



BACHELOR OF SCIENCE IN CHEMISTRY (APPLIED OPTION)

First Semester	Hours	Milestone(s)	Milestone Note	Term
CHEM 105 - General Chemistry I	3	Milestone Course	Core course. Prerequisite for CHEM 106	
CHEM 107 - General Chemistry Laboratory I	2	Milestone Course	Core course. Prerequisite for CHEM 108	
ENGL 101 - English Composition I	3		Prerequisite for ENGL 102, ENGL 112	
ART 101 or another G ED Arts ☞				
G ED 101 (NSM)	3			
Semester Total	14			

Second Semester	Hours	Milestone(s)	Milestone Note	Term
CHEM 106 - General Chemistry II	3	Milestone Course	Core course. Prerequisite for CHEM 206, CHEM 211	
CHEM 108 - General Chemistry Laboratory II	2	Milestone Course	Core course. Prerequisite for CHEM 207, CHEM 211	
MATH 206 - Analytic Geometry and Calculus I	4	Milestone Course	Prerequisite for CHEM 301	
ENGL 102 or ENGL 112 - English Composition II or Technical Writing	3			
Free Elective	3			
Semester Total	15			

Third Semester	Hours	Milestone(s)	Milestone Note	Term
CHEM 205 - Organic Chemistry I	3	Milestone Course	Core course. Prerequisite for CHEM 206	
CHEM 207 - Organic Chemistry Laboratory I	2	Milestone Course	Core course. Prerequisite for CHEM 208	
PHYS 201 or 231 - Gen Phys I or Phys for Scientists & Engineers I	4	Milestone Course	Prerequisite for CHEM 301	
PHYS 203 - General Physics Laboratory I	1	Milestone Course		
ENGL 150 or another G ED Humanities ☞	3			
COMM 100 or ENGL 201 - Speech Comm or Adv. Effective Comm	3			
Semester Total	16			

Fourth Semester	Hours	Milestone(s)	Milestone Note	Term
CHEM 206 - Organic Chemistry II	3	Milestone Course	Core course. Prerequisite for CHEM 301, CHEM 305, CHEM 331, CHEM 350, CHEM 425, CHEM 429	
CHEM 208 - Organic Chemistry Laboratory II	2	Milestone Course	Core course. Prerequisite for CHEM 301, CHEM 305	
CHEM 202 - Computer Chemistry	2	Milestone Course	Core course. Prerequisite for CHEM 301	
PHYS 202 or 232 - Gen Phys II or Phys for Scientists & Engineers II	4	Milestone Course		
PHYS 204 - General Physics Laboratory II	1	Milestone Course		
BIOL 120 - Fundamentals of Biology	4	Milestone Course	Prerequisite for CHEM 331	
Semester Total	16			

Fifth Semester	Hours	Milestone(s)	Milestone Note	Term
CHEM 211 - Introductory Analytical Chemistry	4	Milestone Course	Core course. Prerequisite for CHEM 416	
CHEM 301 - Physical Chemistry I	3	Milestone Course	Core course. Prerequisite for CHEM 416, CHEM 425. Pre- or Co-requisite for CHEM 411	
CHEM 303 - Physical Chemistry Laboratory I	2	Milestone Course		
CHEM 350 - Junior Seminar	1	Milestone Course	Core course. Prerequisite for CHEM 450	
CHEM 331 - Biochemistry	3	Milestone Course		
CHEM 333 - Biochemistry Laboratory	2	Milestone Course		
Semester Total	15			

Sixth Semester	Hours	Milestone(s)	Milestone Note	Term
CHEM Additional Course*	3	Milestone Course	Core course. *Choose from CHEM 312, CHEM 356, CHEM 357, or CHEM 425	
CHEM 305 - Introduction to Polymer Science	3	Milestone Course		
CHEM 460 - Directed Student Research	1	Milestone Course		
HIST 208 or another G ED History ☞	3			
HHP 157 or another G ED Wellness ☞	2			
POSC 210 or another G ED International Perspectives ☞	3			
Semester Total	15			

Seventh Semester	Hours	Milestone(s)	Milestone Note	Term
CHEM Additional Course*	3	Milestone Course	Core course. *Choose from CHEM 312, CHEM 356, CHEM 357, or CHEM 425	
CHEM 411 - Inorganic Chemistry	3	Milestone Course	Core Course	
CHEM Additional Course*	3	Milestone Course	Core course. *Choose from CHEM 312, CHEM 356, CHEM 357, or CHEM 425	
CHEM 461 - Directed Student Research	2	Milestone Course	At least 3 hours of Reseach credit is required of all majors	
PHYS 120 or another G ED Scientific Reasoning ☞	3-4			
Semester Total	14-15			

Eighth Semester	Hours	Milestone(s)	Milestone Note	Term
CHEM 416 - Instrumental Analysis	3	Milestone Course	Core course	
CHEM 418 - Instrumental Analysis Laboratory	2	Milestone Course	Core course	
CHEM 429 - Spectroscopic Methods	3	Milestone Course	Core course	
CHEM 450 - Senior Seminar	1	Milestone Course	Core course	
ECON 101 or another G ED Social Science ☞	3			
Free Elective	2-3			
Semester Total	14-15			

☞ See reverse of this page for General Education coursework options

CHEM 312 - Environmental Chemistry, CHEM 356 - Environmental Toxicology, CHEM 357 - Green Chemistry, or CHEM 425 - Advanced Organic Chemistry

GENERAL EDUCATION COMPONENT AND COURSEWORK OPTIONS

Courses with a  indicate that the course is recommended from a list of courses within a specific General Education Component. Students may choose to take another course within the same General Education Component in place of the recommended course. For descriptions of these courses, consult the online West Virginia State University Catalog.

Some prerequisite requirements are listed in the course schedule; others are at the end of the course descriptions in the University Catalog. Be sure you meet the prerequisites for a particular course before enrolling in the course.

Arts (3 credit hours)	Scientific Reasoning (3-4 credit hours)
ART 101 Studio I - Introduction to Art	BIOL 101 Principles of Biology (4 credits)
ART 101H Studio I – Introduction to Art (Honors)	BIOL 101H Principles of Biology (Honors) (4 credits)
COMM 170 The Art of the Theater	BIOL 108 Environmental Biology (4 credits)
MUSIC 107 Appreciation of Music	BIOL 110 Economic Biology (4 credits)
	BIOL 120 Fundamentals of Biology (4 credits)
International Perspectives (3 credit hours)	Natural Science (3 - 4 credit hours)
COMM 446 International Cinema	CHEM 100 Consumer Chemistry (3 credits)
INTS 210 Introduction to International Perspectives	CHEM 100H Consumer Chemistry (Honors) (3 credits)
INTS 250 Diversity in Africana Studies	CHEM 132 Introductory Environmental Chemistry (3 credits)
ECON 109 Intro to World Economy	PHYS 101 Physical Science Survey I (3 credits)
ENGL 350 World Literature Classical Era	PHYS 102 Physical Science Survey II (4 credits)
ENGL 351 World Literature Modern Era	PHYS 103 Elements of Physical Science (3 credits)
ENGL 440 Interpreting the Holocaust	PHYS 106 Intro. to Physical Geology (4 credits)
FREN 101 Beginning French	PHYS 107 Historical Geology (4 credits)
FREN 102 Elementary French	PHYS 110 Weather and Climate (4 credits)
FREN 205 A View of Changing Culture	PHYS 111 Energy and the Environment (4 credits)
FREN 443 West African Culture	PHYS 120 Astronomy (3 credits) (& optional) PHYS 121 Astronomy Lab
GERM 101 Beginning German	PHYS 121 Astronomy Lab (1 credit)
GERM 102 Elementary German	
SPAN 101 Beginning Spanish	
SPAN 102 Elementary Spanish	
SPAN 205 Spain and its Culture	
POSC 210 International Relations	
POSC 415 Arab Middle East	
PHIL 308 World Religions	
EDUC 319 Content Area Literacy	
EDUC 321 Teaching Writing in the Elementary School	
History (3 credit hours)	
HIST 201 World History	
HIST 201H World History (Honors)	
HIST 202 World History	
HIST 207 American History to 1865	
HIST 208 American History from 1865	
Humanities (3 credit hours)	
ART 100 Art Appreciation	
COMM 140 Film Appreciation	
COMM 140H Film Appreciation (Honors)	
ENGL 150 Introduction to Literature	
ENGL 150H Introduction to Literature (Honors)	
MUSC 104 American Music A Panorama	
Wellness (2 credit hours)	Social Science (3 credit hours)
HHP 122 Fitness for Living	BA 210 Business Law
HHP 157 Healthy Living	BA 312 Personal Finance
HHP 157H Healthy Living (Honors)	ECON 101 American Economy
HHP 242 Team Sports II	POSC 100 Introduction to Government and Politics
	POSC 101 American National Government
	POSC 101H American National Government (Honors)
	PSYC 151 General Psychology
	SOC 101 Introduction to Sociology
	SOC 305 Birth Death and Migration
	EDUC 201 Human Growth and Development

Degree Requirements & Graduation

Students are responsible for knowing and fulfilling requirements for graduation. Accordingly, they should carefully read the catalog and curriculum requirements. The University cannot assume responsibility for failure of students to fulfill catalog and curriculum requirements. If questions arise about requirements, students should consult with the appropriate department chair, college dean or the Registrar several semesters prior to graduation. See below listed requirements for Graduation and consult your respective year WVU Academic Catalog.

1. A cumulative grade point average of 2.0 (i.e., a C average) on all work attempted with the exception of developmental courses and courses with grades of P, K, W, and AUD.
2. A cumulative grade point average of 2.0 in major and minor (if applicable) courses. The department will identify the courses that count toward the major and the major cumulative grade point average.
3. Completion of the total number of hours required in the curriculum elected.
4. The necessary residence requirement for a degree.
5. Payment of all outstanding financial obligations to the University.
6. All grades of I and Q must be satisfied before graduation.