MILLERSVILLE UNIVERSITY

Student Name:_____ Student I.D.#_____

DEGREE: BSE
MAJOR: BIOL
OPTION:

MAJOR REQUIREMENTS FOR A BSE DEGREE IN BIOLOGY

Total credit hours required: 126.0 minimum

REQUIREMENTS AND POLICIES FOR THE BSE 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 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, except for the Perspectives (P) course, which is waived.
2. ENGL 312, Technical Writing, is the recommended course for the Upper Level Writing Requirement under the General Education Curriculum Requirements.
3. Admission to Advanced Professional Studies, whose several requirements include an overall GPA of 3.0, completion of a literature course in the English department, and appropriate clearances.

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

MAJOR SEQUENCE AND DEGREE REQUIREMENTS

Major: **BSE BIOLOGY**
Option:
Major Field Requirements: **32.0 credits**
Other Requirements: **64.0-68.0credits**

When applicable, up to six of the **REQUIRED RELATED** courses may be credited toward the Liberal Arts Core subject to normal distribution rules.

REQUIRED BIOLOGY COURSES (28.0 credits)

Course No.	Short Title	C.H.	Grade
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 & Mol. Biology	4.0	____
BIOL 375	Biometry	3.0	____
BIOL 473	Methods Teach Biology	1.0	____

BIOLOGY ELECTIVES (4.0 credits)

In consultation with your advisor, choose additional biology courses approved for the major to bring total biology credits to 32.0.

BIOL ___	_____	____	____
BIOL ___	_____	____	____
BIOL ___	_____	____	____

PROFESSIONAL EDUCATION (33.0 credits)

Foundations Bloc

EDFN 211	Foundation Modern Ed	3.0	____
EDFN 241	Psyc Found Teach	3.0	____

EDFN 001: Prof. Bloc, Science (*requires APS status*)

EDFN 321	Issues in Sec. Educ.	3.0	____
EDFN 330	Instruct. Tech. Des.	3.0	____
EDSE 340	Content Area Literacy	3.0	____
SPED 346	Sec Students w/Disabilities	3.0	____
EDSE 435	Teaching of Science*	3.0	____

* EDSE 435 offered in Fall semester only.

Professional Bloc II

EDSE 471	Differentiating Instruction	3.0	____
EDSC 461	Student Teaching	9.0	____

Admission to Advanced Professional Studies & Certification (APS)

All students enrolled in teacher preparation programs must be admitted to Advanced Professional Studies and meet Pennsylvania state requirements and university requirements prior to being enrolled in their initial advanced Professional Studies course. Students must meet additional Pennsylvania state requirements in order to be certified. Listings of Advanced Professional Studies courses and requirements are available in each department office, the Early Field Experiences office, and on the Early Experiences website.

REQUIRED RELATED (31.0 - 35.0 credits)

Chemistry (16.0 credits)

Course No.	Short Title	C.H.	Grade
CHEM 111*	Intro Chemistry I	4.0	____
CHEM 112*	Intro Chemistry II	4.0	____
CHEM 235	Short Course Org. Chem	4.0	____
CHEM 326	Biochemistry I	4.0	____

Note: CHEM 231* and CHEM 232 (total 8.0 credits) may substitute for CHEM 235.

*Must earn a C- or better in these CHEM courses before completing CHEM 235 or 232.

Note: Students who are considering going to graduate school to earn an advanced degree in Biology SHOULD TAKE CHEM 231 and 232.

Note: Those wishing to complete a Chemistry minor must complete CHEM 265 (Quantitative Analysis) in addition to those CHEM courses listed.

Earth Sciences (3.0-4.0 credits)

ESCI* ___	_____	___	____

* At the 200 level or above.

Mathematics (4.0-5.0 credits)

MATH 160	Precalculus	4.0	____
	--- --- or --- ---		
MATH 161	Calculus I	4.0	____
	--- --- or --- ---		
MATH 163	Honors Calculus	5.0	____

*Note: Students who might be interested in graduate school or professional school SHOULD TAKE MATH 161.

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	____

General Electives (as necessary)

_____	_____	____	____
_____	_____	____	____
_____	_____	____	____