

MILLERSVILLE UNIVERSITY

Student Name: _____ Student I.D.# _____

DEGREE: BS	MAJOR REQUIREMENTS FOR A BS DEGREE IN
MAJOR: CHEM	CHEMISTRY / BIOCHEMISTRY
OPTION: BIOCH	Total credit hours required: 120.0 minimum

REQUIREMENTS AND POLICIES FOR THE BS 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 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 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.

American Chemical Society Certification

In compliance with ACS Guidelines, the department highly recommends a modern foreign language (FORL 101-102; G1 Humanities elective) and an elementary economics course (Social Science; G3 elective) for ACS certification.

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: **BS CHEMISTRY**

Option: **BIOCHEMISTRY**

Major Field Requirements: **49.0 credits**

Other Requirements: **32.0-33.0 credits**

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

Course No.	Short Title	C.H.	Grade	Q.P.	Course No.	Short Title	C.H.	Grade	Q.P.
REQUIRED CHEMISTRY COURSES (47.0 credits)					REQUIRED RELATED (29.0-30.0 credits)				
CHEM 111	Intro Chemistry I	4.0	_____	_____	Mathematics (12.0 credits)				
CHEM 112	Intro Chemistry II	4.0	_____	_____	MATH 161	Calculus I	4.0	_____	_____
CHEM 188	Freshman Seminar	1.0	_____	_____	MATH 211	Calculus II	4.0	_____	_____
CHEM 231	Organic Chem I	4.0	_____	_____	MATH 311	Calculus III	4.0	_____	_____
CHEM 232	Organic Chem II	4.0	_____	_____	Physics (10.0 credits)				
CHEM 251	Inorganic Chem I	3.0	_____	_____	PHYS 231	Physics I with Calc	5.0	_____	_____
CHEM 265	Quant Analysis	4.0	_____	_____	PHYS 232	Physics II with Calc	5.0	_____	_____
CHEM 326	Biochemistry I	4.0	_____	_____	Biology (7.0-8.0 credits)				
CHEM 327	Biochemistry II	4.0	_____	_____	Demonstrate competency in Biology 100*				
CHEM 328	Analytical Bioch Lab	1.0	_____	_____	BIOL 364	Fdns. Genetics/Mole	4.0	_____	_____
CHEM 341	Physical Chem I	4.0	_____	_____	Select one additional course from the following:				
CHEM 342	Physical Chem II	4.0	_____	_____	BIOL 362	Cell/Devel Biol	3.0	_____	_____
CHEM 465	Analytical Chemistry	4.0	_____	_____	BIOL 461	General Microbiol	3.0	_____	_____
CHEM 487	Seminar in Chem 1	0.5	_____	_____	BIOL 462	Molecular Biology	4.0	_____	_____
CHEM 488	Seminar in Chem II	0.5	_____	_____	General Electives (as necessary)				
CHEM 498	Independent Study	1.0	_____	_____	_____	_____	_____	_____	_____
CHEMISTRY ELECTIVES (5.0 credits)					_____	_____	_____	_____	_____
CHEM 300	Cooperative Educ.	3.0	_____	_____	_____	_____	_____	_____	_____
CHEM 400	Cooperative Educ.	3.0	_____	_____	_____	_____	_____	_____	_____
CHEM 324	Plant Biochemistry	4.0	_____	_____	_____	_____	_____	_____	_____
CHEM 375	Environmental Chem	4.0	_____	_____	_____	_____	_____	_____	_____
CHEM 381	Polymer Chemistry I	4.0	_____	_____	_____	_____	_____	_____	_____
CHEM 391	Advanced Lab I	1.0	_____	_____	_____	_____	_____	_____	_____
CHEM 392	Advanced Lab II*	1.0	_____	_____	_____	_____	_____	_____	_____
CHEM 435	Advanc Organ Chem	3.0	_____	_____	_____	_____	_____	_____	_____
CHEM 452	Inorganic Chem II	3.0	_____	_____	_____	_____	_____	_____	_____
CHEM 476	Environ. Chem II	4.0	_____	_____	_____	_____	_____	_____	_____
CHEM 482	Polymer Chemistry II	3.0	_____	_____	_____	_____	_____	_____	_____
CHEM 486	Topics in Chemistry	1.0-4.0	_____	_____	_____	_____	_____	_____	_____
CHEM 498	Independent Study**	1.0-3.0	_____	_____	_____	_____	_____	_____	_____
CHEM 489	Dept. Honors	1.0-3.0	_____	_____	_____	_____	_____	_____	_____
CHEM 499	Dept. Honors	1.0-3.0	_____	_____	_____	_____	_____	_____	_____
<p>*This elective must be completed to gain ACS certification in Biochemistry.</p> <p>** Students seeking ACS certification must take a minimum of two credit hours of CHEM 498 under Chemistry Electives</p>					<p>*Competency may be demonstrated by one of the following:</p> <ol style="list-style-type: none"> 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 4) a passing grade for General Biology (BIOL 100) 				