CHEMISTRY - BACHELOR OF ARTS

A Suggested Plan of Study for Students

This roadmap assumes student placement in MATH 1511G Calculus and Analytic Geometry I and ENGL 1110G Composition I. The contents and order of this roadmap may vary depending on initial student placement in mathematics and English. It is only a suggested plan of study for students and is not intended as a contract. Course availability may vary from fall to spring semester and may be subject to modification or change.

First Year		
Semester 1		**Credits**
ENGL 1110G	Composition I [1]	4
MATH 1511G	Calculus and Analytic Geometry I [1]	4
CHEM 1216	General Chemistry I Lecture and Laboratory for CHEM Majors	4
CHEM 2111	Explorations in Chemistry	1
Area IV: Social and Behavioral Science Course [2]		3
	Credits	**16**
Semester 2		
ENGL 2210G	Professional and Technical Communication Honors [1]	3
MATH 1521G	Calculus and Analytic Geometry II [1]	4
CHEM 1226	General Chemistry II Lecture and Laboratory for CHEM Majors	4
Area V: Humanities Course [2]		3
	Credits	**14**
Second Year		
Semester 1		
COMM 1115G	Introduction to Communication	3
CHEM 313	Organic Chemistry I [1]	3
CHEM 371	Analytical Chemistry [1]	4
Select one of the following:		4
PHYS 2110 & 2110L	Mechanics and Experimental Mechanics [1]	
PHYS 1230G & PHYS 1230L	Algebra-Based Physics I and Algebra-Based Physics I Lab [1]	
PHYS 2230G & PHYS 2230L	General Physics for Life Science I and Laboratory to General Physics for Life Science I	
PHYS 1310G & PHYS 1310L	Calculus -Based Physics I and Calculus -Based Physics I Lab	
Elective Course		3
	Credits	**17**
Semester 2		
CHEM 314 & CHEM 315	Organic Chemistry II and Organic Chemistry Laboratory [1]	5
Select one of the following:		4
PHYS 2140 & 2140L	Electricity and Magnetism and Electricity & Magnetism Laboratory [1]	
PHYS 1240G & PHYS 1240L	Algebra-Based Physics II and Algebra-Based Physics II Lab [1]	
PHYS 2240G & PHYS 2240L	General Physics for Life Science II and Laboratory to General Physics for Life Science II [1]	
PHYS 1320G & PHYS 1320L	Calculus -Based Physics II and Calculus -Based Physics II Lab [1]	
CHEM Emphasis Area Course [3]		3
Area VI: Creative and Fine Arts Course [2]		3
	Credits	**15**
Third Year		
Semester 1		
CHEM 430	Physical Chemistry: Thermodynamics, Kinetics, Quantum Chemistry, and Spectroscopy	3
VWW: Viewing a Wider World Course [4]		3
Elective Course		3
Elective Course		3
Elective Course		2
	Credits	**14**
Semester 2		
CHEM Emphasis Area Course [3]		3
CHEM Emphasis Area Course [3]		3
CHEM Upper-Division Elective Course [1]		3
Elective Course		4
Choose one from the following: [5]		
CHEM 456	Inorganic Structure and Bonding	
CHEM 472	Advanced Integrated Instrumental Analysis and Protein Biochemistry Laboratory	
Elective Course (3 credits)		
	Credits	**13**
Fourth Year		
Semester 1		
VWW: Viewing a Wider World Course [4]		3
CHEM Emphasis Area Upper-Division Course [3]		3
CHEM Upper-Division Elective Course		3
Upper-Division Elective Course		3
Elective Course		3
Choose one from the following: [5]		3
CHEM 471	Advanced Integrated Inorganic and Physical Chemistry Laboratory (if CHEM 456 or CHEM 472 was not completed in the previous term)	
Elective Course (3 credits)		
	Credits	**18**
Semester 2		
CHEM 443	Senior Seminar [1]	1
CHEM Emphasis Area Upper-Division Course [3]		3
CHEM Emphasis Area Upper-Division Course [3]		3
Upper-Division Elective Course		3
Elective Course		3
	Credits	**13**
	Total Credits	**120**

[1] These courses may have prerequisites and/or co-requisites, and it is the students responsibility for checking and fulfilling all those requirements.

[2] See the General Education (https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/) section of the catalog for a full list of courses.

[3] The Emphasis area is composed of courses outside either chemistry or biochemistry degrees (non-departmental and departmental requirements cannot be used for emphasis area credit). These courses must have a common theme, which complement (whenever possible)

principles learned on either chemistry or biochemistry. For example, astronomy and physics courses could be taken as an emphasis area in astrophysics. See a faculty mentor for approval of the courses to be used for an emphasis area. A minimum of 18 credits can be used as an Emphasis area (which could constitute a minor in some cases), but at least nine credits must be upper – division.

[4] See the Viewing a Wider World (https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/#viewingawiderworldtext) section of the catalog for a full list of courses.

[5] Selection course option - Departmental requirement includes a choice of one of the following: CHEM 456 Inorganic Structure and Bonding, CHEM 471 Advanced Integrated Inorganic and Physical Chemistry Laboratory, or CHEM 472 Advanced Integrated Instrumental Analysis and Protein Biochemistry Laboratory. If the student wishes to now take the CHEM offerings in the specific term they should add an elective course for 3 credits, however, the student must complete at least one of the above courses.