# **BIOCHEMISTRY B.A.**



### **ACADEMIC ADVISING**

Partnering with students to successfully navigate college

**Location:** Main Hall 208 **Phone:** 719.255.3260

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• Drop In Advising: Most Wednesdays, 1:00pm - 4:00pm Prospective Students: <a href="https://www.uccs.edu/admissions/contact">www.uccs.edu/admissions/contact</a>

### **GENERAL ACADEMIC INFORMATION**

#### **Minimum Graduation Requirements**

- 1. 120 credit hours
- 2. 45 upper-division credit hours (3000-4999 level)
- 3. 2.0 CU cumulative GPA
- Residency: Last 30 credit hours of degree must be completed while registered in the College of Letters, Arts, and Sciences at UCCS

#### **Student Responsibilities**

Students are required to know and follow:

- All academic policies set forth by the University, College, and academic department in the UCCS Catalog: <u>catalog.uccs.edu</u>
- All course prerequisites designated by the University. Failure to meet course prerequisites may result in an administrative drop of the course from a student's schedule. See degree audit for course prerequisites within the academic major.

#### **MAJOR INFORMATION**

Chemistry is the science about substances, their composition, structure, properties, and interactions. Chemistry helps explain the world and its workings and plays an important role in our lives. Chemists have contributed a great deal to technical advances of society and have made many important contributions to modern life. Everything is made from one or more chemical elements that occur in nature. Chemists use different kinds of chemical processes to make the elements found in nature more useful, and they create countless products that make our lives healthier, easier, and more enjoyable. There are as many specialties as there are areas of application of chemical principles. Biochemistry is the study of the structure, composition, and chemical reactions of substances in living systems.

Major Requirements								
Biochemistry Major	Course/Area	Course/Area Course Title						
(52 hours)	CHEM 1401/1402	General Chemistry I and Lab I	5					
	CHEM 1511/1513	General Chemistry for Majors II and Lab II	5					
Requires a minimum of 52 credit hours of CHEM course work	CHEM 2201	Introduction to Biochemical Principles						
Hours of Chelvi Course work	CHEM 3101/3102	Organic Chemistry I and Lab I	4					
Requires a minimum of 16 credit	CHEM 3111/3112	Organic Chemistry II and Lab II	4					
hours of upper-division (3000-4999	CHEM 4001/4002	001/4002 Analytical Chemistry and Lab						
level) CHEM course work.	CHEM 4221	Biochemistry I	3					
	CHEM 4222	Biochemistry Laboratory						
Must maintain a minimum 2.0 major	CHEM 4231	Biochemistry II	3					
GPA (all CHEM courses) to graduate.	CHEM 4701	Biophysical Chemistry (spring only)	3					
a All auviliant requirements must be	CHEM 4921	Biochemistry Capstone	3					
All auxiliary requirements must be completed in addition to the required .	Electives	Complete 12 hours of upper-division (3000 + level) Chemistry Electives. Up to 6 hours may be from CHEM 4904/4905.	12					
major courses.	Auxiliary Requirements							
	BIOL 1350	General Biology: Intro to the Cell	3					
	MATH 1330	Calculus for Life Sciences	4					
	PES 1110/1160	General Physics I and Lab I	5					
	PES 1120/2160	General Physics II and Lab II	5					

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G	General Education and Elective F	Requirements			
Composition (6 hours)	<ol> <li>ENGL 1310</li> <li>ENGL 1410</li> <li>PORT 3000 (0 Credits) – Writing Portfolio</li> </ol>				
Reasoning Skills (4 hours)	1. MATH 1330 2. CHEM 4001				
Area Requirements (28 hours)  • Maximum 2 courses from any one discipline may be applied to the area	<ol> <li>Humanities – 9 credit hours of which 3 cred</li> <li>Social Sciences – 9 credit hours</li> <li>Natural Sciences – as listed in course requirements</li> </ol>	dits must be HUM3990. rements PES 1110, PES 1120, PES 1160, PES 2160			
requirements  Courses may not be taken pass/fail	<b>NOTE:</b> Cannot select courses from primary major courses for area requirements.				
Oral Communication, Cultural Diversity, and Global Awareness Requirements	One course from each list (see degree audit). All cours general education or major requirements.	es that fulfill these requirements may also count towards other			
Compass Curriculum	Component	Course			
(12 hours)	Gateway	GPS 1010			
Explore and Navigate courses must be	Explore – Arts, Humanities and Cultures	See Degree Audit			
outside major and area requirements	Explore – Society, Behavior and Health	See Degree Audit			
Writing Intensive, Inclusiveness, and	Explore – Physical and Natural World	BIOL 1350			
Sustainability courses can count	Navigate	HUM 3990 (included in LAS area requirements)			
towards other requirements within	Summit	CHEM 4921 (included in major requirements)			
degree	Writing Intensive Courses (WIC) Two courses with one upper-division (3000+ level)	<ol> <li>HUM 3990 (included in LAS area requirements)</li> <li>See Degree Audit</li> </ol>			
	Inclusiveness	See Degree Audit			
	Sustainability	See Degree Audit			
<b>General Electives</b> (18 hours)	Complete additional courses to meet total and upper-	division requirements for your degree program.			

## **Four-Year Degree Plan**

Please note that this is an *example* degree program and your program may vary. **Students are responsible for completing all course prerequisites.**| J | FALL | Hours | J | SPRING Hours

		V	I TALL	Hours	V	J T KING	Hours
Year One	пe		ENGL 1310	3		ENGL 1410	3
	ō		CHEM 1401/1402	5		CHEM 1511/1513	5
	В		MATH 1330	4		BIOL 1350	3
	Ye		GPS 1010	3		Explore – Society, Behavior and Health Course	3
			TOTAL	15		TOTAL	14

	1	FALL	Hours	J	SPRING	Hours
9		CHEM 3101/3102	4		CHEM 3111/3112	4
≥		PES 1110/1160	5		PES 1120/2160	5
ā		General Elective	3		CHEM 2201	3
Ϋ́e		Explore – Arts, Humanities & Cultures Course	3		Humanities Elective	3
		TOTAL	15		TOTAL	15

ā	J	FALL	Hours	J	SPRING	Hours
		CHEM 4001/4002	4		CHEM 4222	3
ıre		CHEM 4221	3		CHEM 4231	3
F		Core HUM	3		CHEM 4701	3
ear		General Elective	3		UD (Upper-Division) CHEM Elective	4
۶		Social Science Elective	3		General Elective	3
		TOTAL	16		TOTAL	16

	1	FALL	Hours	1	SPRING	Hours
_		CHEM 4921	3		UD CHEM Elective	4
T		Humanities Elective	3		UD CHEM Elective	4
<u>.</u>		Social Science Elective	3		General Elective	3
ea		General Elective	3		Social Science Elective	3
<b>&gt;</b>		General Elective	3			
		TOTAL	15		TOTAL	14