 4; 12-101 Spanish 1, 12-102 Spanish 2, 12-203 Spanish 3, 12-204 Spanish 4; 13-102 Russian 2, 13-203 Russian 3, 13-204 Russian 4; 14-102 Italian 2; 16-106 Chinese 2, or 18-102 Latin 2. ☐

Communication (9 cr hrs)

20-101	English Composition I	3	☐
50-290	Writing in Biology	3	☐
79-494	ELL Strategies **OR**	3	☐
72-415	ELL Basics Lang Comm		

20-201 English Composition II can be substituted for Writing in Biology (substitution requires written justification, advisor endorsement, and BAHS Office approval).

Quantitative-Analytical Reasoning (3 cr hrs)
Fulfilled by mathematics requirement for major.

Values, Ethics, … (3 cr hrs)

60.406+	Multicultural Education	3	☐

GROUP C. Natural Science and Mathematics (12 cr hrs)
Fulfilled by chemistry, physics, and geosciences requirements for the major.

Penn Dept of Education (PDE) requires an earth or space science course for certification in biology. Choose **ONE** from the group (at right).

51-100	Environmental Geology	3	☐
51-101	Physical Geology	3	☐
51-255	Meterology	3	☐
51-259	Oceanography	3	☐

GROUP A. Humanities (12 cr hrs)

20-101	English Composition 1	☐
25-103	Public Speaking	☐
_____	*foreign language*_____	☐
_____	_____	☐

GROUP B. Social Sciences (12 cr hrs)

48-101	General Psychology	3	☐
48-212	Adolescent Psychology	3	☐
70-101+	Intro Individuals w/ Except	3	☐
45-211	Principles of Sociology	3	☐

Fitness and Recreational Skills (2 cr hrs) ☐

____	_____	☐	____	_____	☐

Free Electives. List free elective courses here.

____	_____	☐	____	_____	☐
____	_____	☐	____	_____	☐
____	_____	☐	____	_____	☐
____	_____	☐	____	_____	☐