

MILLERSVILLE UNIVERSITY

Student Name:

Student I.D. #:

DEGREE:	BS	MAJOR REQUIREMENTS FOR A BS
MAJOR:	CHEM	DEGREE IN CHEMISTRY
OPTION:	Nanotechnology	Total credit hours required: 120 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 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.

American Chemical Society Certification

A student opting for ACS certification should take all chemistry courses in the given sequence in the college catalog. The student must have successfully completed Physical Chemistry II (CHEM 342) before beginning Advanced Inorganic (CHEM 452) or Analytical Chemistry (CHEM 465).

In compliance with the 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 advisor for any change and curriculum details which are not incorporated on this form.

**BACHELOR OF SCIENCE IN CHEMISTRY
NANOTECHNOLOGY OPTION
RECOMMENDED PROGRAM**

FIRST SEMESTER

CHEM	111	Intro Chem I.	4.0
CHEM	188	Freshman Seminar	1.0
MATH	161	Calculus I	4.0
ENGL	110	English Composition	<u>3.0</u>
		<i>Total S.H.</i>	12.0

SECOND SEMESTER

CHEM	112	Intro Chem II	4.0
MATH	211	Calculus II	4.0
COMM	100	Fund. Of Speech	3.0
CHEM	251	Inorganic I	<u>3.0</u>
		<i>Total S.H.</i>	14.0

THIRD SEMESTER

CHEM	231	Organic I	4.0
PHYS	231	Physics I	5.0
MATH	311	Calculus III	<u>4.0</u>
		<i>Total S.H.</i>	13.0

FOURTH SEMESTER

CHEM	232	Organic II	4.0
PHYS	232	Physics II	5.0
CHEM	265	Quant. Analysis	<u>4.0</u>
		<i>Total S.H.</i>	14.0

SUMMER (18.0)

Nanofabrication Courses at Penn State University

FIFTH SEMESTER

CHEM	312	Chem in Nanotechnology	3.0
CHEM	341	Physical Chem I	4.0
_____	_____	Humanities Course #1	3.0
_____	_____	Soc. Science Course #1	<u>3.0</u>
		<i>Total S.H.</i>	13.0

SIXTH SEMESTER

CHEM	342	Physical Chem II	4.0
ENGL	3XX	Advanced Writing	3.0
_____	_____	Humanities Course #2	3.0
_____	_____	Soc. Science Course #2	<u>3.0</u>
		<i>Total S.H.</i>	13.0

SEVENTH SEMESTER

CHEM	487	Seminar in Chem I	0.5
CHEM	498	Intro to Research (Req)	1.0
CHEM	498	Chemistry Elective	1.0
CHEM	_____	Chemistry Elective	4.0
_____	_____	Humanities Course #3	3.0
_____	_____	Soc. Science Course #3	<u>3.0</u>
		<i>Total S.H.</i>	12.5

EIGHTH SEMESTER

CHEM	488	Seminar in Chem II	0.5
_____	_____	Perspectives Course	3.0
_____	_____	C&E Course #1	3.0
_____	_____	C&E Course #2	3.0
WELL	175	Wellness	<u>3.0</u>
		<i>Total S.H.</i>	12.5

COMMENTS, NOTES OR RECOMMENDATIONS:

5. Connections & Exploration (C&E) courses #1 and #4 can be satisfied with any approved GenEd course.
6. Cultural Diversity & Community (D) course may be satisfied with approved courses from the GenEd requirements (including Perspectives), the major, the minor, the required related area, or general electives.