MILLERSVILLE UNIVERSITY

Student Name:_____ Student ID #_____

DEGREE: BS
MAJOR: BIOL
OPTION: ANBE

MAJOR REQUIREMENTS FOR A
BS DEGREE IN BIOLOGY : ANIMAL BEHAVIOR
Total credit hours required: 120.0 minimum

REQUIREMENTS AND POLICIES FOR THE BS BIOLOGY MAJOR

A. Policies for Admission to the Major

1. New students (freshmen and transfers) must be admitted to the Biology major by the Office of Admissions upon admission to the University.
2. Admission of Millersville University students to the Biology major (from other departments or undeclared status) requires that the student is in satisfactory academic standing as described in the Undergraduate catalog. Students who were dropped from a Biology major also must satisfy the Biology Retention in the Major criteria before being readmitted to a Biology major.
3. Non-degree and continuing education students must be admitted to the Biology major by the Office of Admissions.

B. Policies for Retention in the Major

1. University requirements for retention must be met.
2. All Biology majors must earn grades of C- (C minus) or higher in all core courses (BIOL 101, 211, 221, 343, 362, 364) required for their option.
3. The requirements stated above must be satisfied before completion of 90 Millersville University credit hours.
4. Millersville University students changing majors, or Biology majors changing options within the Biology major, must satisfy the above requirements prior to completion of 45 additional Millersville University credit hours. Note: Students who desire to change their major to Biology must refer to the Biology department's Admission to the Major Policy. Those transferring into the major may substitute BIOL 100 for BIOL 101 if they earn a grade of B- (B minus) or higher in this course.
5. Transfer students with 60 credit hours or more must satisfy the above requirements prior to completion of 45 Millersville University credit hours. Transfer students with fewer than 60 credits should refer to the policy for all other majors (part 3 above).
6. Any students failing to meet the above requirements will be dropped from the Biology major. Students who wish to re-enter the major, must follow the requirements stipulated in part 4 above.

C. Policies for Completion of the Major

1. Completion of all University curricular requirements.
2. ENGL 312, Technical Writing, is the recommended course for the Upper Level Writing Requirement under the General Education Curriculum Requirements.

Note to the student: *This form is provided as a guide. It is your responsibility to consult regularly with your advisor to be aware of changes and curriculum details which are not incorporated on this form.*

MAJOR SEQUENCE AND DEGREE REQUIREMENTS

Major: **BS BIOLOGY**
Option: **ANIMAL BEHAVIOR**
Major Field Requirements: **46.0 credits**
Other Requirements: **34.0-37.0credits**

When applicable, required related courses may be credited toward the Liberal Arts Core, subject to normal substitution rules.

Course No.	Short Title	C.H.	Grade

REQUIRED BIOLOGY COURSES (24.0 credits)

BIOL	101	Foundations of Biology	4.0	____
BIOL	211	Concepts of Zoology	4.0	____
BIOL	221	Concepts of Botany	4.0	____
BIOL	343	Ecology & Evolution	4.0	____
BIOL	362	Cell & Development	4.0	____
BIOL	364	Genetics & Molecular Biology	4.0	____

REQUIRED ANIMAL BEHAVIOR COURSES (11.0-14.0 credits)

Foundations (10.0 credits)

BIOL	385	Principles of Animal Behavior	3.0	____
BIOL	484	Mechanisms of An. Behavior	3.0	____
--OR--				
BIOL	435	Animal Physiology	3.0	____
BIOL	486	Behavioral Ecology	3.0	____
--OR--				
BIOL	483	Applied Ethology	3.0	____
BIOL	472	Seminar on Animal Behavior	1.0	____

Practical Experience in Animal Behavior (1.0-4.0 credits)

In consultation with your advisor, select a Co-op, internship, or research project in animal behavior.

BIOL	300	400 or 500 Co-op	3.0	____
BIOL	489	Honors Independent Study	1.0-4.0	____
BIOL	498	Independent Study in Biology	1.0-3.0	____
BIOL	499	Honors Thesis in Biology	1.0-4.0	____

REQUIRED ELECTIVES (9.0-11.0 credits)

In consultation with your advisor, select additional courses from Foundations, above, or from the list below that will best prepare you for your area of interest in animal behavior.

Organism-Based Biology

BIOL	295	Marine Invertebrates	3.0	____
BIOL	346	Ornithology	3.0	____
BIOL	396	Ichthyology	3.0	____
BIOL	415	Mammology	3.0	____
BIOL	416	Entomology	3.0	____
BIOL	418	Aquatic Entomology	3.0	____

Mechanisms of Behavior

BIOL	318	Compar Vertebrate Anatomy	4.0	____
BIOL	352	Nutritional Science	3.0	____
BIOL	437	Endocrinology	3.0	____
BIOL	438	Neurobiology	3.0	____

Other Relevant Electives

BIOL	329	Plant-Insect Interactions	3.0	____
BIOL	443	Conservation Biology	3.0	____

Course No.	Short Title	C.H.	Grade

REQUIRED RELATED (34.0 - 37.0 credits)

Chemistry (16.0 credits)

CHEM	111	Introductory Chemistry I	4.0	____
CHEM	112	Introductory Chemistry II	4.0	____
CHEM	235	Short Course Organic Chemistry	4.0	____
CHEM	326	Biochemistry I	4.0	____
--OR--				
CHEM	375	Environmental Chemistry	4.0	____

Note: Students aiming for Veterinary Schools should take CHEM 231 and CHEM 232 in lieu of CHEM 235, and should take CHEM 326 rather than CHEM 375.

Mathematics (4.0-5.0 credits)

MATH	151	Calculus for Management	4.0	____
--OR--				
MATH	161	Calculus I	4.0	____
--OR--				
MATH	163	Honors Calculus	5.0	____

Statistics (3.0 credits)

BIOL	375	Biometry	3.0	____
--OR--				
MATH	235	Survey of Statistics	3.0	____
--OR--				
PSYC	211	Statistics & Exper Design I	3.0	____

Physics (8.0 - 10.0 credits)

PHYS	131	Physics I with Algebra	4.0	____
PHYS	132	Physics II with Algebra	4.0	____
		---- ---- OR ---- ----		
PHYS	231	Physics I with Calculus	5.0	____
PHYS	232	Physics II with Calculus	5.0	____

Pyschology (3.0 credits)

PSCY	100	General Pyschology	3.0	____

Note: Students may consider completing a minor in Pyschology. Particularly appropriate courses for biology majors include the following: PSYC 216, PSYC 315 and PSYC 316.

Additional Note: Students interested in Veterinary School should also take BIOL 461 General Microbiology.