

CHEMISTRY, B.S. - 3+4 PRE-PHARMACY OPTION

The 3+4 Pre-Pharmacy option is designed within the B.S. Chemistry program, allowing students to complete both B.S. Chemistry and Doctor of Pharmacy degrees in seven years. Students will be admitted into this program by Millersville University and complete a 3-year program in the Chemistry department that includes all courses required in the first three years (101.0 credits) of a B.S. chemistry degree. To remain in the program, each student must maintain an overall GPA of 3.0 as well as a science GPA of 3.0 at Millersville University. The students will then enroll in a 4-year Pharm. D. degree program at the pharmacy school of their choice. Upon successful completion of the first-year pharmacy program coursework, the chemistry department will accept a professional block of 19.0 credits from the pharmacy school. The 120.0 total credits earned will be the basis for awarding a B.S. chemistry degree from Millersville University, provided the student has completed all other requirements.

Major in Chemistry, BS

Code	Title	Hours
Credits Required for Major		
true		
Minimum GPA 2.0 for Major		
true		
Minimum credits for 50% residency		
true		
100 AND 200 LEVEL CHEMISTRY REQUIRED COURSES		
A grade of C or better is required in the 100/200 level courses before proceeding to the courses for which they are pre-requisites.		
CHEM 111	Introductory Chemistry 1 (C minimum)	4
CHEM 112	Introductory Chemistry 2 (C minimum)	4
CHEM 231	Organic Chemistry 1 (C minimum)	4
CHEM 232	Organic Chemistry 2 (C minimum)	4
CHEM 251	Inorganic Chemistry 1 (C minimum)	3
CHEM 265	Quantitative Analysis (C minimum)	4
300 AND 400 LEVEL CHEMISTRY REQUIRED COURSES		
CHEM 341	Physical Chemistry 1	4
CHEM 342	Physical Chemistry 2	4
CHEM 487	Seminar in Chemistry 1	0.5
CHEM 488	Seminar in Chemistry 2	0.5
Independent Study - Choose 1 hour from:		1
CHEM 498	Independent Study	
CHEMISTRY OPTIONS		
Option in Pre-Pharmacy - See separate block		
Total Hours		33

Option in Chemistry, Pre-Pharmacy, BS

Code	Title	Hours
Chemistry Electives - Choose 4 hours from:		4
CHEM 300	Co-Op Ed Experience in Chem	
CHEM 375	Environmental Chemistry	
CHEM 381	Polymer Chemistry 1	
CHEM 391	Advanced Laboratory 1	
CHEM 392	Advanced Laboratory 2	
CHEM 435	Advanced Organic Chemistry	
CHEM 452	Inorganic Chemistry	
CHEM 465	Analytical Chemistry	
CHEM 486	Topics in Chemistry	
CHEM 489	Honors Course	
CHEM 498	Independent Study	
CHEM 499	Departmental Honors	
1st Year Pharmacy School Credits		19
19 Credits will be awarded upon receipt of transcripts from first year of Pharmacy School.		
Total Hours		23

Req Related for Chemistry, BS

Code	Title	Hours
MATHEMATICS		
Calculus I or Honors Calculus - Choose 1 of the following:		4-5
MATH 161	Calculus 1	
MATH 163H	Honors Calculus 1	
MATH 211	Calculus 2	4
MATH 311	Calculus 3	4
MATH 235	Survey of Statistics	3
PHYSICS		
PHYS 231	Physics 1 with Calculus	5
PHYS 232	Physics 2 with Calculus	5
BIOLOGY COMPETENCY		
General Biology		
Competency may be demonstrated with credits earned for BIOL 100 through any of the following: 1) a successful score on either the national AP Biology exam or the Biology CLEP exam. 2) a passing grade for General Biology (BIOL 100) or equivalent.		
Total Hours		25-26

Specific pharmacy curricula have additional requirements; students should consult with their advisor or chemistry department chairperson.