

PROGRAM SUMMARY

- **Credit Hours:** 120
- **Concentrations:** Biochemistry
- **Declaring the Major:** minimum cumulative and Chemistry GPA of 2.0; earn a C or better in CHEM 2132 or CHEM 3111 and pass MATH 1242, PHYS 2102 and PHYS 2102L; change of major form accepted year-round; advising session recommended to declare the major.
- **Advising (For the Major):** completed by your chemistry faculty advisor (please refer to your 49er Banner account to find your advisor); required during pre-registration every semester.
- **Advising (For General Education):** by chemistry faculty advisor and CLAS Advising Center.
- **Minimum Grades/GPA:** Must achieve a cumulative GPA of 2.0 or greater; maintain a minimum Chemistry GPA of 2.0 to remain in good academic standing within the department and graduate; and progress through CHEM 1251, 1251L, 1252, 1252L, 2131, 2131L, 2132, 2132L and 3111 in no more than three attempts per course.
- **Teacher Licensure:** Yes (BA degree with a minor in secondary education)
- **Evening Classes Available:** No (degree cannot be completed at night)
- **Weekend Classes Available:** No
- **Other Information:** undergraduate research opportunities; honors; early entry to MS Program.
- **Contact(s):** Ms. Susan Michael, Chemistry Advising Coordinator, Burson 140, 704-687-1660, smichael@uncc.edu

PROGRAM REQUIREMENTS

The Department of Chemistry offers two BS degree programs approved by the American Chemical Society (ACS) and two non-ACS-certified BS degree programs, which provide the background necessary for a career in industry or for graduate studies in chemistry and related fields. In addition, a BA degree in chemistry is available for students who plan to pursue a career in chemical industry, secondary education, or professional studies in areas such as pharmacy and optometry. Degree requirements for the BS, BA, and BS + MS degree programs are available online. A minimum chemistry GPA of 2.0 is required in the BS and BA degree programs. The BS degree is very structured and the BA degree is relatively structured.

Areas	Credit Hours	Description
Pre-Major/Prerequisites	-	
Major	32-48	Hours depend on degree and concentration. Required courses in the major will count towards university General Education requirements for Natural Sciences, Oral Communications and Writing Intensive in the Major requirement. Required courses in the related work will count towards university General Education requirements for Mathematics.
General Education (not satisfied by other major requirements)	21-24	Hours do not include those requirements which are satisfied within the major. Transfer students with an associate's degree are exempt from most General Education, but must complete Writing Intensive in the Major requirement.
Related Work	14-20	Mathematics and Physics courses. May be satisfied by a second major or a minor. Consult with an advisor.
Foreign Language	0-8	Foreign language proficiency through the 1202 level is required. Proficiency may be demonstrated by proficiency testing, 3 years of foreign language in high school, or 1201/1202 course completion.
Electives	20-53	As needed to complete 120 hours total.
Total Credit Hours	120	

SUGGESTED PLAN OF STUDY – B.S. IN CHEMISTRY

The schedule outlined below provides one possible route for completing the B.S. degree in Chemistry in four years; students may tailor the sample schedule to meet their needs. Students should consult with their academic advisor every semester to discuss progress towards obtaining their degree.

Freshman Year					
Course Number	Course Title	Credit Hours	General Education	W/O Course	Notes
<i>Fall Semester</i>					
CHEM 1251	General Chemistry I	3	X		Prerequisites: MATH 1100 with C or better (or equivalent math level) or CHEM 1200 with C or better
CHEM 1251L	General Chemistry I Laboratory	1	X		
MATH 1241	Calculus I	3	X		Prerequisite MATH 1103 or appropriate math level
UWRT 1103	Writing and Inquiry in Academic Contexts I and II (or UWRT 1104)	3-4	X		UWRT 1103 or UWRT 1104
LBST 11XX	LBST Series 1100: Arts and Society	3	X		
XXXX XXXX	Foreign Language 1201 (or Elective if needed)	3-4			
<i>Spring Semester</i>					
CHEM 1252	General Chemistry II	3	X		Prerequisite CHEM 1251+L with grade of C or better
CHEM 1252L	General Chemistry II Laboratory II	1			
MATH 1242	Calculus II	3	X		Prerequisite MATH 1241 with C or better
XXXX XXXX	Elective	3			
XXXX XXXX	Social Science General Education Requirement	3	X		
XXXX XXXX	Foreign Language 1202 (or Elective in needed)	3-4			

32-35 Credit Hours for Year

Sophomore Year					
Course Number	Course Title	Credit Hours	General Education	W/O Course	Notes
<i>Fall Semester</i>					
CHEM 2131	Organic Chemistry I	3			Prerequisite CHEM 1251+L, 1252+L with C or better
CHEM 2131L	Organic Chemistry I Laboratory	1			
PHYS 2101	Introductory Physics I	3			
PHYS 2101L	Introductory Physics I Laboratory	1			
LBST 2301	Critical Thinking and Communication	3	X		
XXXX XXXX	Two Electives	6			
<i>Spring Semester</i>					
CHEM 2132	Organic Chemistry II	3			Prerequisite CHEM 2131+L with grade of C or better
CHEM 2132L	Organic Chemistry II Laboratory	1			
PHYS 2102	Introductory Physics II	3			Prerequisite PHYS 1101+L with grade of C or better
PHYS 2102L	Introductory Physics II Laboratory	1			
LBST 2XXX	LBST 2101, LBST 2102, or LBST 22XX	3	X		
XXXX XXXX	MATH 2241, 2242, 2164, 2171, or STAT 3128	3			

31 Credit Hours for Year

Junior Year					
Course Number	Course Title	Credit Hours	General Education	W/O Course	Notes
<i>Fall Semester</i>					
CHEM 3111	Quantitative Analysis	4			Prerequisite CHEM 1252+L with grade of C or better
CHEM 3141	Physical Chemistry I (Fall Only)	3			Prereq CHEM 1252+L (C or better), MATH 1241, 1242, PHYS 2102+L, co-/pre-req Upper-level Math
CHEM 3141L	Physical Chemistry I Laboratory (Fall Only)	1			
CHEM 4900	Directed Undergraduate Research	2			Prerequisite: Consent of the research advisor
LBST 2XXX	LBST 2101, LBST 2102, or LBST 22XX	3	X		
XXXX XXXX	Writing Intensive Course	3	X	W	
<i>Spring Semester</i>					
CHEM 3142	Physical Chemistry II (Spring Only)	3			Prereq CHEM 3141+L (C or better), MATH 1241, 1242, PHYS 2102+L, co-/pre-req Upper-level Math
CHEM 3142L	Physical Chemistry II Laboratory (Spring Only)	1			
CHEM 3695	Chemistry Seminar I	1	X	W	Prereq CHEM major and CHEM 2131 (C or better)
CHEM 4900	Directed Undergraduate Research	1-2			Prerequisite: Consent of the research advisor
XXXX XXXX	MATH 2241, 2242, 2164, 2171, or STAT 3128	3			
XXXX XXXX	Two Electives	5-6			

30-32 Credit Hours for Year

Senior Year					
Course Number	Course Title	Credit Hours	General Education	W/O Course	Notes
<i>Fall Semester</i>					
CHEM 4165	Principles of Biochemistry I (or other CHEM elective)	3			Prerequisite CHEM 2132 with grade of C or better
CHEM 4121	Advanced Inorganic Chemistry (Fall Only)	4			Prerequisite CHEM 2132 + L with grade of C or better; Co-/Pre-requisite CHEM 3141
CHEM 4695	Chemistry Seminar II	1	X	W,O	Prerequisite CHEM 3695 (C or better) and C or better in one of the following courses: CHEM 2125, CHEM 2132, CHEM 2141, CHEM 3111, or CHEM 3141
XXXX XXXX	CHEM 4900 or Elective	3			
XXXX XXXX	Elective	3			
<i>Spring Semester</i>					
CHEM 4111	Instrumental Analysis (Spring Only)	4			Prerequisite CHEM 3111 and 3141+L (C or better)
CHEM 4133	Methods of Organic Structure Determination	2			Prerequisite CHEM 2132+L with grade of C or better
CHEM 4696	Chemistry Seminar III	1	X	W,O	Prerequisite CHEM 4695
XXXX XXXX	CHEM 4900 or Elective	3			
XXXX XXXX	One or more Electives	3-6			

27-30 Credit Hours for Year

SUGGESTED PLAN OF STUDY – B.S. IN CHEMISTRY WITH OPTION IN BIOCHEMISTRY

The schedule outlined below provides one possible route for completing the B.S. degree in Chemistry with a concentration in Biochemistry in four years; students may tailor the sample schedule to meet their needs. Students should consult with their academic advisor every semester to discuss progress towards obtaining their degree.

Freshman Year					
Course Number	Course Title	Credit Hours	General Education	W/O Course	Notes
<i>Fall Semester</i>					
CHEM 1251	Principles of Chemistry I	3	X		Prerequisites: MATH 1100 with C or better (or equivalent test score) or CHEM 1200 with C or better
CHEM 1251L	Principles of Chemistry I Laboratory	1	X		
MATH 1241	Calculus I	3	X		Prerequisite MATH 1103 or appropriate math level
UWRT 1103	Writing and Inquiry in Academic Contexts I and II (or UWRT 1104)	3-4	X		UWRT 1103 or UWRT 1104
LBST 11XX	LBST Series 1100: Arts and Society	3	X		
XXXX XXXX	Foreign Language 1201 (or Elective if needed)	3-4			
<i>Spring Semester</i>					
CHEM 1252	Principles of Chemistry II	3	X		Prerequisite CHEM 1251+L with grade of C or better
CHEM 1252L	Principles of Chemistry II Laboratory II	1			
MATH 1242	Calculus II	3	X		Prerequisite MATH 1241 with C or better
XXXX XXXX	Elective	3			
XXXX XXXX	Social Science General Education Requirement	3	X		
XXXX XXXX	Foreign Language 1202 (or Elective in needed)	3-4			
					32-35 Credit Hours for Year

Sophomore Year					
Course Number	Course Title	Credit Hours	General Education	W/O Course	Notes
<i>Fall Semester</i>					
CHEM 2131	Organic Chemistry I	3			Prerequisite CHEM 1251+L, 1252+L with C or better
CHEM 2131L	Organic Chemistry I Laboratory	1			
PHYS 2101	Introductory Physics I	3			
PHYS 2101L	Introductory Physics I Laboratory	1			
LBST 2301	Critical Thinking and Communication	3	X		
XXXX XXXX	Elective	3			
<i>Spring Semester</i>					
CHEM 2132	Organic Chemistry II	3			Prerequisite CHEM 2131+L with grade of C or better
CHEM 2132L	Organic Chemistry II Laboratory	1			
PHYS 2102	Introductory Physics II	3			Prerequisite PHYS 1101+L with grade of C or better
PHYS 2102L	Introductory Physics II Laboratory	1			
LBST 2XXX	LBST 2101, LBST 2102, or LBST 22XX	3	X		
XXXX XXXX	MATH 2241, 2242, 2164, 2171, or STAT 3128	3			
					28 Credit Hours for Year

Junior Year					
Course Number	Course Title	Credit Hours	General Education	W/O Course	Notes
<i>Fall Semester</i>					
CHEM 3111	Quantitative Analysis	4			Prerequisite CHEM 1252+L with grade of C or better
CHEM 3141	Physical Chemistry I (Fall Only)	3			Prereq CHEM 1252+L (C or better), MATH 1241, 1242, PHYS 2102+L, co-/pre-req Upper-level Math
CHEM 3141L	Physical Chemistry I Laboratory (Fall Only)	1			
CHEM 4900	Directed Undergraduate Research	2			Prerequisite: Consent of the research advisor
LBST 2XXX	LBST 2101, LBST 2102, or LBST 22XX	3	X		
BIOL 2120	General Biology I (<i>Recommended, not required</i>)	3			
<i>Spring Semester</i>					
CHEM 3142	Physical Chemistry II (Spring Only)	3			Prereq CHEM 3141+L (C or better), MATH 1241, 1242, PHYS 2102+L, co-/pre-req Upper-level Math
CHEM 3142L	Physical Chemistry II Laboratory (Spring Only)	1			
CHEM 3695	Seminar	1	X	W	Prereq CHEM major and CHEM 2131 (C or better)
CHEM 4900	Directed Undergraduate Research	1-2			Prerequisite: Consent of the research advisor
XXXX XXXX	MATH 2241, 2242, 2164, 2171, or STAT 3128	3			
BIOL 2130	General Biology II (<i>Recommended, not required</i>)	3			
BIOL 2130L	General Biology II Laboratory (<i>Recommended, not required</i>)	2			
					30-31 Credit Hours for Year

Senior Year					
Course Number	Course Title	Credit Hours	General Education	W/O Course	Notes
<i>Fall Semester</i>					
CHEM 4165	Principles of Biochemistry I	3			Prerequisite CHEM 2132 with grade of C or better
CHEM 4165L	Principles of Biochemistry I Laboratory	1			Prerequisite CHEM 2132L with grade of C or better
CHEM 4121	Advanced Inorganic Chemistry (Fall Only)	4			Prerequisite CHEM 2132 + L with grade of C or better; Co-/Pre-requisite CHEM 3141
CHEM 4695	Chemistry Seminar I	1	X	W,O	Prerequisite CHEM 3695 (C or better) and C or better in one of the following courses: CHEM 2125, CHEM 2132, CHEM 2141, CHEM 3111, or CHEM 3141
BIOL 3111	Cell Biology (<i>Recommended, not required</i>)	3			
XXXX XXXX	CHEM 4900 or Elective	2-3			
<i>Spring Semester</i>					
CHEM XXXX	CHEM 4111 or CHEM 4171 (both courses are Spring Only)	4			
CHEM 4166	Principles of Biochemistry II (Spring Only)	3			Prerequisite CHEM 4165 with grade of C or better
CHEM 4696	Chemistry Seminar II	1	X	W,O	Prerequisite CHEM 4695
XXXX XXXX	CHEM 4900 or Elective	3			
XXXX XXXX	Writing Intensive Course	3	X	W	
XXXX XXXX	Elective	3			
					31 Credit Hours for Year

ADVISING RESOURCES

- General Education Requirements for ALL Students: ucol.uncc.edu/general-education
- Undergraduate Catalog: catalog.uncc.edu
- Central Advising website: advising.uncc.edu
- College of Liberal Arts & Sciences advising website: clas.uncc.edu/students/advising-news/
- University Advising Center website: advisingcenter.uncc.edu