Chemistry BA, Biochemistry Emphasis

General Education Requirements

Students must satisfy the university and college general education requirements. Courses in chemistry may be used to meet the university's mathematics and life/natural science requirement. The college's foreign language requirement fulfills the departmental requirements for B.A. candidates. B.S. degree candidates are not required to take a foreign language: however, the American Chemical Society (ACS) states that the study of a foreign language is recommended, especially for students planning to pursue graduate studies in chemistry.

Satisfactory/Unsatisfactory Restrictions

Chemistry majors may not take required chemistry, mathematics, or physics courses on a satisfactory/unsatisfactory basis.

Related Area Requirements

Candidates must complete:

MATH 1100	Basic Calculus	3-5
or MATH 1800	Analytic Geometry and Calculus I	
PHYSICS 1011	Basic Physics I	3
PHYSICS 1011L	Basic Physics I Laboratory	1
PHYSICS 1012	Basic Physics II	3
PHYSICS 1012L	Basic Physics II Laboratory	1
Total Hours		**11-13**

Course Requirements

CHEM 1000	Chemistry: The Central Science	1
CHEM 1111	Introductory Chemistry I (MOTR CHEM 150L)	5
CHEM 1121	Introductory Chemistry II	5
CHEM 2223	Quantitative Analysis in Chemistry	4
CHEM 2612	Organic Chemistry I	3
CHEM 2622	Organic Chemistry II	3
CHEM 2633	Organic Chemistry Laboratory	2
CHEM 3022	Introduction to Chemical Literature	1
CHEM 3302	Physical Chemistry for The Life Sciences	3
CHEM 3412	Basic Inorganic Chemistry	3
CHEM 3643	Advanced Organic Chemistry Laboratory	2
CHEM 4712	Biochemistry	3
CHEM 4722	Advanced Biochemistry	3
CHEM 4733	Biochemistry Laboratory	2
CHEM 4897	Seminar in Chemistry	2
Total Hours		**42**

No more than 45 hours in chemistry may be applied toward the degree. Each chemistry major must present a seminar and pass a comprehensive examination during the senior year.

At least 12 credits of chemistry at the 3000 level or higher must be completed at UMSL.

Sample Plan of Study

First Year

Fall	Hours	Spring	Hours
INTDSC 1003[1]	1	CHEM 1121	5
CHEM 1000	1	MATH 1800 or 1100	5
CHEM 1111	5	EXPLORE - Humanities and Fine Arts	3
ENGL 1100	3	EXPLORE - Social Sciences	3
MATH 1035	2		
CORE - US History and Gonvernment	3		
	15		**16**

Second Year

Fall	Hours	Spring	Hours
CHEM 2223	3	CHEM 2622	3
CHEM 2612	3	CHEM 2633	2
PHYSICS 1011	3	PHYSICS 1012	3
PHYSICS 1011L	1	PHYSICS 1012L	1
FGN LANG 1001: Language and Culture I	5	FGN LANG 1002: Language and Culture II	5
	15		**14**

Third Year

Fall	Hours	Spring	Hours
CHEM 3022	1	CHEM 3302	3
CHEM 3412	3	CHEM 4722	3
CHEM 4712	3	EXPLORE - Social Sciences and Cultural Diversity (Choose one to fulfill both)	3
ENGL 3160	3	EXPLORE - Social Sciences	3
FGN LANG 2101: Language and Culture III	3	Elective or minor	3
Elective or minor	3		
	16		**15**

Fourth Year

Fall	Hours	Spring	Hours
CHEM 3643	2	CHEM 4897	2
CHEM 4733	2	EXPLORE - Humanities and Fine Arts	3
CORE - Communication Proficiency	3	EXPLORE - Social Sciences	3
EXPLORE - Humanities and Fine Arts	3	Elective or minor	3
Elective or minor	3	Elective or minor	3
Elective or minor	3		
	16		**14**

Total Hours: 121

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INTDSC 1003is required only for first-time freshmen and transfer students with less than 24 college credits.

Please Note: This plan is an example of what a four year plan could look like for a typical student pursuing the B.A. degree. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.