

This roadmap is a **suggested** semester-by-semester planning guide for this major. It is a model four-year plan, not a guaranteed sequence or contract. Course availability may vary from semester to semester. Roadmaps are not meant to cover every possibility. They are intended to provide guidance in planning your academic path. **Roadmaps should be reviewed in consultation with your advisor.**

KEY

Course Subject and Number:	Lists the course subject and number (ex. MATH 111; ARTH 101).		
Credit Hrs:	Lists how many credit hours the course is worth. Courses listed with a range of credit hours depend on course selection.		
Min. Grade:	Lists if the major has a minimum grade requirement for this course.		
Critical:	TIME = Timing. This course must be completed in the semester listed to ensure a timely graduation.		
GenEd	Indicates whether or not this major course can also fulfill a general education requirement.		
	ENGL: GenEd First Year Writing	HUMS: GenEd Humanities	SOSCI: GenEd Social Science
	FLANG: GenEd Foreign Language	MATH: GenEd Math	
	HIST: GenEd History	NATSCI: GenEd Natural Science	
Course Notes:	Lists important information about the course or the timing of the course.		

General Education Requirement

First-Year Writing: Complete English (ENGL) 110, Introduction to Academic Writing, or one of the approved course credit combinations satisfying the first-year writing general education requirement.	Math/Logic: Completion of MATH 120 or HONS 115 or transfer credit for any one of MATH 220, MATH 221, MATH 323 (any of which requires the comprehension of the content of MATH 120/HONS 115); or 6 credit hours from the remaining list of approved courses satisfying the math/logic general education requirement.
Foreign Language: Complete the 202-level or its equivalent or demonstrate proficiency at that level of an approved course satisfying the foreign language general education requirement.	Natural Science: Complete 8 credit hours of an introductory or higher sequence (of which 2 credit hours must be earned in the accompanying laboratories) from the list of approved course sequences satisfying the natural science general education requirement.
History: Complete one course in pre-modern history and one course in modern history from the list of approved courses satisfying the history general education requirement (6 credit hours). The two courses do not have to be taken from the same department or in sequence.	Social Sciences: Complete 6 credit hours from the list of approved courses satisfying the social science general education requirement.
Humanities: Complete 12 credit hours from the list of approved courses satisfying the humanities general education requirement with no more than 6 credit hours with the same acronym.	General Education Resources: Approved course listings for each requirement can be found in the Undergraduate Catalog (http://catalog.cofc.edu/).

Degree Requirements

Minimum GPA		Minimum Credit Hours
Major	Cumulative	122 credit hours
2.00	2.00	Additional hours are required for earning more than one degree. Consult your academic catalog

For additional information on course descriptions, pre-requisites and degree requirements for this major, please consult your [Undergraduate Catalog](#).

First Year

Semester One

Course Subject and Number	Credit Hrs.	Min. Grade	Critical	GenEd	Course Notes
CHEM 111/111L	4			NATSCI	Recommended minimum grade before proceeding to Chem 112 is a C
MATH 111	4			MATH	Pre-calculus
General Education Requirement	3-4				Recommend to select course that counts towards Gen Ed requirement too
General Education Requirement	3-4				English 110 or foreign language recommended

Semester Two

Course Subject and Number	Credit Hrs.	Min. Grade	Critical	GenEd	Course Notes
CHEM 112/112L	4			NATSCI	
MATH 120	4			MATH	
General Education Requirement	3-4				English or foreign language recommended
General Education Requirement	3-4				English or foreign language recommended
General Elective	3-4				

First Year Notes

Note 1: The General Education First-Year Writing requirement should be completed within the first or second semester.

Note 2: First-Year Experience Requirement: All entering students with less than one year of college experience are required to complete a [First-Year Experience](#) (First-Year Seminar (FYSM), a Learning Community (LC), or an Honors College First-Year Experience course) within their first three consecutive academic terms.

Second Year

Semester Three

Course Subject and Number	Credit Hrs.	Min. Grade	Critical	GenEd	Course Notes
CHEM 220/220L	5				Quantitative Analysis; 220L is a six hour lab; this class is offered both Spring and Fall terms
CHEM 231/231L	4				Organic Chemistry I; this class is offered both Spring and Fall terms
PHYS 111/111L	4			NATSCI	Completion of Physics prior to Chem 341/Chem 342 is recommended
General Education Requirement	3-4				

Semester Four

Course Subject and Number	Credit Hrs.	Min. Grade	Critical	GenEd	Course Notes
CHEM 232/232L	4				Note: recommended grade from 231 before proceeding to 232 is a C; this class is offered both Spring and Fall terms
PHYS 112/112L	4				
MATH 229	5				This course needs to be completed prior to taking Chem 341/Chem 342
General Education Requirement	3-4				

Second Year Notes

The position of Math 229 and Chem 220 can be reversed. Both are required before taking Chem 341 or Chem 342.

Note: Math 120-Math 220-Math 221 is an alternative math requirement option for chemistry and biochemistry majors and the recommended pathway for math or physics double majors or minors

Third Year

Semester Five

Course Subject and Number	Credit Hrs.	Min. Grade	Critical	GenEd	Course Notes
CHEM 341/341L	4				Math 229 and Chem 220 are pre-reqs; This class is only offered in the fall
CHEM 351	3				Biochemistry I; This class does not have an associated lab; Chem 351 is offered both Spring and Fall terms; Chem 232 is a pre-req
General Education Requirement	3-4				
General Education Requirement	3-4				
CHEM 481	2				Research is recommended; student must arrange to work with a faculty mentor; individual enrollment course

Semester Six

Course Subject and Number	Credit Hrs.	Min. Grade	Critical	GenEd	Course Notes
CHEM 342/342L	4				Chem 342 is only offered in the Spring
General Education Requirement	3-4				
General Education Requirement	3-4				
CHEM 482	2				Research is recommended; student must arrange to work with a faculty mentor; individual enrollment course
General Elective	3-4				

Third Year Notes

Note 1: Research can be taken for credit at CofC if the work is done at MUSC; Student must arrange for a faculty member to oversee the requirements of the course locally

Note 2: Chem 341 is no longer a pre-req for Chem 342

Note 3: The order of Chem 371/Chem 311/Chem 341/Chem 342/Chem 421 listed here is arbitrary and can be switched, but be aware that 371 and 341 are Fall only courses, and Chem 311, 421 and Chem 342 are spring only courses

Note: If you are a December graduate, plan on taking Chem 492, the 1 credit Senior Seminar Class, in the spring of your Junior Year.

Fourth Year

Semester Seven

Course Subject and Number	Credit Hrs.	Min. Grade	Critical	GenEd	Course Notes
CHEM 371/371L	4				Chem 371 is only offered in the Fall. Lab meets 6 hours/week; lecture 1 hour/week
CHEM Elective	1-3				Recommended: Modeling, Biochemistry II, Environmental Chemistry, etc.
General Education Requirement	3-4				
CHEM 490	1		TIME		Guest seminar format; can be repeated
CHEM 499	3				Optional: Continuation of research towards Bachelor's Essay (recommended)
General Education Requirement	3-4				

Semester Eight

Course Subject and Number	Credit Hrs.	Min. Grade	Critical	GenEd	Course Notes
CHEM 421/421L	4				Chem 421/421L is only offered in the spring; Chem 220 is pre-req
CHEM 311	3				Inorganic Chemistry is only offered in the spring
CHEM 312L	1				Inorganic Lab is only offered in the spring
General Education Requirement	3-4				recommended
CHEM 492	1		TIME		Spring only course!!
General Education Requirement	3-4				
CHEM 499	3				

Fourth Year Notes

Note 1: If student wants to continue research without writing a Bachelor's Essay, Chem 397 is a zero credit research course that is graded either Satisfactory or Unsatisfactory.

Note 2: The order of Chem 371/Chem 311/Chem 341/Chem 342/Chem 421 is arbitrary and can be switched, but be aware that 371 and 341 are Fall only courses, and Chem 311, Chem 421 and Chem 342 are spring only courses

Chem 490 is only offered in the Fall and Chem 492 is only offered in the Spring.