

**SUGGESTED STUDY PLAN FOR B.S. IN CHEMISTRY -
BIOCHEMISTRY CONCENTRATION (with MAC)**

See ACS Certification Option*

MXX = Minerva; CIC = College Requirement; CW = College Writing

Freshman Year	
<u>Fall</u>	<u>Sem. Hours</u>
CHE 111,112 General Chemistry I ^{F,S,Su} (MDA)	3+1
Foundations (MFND) (Chem Biochem Section) ^F	3
BIO 111 & 111L Principles of Biology I & Lab ^{F,S,Su}	3+1
ENG 101 (MWC)	3
	/ 14

Freshman Year	
<u>Spring</u>	<u>Sem. Hours</u>
CHE 114, 115 General Chemistry II ^{F,S,Su} (MNTS)	3+1
BIO 112 & BIO 112L Principles of Biology II & Lab ^{F,S,Su}	3+1
MAT 190 PreCalculus (MQR) ^{F,S,Su}	4
Oral Communications (MOC)	3
	/ 15

Sophomore Year	
<u>Fall</u>	<u>Sem. Hours</u>
CHE 342 Inorganic Chemistry ^F	3
CHE 351 ^{F,S,Su} ,353 ^F Organic Chem I & Lab	4+1
MAT 196 Calculus A (MQR) ^{F,S,Su}	4
Foreign Language (CIC1)	3
	/ 15

Sophomore Year	
<u>Spring</u>	<u>Sem. Hours</u>
CHE 352 Organic Chem II ^{S,Su}	3
CHE 355 Int Organic Chem Lab ^S	2
PHY 291 General Physics I ^S	4
MAT 296 Calculus B ^{F,S,Su}	4
Foreign Language (CIC2)	3/ 16

Junior Year	
<u>Fall</u>	<u>Sem. Hours</u>
CHE 331, 333 Quantitative Analysis ^F (CW)	3+1
PHY 292 General Physics II ^F	4
CT Humanities/Fine Arts (MHFA)	3
CT Social/ Behavioral Science (MSBS)	3
Foreign Language (CIC3)	3 / 17

Junior Year	
<u>Spring</u>	<u>Sem. Hours</u>
CHE 431, 433 Instrumental Analysis ^S	3+1
BIO 392 Genetics ^{F,S}	3
Diversity & Equity (MDEQ)	3
Health & Wellness (MHW)	3
Foreign Language (CIC4)	3/16

Senior Year	
<u>Fall</u>	<u>Sem. Hours</u>
CHE 401 Chemistry Seminar ^{F,S}	P/NP
CHE 456 Biochemistry I ^F	3
CHE 461, 463 Physical Chemistry & Lab ^F	4+1
Humanities (CIC) (Two courses)	6
CHE 392	2
	/16

Senior Year	
<u>Spring</u>	<u>Sem. Hours</u>
CHE 402 Chemistry Seminar ^{F,S}	1
CHE 462 Physical Chemistry ^S	3
CHE 457, 458 Biochemistry II & Lab ^S CW)	3+1
CHE 492 (3 credits total)	2
Social & Behavioral Science (CIC)	3
Global & Intercultural Engagement (MGIL)	3 / 16

*Students completing the BS Chemistry with Concentration in Biochemistry degree are close to completing the requirements necessary to have the degree certified by the American Chemical Society. By adding one lab course or research beyond 333, 353,355, 407, 433, 458 to the degree, the degree will be certified.

The Concentration in Biochemistry provides a specialization in biochemistry within the curriculum leading to the B.S. in Chemistry. This concentration is designed to prepare students for graduate programs in biochemistry, medicine and related professions, or for employment in biochemistry or biotechnology industries. The proper scheduling of courses is important, and the student should work closely with a biochemistry advisor when planning a schedule.

FOOTNOTES FOR B.S. WITH BIOCHEMISTRY CONCENTRATION STUDY PLAN

1. All majors must complete mathematics at least through MAT 296 Calculus B. Depending upon the individual mathematics background*, some students may start with MAT 190 rather than MAT 196. MAT 190 is a one-semester precalculus course for science majors. Some students may take MAT 181 Foundations of Calculus along with MAT 196. Majors are strongly advised to elect additional advanced mathematics courses. A Calculus Readiness Diagnostic Test should be taken. (*See <https://mathstats.uncg.edu/undergraduate/placement/calculus-diagnostic-test/>)
2. The requirement is Foreign Language through the Intermediate (204) level. If the student is able to begin Foreign Language at the intermediate level in the Freshman Year, a second year of language may not be required. Students who are native speakers of a second language may be exempted from the Foreign Language requirement.
3. The sequence listed here for meeting the Minerva Academic Requirements (MAC) and College additional requirements (CIC) (identified by capital letters in parentheses) is a suggestion only and may be arranged to fit each student's particular situation. Note: Two College Writing courses must be completed. Electives should be sufficient to complete the 120 semester hours required for the degree.
4. Only major requirement and related area requirement courses at or below the 300-level in which grades of C- or better are earned will be counted toward the major. Students must earn a C- or better in prerequisite major requirement and related area requirement courses before advancing to subsequent courses. Students must have an overall GPA of at least 2.0 in CHE courses at UNC Greensboro.
5. Advanced Biochemistry requirement: 3 credits in CHE 492-492 (Indep. Study). One additional advanced biology course (e.g., BIO 355 or 481) is strongly recommended.
6. Chemistry and Biochemistry majors can register for CHE 401 any time after achieving junior status. All must register for CHE 402 in their last semester. A grade will be given in the semester CHE 402 is completed, based on presentation and attendance in CHE 401 and CHE 402. All majors are encouraged to attend seminar even if not registered for CHE 401 or CHE 402.

Major Requirements

CHE 111, 112, 114, 115, 342, 331, 333, 351, 352, 353, 355, 401 (audit), 402, 431, 433, 456, 457, 458, 461, 462, 463

Related Area Requirements

1. Adv. Biochem: 3 credits from CHE 491, CHE 492
2. BIO 111, 112, 392
3. MAT 196, 296
4. PHY 291, 292