

MILLERSVILLE UNIVERSITY

Student Name:

Student I.D. #:

DEGREE: BSE

**MAJOR REQUIREMENTS FOR A BSE
DEGREE IN**

MAJOR: CHEM

CHEMISTRY

OPTION:

Total credit hours required: 126 minimum

REQUIREMENTS AND POLICIES FOR THE BSE CHEMISTRY MAJOR

A. Policies for Admission to the Major

1. New students (freshmen and transfers) must be admitted to the Chemistry major by the Office of Admissions upon admission to the University.
2. Admission into the Chemistry major from other departments is upon approval of the chairperson of the Chemistry Department.
3. Non-degree and continuing education students must be admitted to the Chemistry major by the Office of Admissions.

B. Policies for Retention in the Major

1. University requirements for retention.
2. The student is required to have a 2.00 grade point average in the major courses by the end of the of sophomore year. If not, it is recommended that courses be repeated to achieve a 2.00 average in the major or that there be a change of major.
3. Chemistry majors are required to have a 2.00 grade or better in Chemistry courses required for the major at the 100 and 200 level before proceeding to a new course for which it is a prerequisite. (Currently, these courses include: CHEM 111,112, 231, 232, 251, and 265).

C. Policies for Completion of the Major

1. Completion of all University curricular requirements.

D. Admission to Advanced Professional Studies and Certification (Ed. Majors)

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. A listing of Advanced Professional Studies courses and requirements is available in each department office, the Early Field Experience office, and on the Early Field Experience website.

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.*

**BACHELOR OF SECONDARY EDUCATION IN CHEMISTRY
RECOMMENDED PROGRAM**

FIRST SEMESTER				SECOND SEMESTER			
CHEM	111	Introductory Chem I	4.0	CHEM	112	Introductory Chem II	4.0
CHEM	188	Freshman Seminar	1.0	CHEM	251	Inorganic Chem I	3.0
MATH	161	Calculus I	4.0	MATH	211	Calculus II	4.0
ENGL	110	English Composition	3.0	COMM	100	Fund. Of Speech	3.0
WELL	175	Wellness	<u>3.0</u>	_____	_____	Humanities Course #1****	<u>3.0</u>
			<i>TOTAL S.H.</i>				<i>TOTAL S.H.</i>
			15.0				17.0
THIRD SEMESTER				FOURTH SEMESTER*			
CHEM	231	Organic Chem. I	4.0	CHEM	232	Organic Chem. II*	4.0
MATH	311	Calculus III	4.0	CHEM	265	Quant. Analysis*	4.0
PHYS	231	Physics I w/ Calculus	5.0	PHYS	232	Physics II w/ Calculus*	5.0
_____	_____	Soc. Science Course #1	<u>3.0</u>	EDFN	211	Foundations of Modern Educ.	3.0
			<i>TOTAL S.H.</i>	EDFN	241	Psych. Foundations Teaching	<u>3.0</u>
			16.0				<i>TOTAL S.H.*</i>
							19.0*
FIFTH SEMESTER				SIXTH SEMESTER			
CHEM	341	Physical Chem I	4.0	CHEM	326	Biochemistry I**	4.0
CHEM	375	Environmental Chem (D)	4.0	CHEM	342	Physical Chem II	4.0
CHEM	487	Chemistry Seminar I	0.5	CHEM	488	Chemistry Seminar II	0.5
_____	_____	Soc. Science Course #2	3.0	_____	_____	Humanities Course #2****	3.0
WRIT	31X	Advanced Writing**	3.0	_____	_____	Humanities Course #3****	3.0
BIOL	100	General Biology***	<u>3.0</u>	_____	_____	Soc. Science Course #3	<u>3.0</u>
			<i>TOTAL S.H.</i>				<i>TOTAL S.H.</i>
			17.5				17.5
SEVENTH SEMESTER				EIGHTH SEMESTER			
EDFN	321	Issues in Secondary Ed.	3.0	EDSE	461	Student Teaching	9.0
EDFN	330	Instructional Technology	3.0	EDSE	471	Different Instr. In Class	<u>3.0</u>
EDFN	435	Teaching of Science	3.0				<i>TOTAL S.H.</i>
EDSE	340	Cntnt Area Litrcy Divers	3.0				12.0
SPED	346	Sec Stdnts Disab Inclu Sttgs	<u>3.0</u>				
			<i>TOTAL S.H.</i>				
			15.0				

COMMENTS, NOTES, OR RECOMMENDATIONS:

* It is recommended that CHEM 232, CHEM 265, or PHYS 232 be taken during a summer session to reduce the total number of credits in the 4th semester.

** WRIT 312 (Technical Writing) or WRIT 319 (Science Writing) are highly recommended.

*** Students may alternatively satisfy this requirement by one of the following: (1) a course grade of "A" or "B" in AP Biology, (2) a score of 3 or better in the national AP exam, (3) a successful score on the CLEP exam.

**** One of the Humanities Courses MUST be an English Course with "Literature" in the title. The Pennsylvania Dept. of Education requires 6 credits of English; 3 in writing (ENGL 110) AND 3 in literature. Each BSE student MUST complete a 3-credit English literature course as one of their G1 courses to serve as a prerequisite requirement before entering Professional Block and Student Teaching.

Note 1: The BSE-Chemistry curriculum, as a whole, satisfies the Perspectives (P) requirement in the general education curriculum. This means that BSE-Chemistry majors do not take a separate Perspectives (P) course.

Note 2: The Professional Block Courses (7th Semester) are offered ONLY during Fall semesters. Students starting out in CHEM 110 and/or MATH 101 or 160 are advised to use summer courses as needed to have all prerequisites completed for enrolling in CHEM 341 in the 5th Semester. A student not able to take CHEM 341 in the 5th semester should instead take the Professional Block courses and adjust plans to facilitate graduating in nine total semesters.