BIOCHEMISTRY B.A.

Pre-Med Option



ACADEMIC ADVISING

Partnering with students to successfully navigate college

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

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Appointments: <u>www.uccs.edu/advising/current-students</u>

• Drop In Advising: Most Wednesdays, 1:00pm - 4:00pm Prospective Students: www.uccs.edu/admissions/contact

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 Title Credit Ho										
	(49 hours)	CHEM 1401/1402	General Chemistry I	5							
		CHEM 1511/1513	General Chemistry for Majors II and Lab II	5							
•	Requires a minimum of 49 credit hours of CHEM course work	CHEM 2201	Introduction to Biochemical Principles	3							
		CHEM 3101/CHEM 3102	Organic Chemistry I and Lab I	4							
•	Requires a minimum of 16 credit	CHEM 3111/CHEM 3112	Organic Chemistry II and Lab II	4							
	hours of upper-division (3000-4999	CHEM 4001/CHEM 4002	Analytical Chemistry and Lab	4							
	level) CHEM course work.	CHEM 4201	Current Perspectives in Science and Medicine	3							
		CHEM 4221	Biochemistry I	3							
•	Must maintain a minimum 2.0 major	CHEM 4222	Biochemistry Laboratory	3							
	GPA (all CHEM courses) to graduate.	CHEM 4231	Biochemistry II	3							
	All auxiliary requirements must be completed in addition to the required	CHEM 4701	Biophysical Chemistry (spring only)	3							
•		CHEM 4921	Biochemistry Capstone	3							
	major courses.	Electives	Complete 6 hours of upper-division (3000+ level) Chemistry Electives. Up to 6 hours may be from CHEM 4904/4905.	6							
			Auxiliary Requirements	equirements							
		BIOL 1300/1310	General Biology: Organismic Biology and Lab	4							
		BIOL 1350/1360	General Biology: Introduction to the Cell and Lab	4							
		MATH 1330	Calculus for Life Sciences	4							
		PES 1110/1160	General Physics I and Lab	5							
		PES 1120/2160	General Physics II and Lab	5							
		PHIL 3130	Biomedical Ethics								
		OR PHIL 3160	Philosophical Issues in Death & Dying	3							
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G	General Education and Elective F	Requirements			
Composition (6 hours)	ENGL 1310 ENGL 1410 PORT 3000 (0 Credits) – Writing Portfolio				
Reasoning Skills (4 hours)	1. MATH 1330 2. CHEM 4001				
Area Requirements (27 hours) Maximum 2 courses from any one discipline may be applied to the area	 Humanities – 9 credit hours – ENGL 1500, H Social Sciences – 9 credit hours - PSY 1000, Natural Sciences – BIOL 1300, BIOL 1310, P 	SOC 1110 and one other ES 1110, PES 1120			
requirements Courses may not be taken pass/fail Oral Communication, Cultural Diversity, and Global Awareness Requirements	NOTE: Cannot select courses from primary major courses for area requirements. One course from each list (see degree audit). All courses that fulfill these requirements may also count towards other general education or major requirements.				
Compass Curriculum	Component	Course			
 (12 hours) Explore and Navigate courses must be outside major and area requirements Writing Intensive, Inclusiveness, and Sustainability courses can count towards other requirements within degree 	Gateway Explore – Arts, Humanities and Cultures Explore – Society, Behavior and Health Explore – Physical and Natural World Navigate Summit Writing Intensive Courses (WIC) Two courses with one upper-division (3000+ level) Inclusiveness	GPS 1010 See Degree Audit See Degree Audit BIOL 1350 (included in auxiliary requirements) HUM 3990 (included in LAS area requirements) CHEM 4921 (included in major requirements) 1. HUM 3990 (included in LAS area requirements) 2. CHEM 1513 (included in major requirements) See Degree Audit			
General Electives (16 hours)	Sustainability Complete additional courses to meet total and upper-	See Degree Audit 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
One		ENGL 1310	3		ENGL 1410	3
		CHEM 1401/1402	5		CHEM 1511/1513	5
ar		BIOL 1300/1310	4		BIOL 1350/1360	4
Ϋ́		GPS 1010	3		MATH 1330	4
		TOTAL	15		TOTAL	16

	1	FALL	Hours	J	SPRING	Hours
9		CHEM 3101/3102	4		CHEM 3111/3112	4
≥		PES 1110/1160	5		PES 1120/2160	5
ear		PSY 1000	3		CHEM 2201	3
Υe		Explore – Arts, Humanities & Cultures Course	3		ENGL 1500	3
		TOTAL	15		TOTAL	15

ē	1	FALL	Hours	J	SPRING	Hours
		CHEM 4001/4002	4		CHEM 4201	3
٦re		CHEM 4221	3		CHEM 4231	3
F		Explore – Society, Behavior and Health Course	3		CHEM 4222	3
ear		General Elective	3		CHEM 4701	3
>					General Elective	3
		TOTAL	13		TOTAL	15

	J	FALL	Hours	J	SPRING	Hours
_		CHEM 4921	3		UD (Upper-Division) CHEM Elective	3
, T		PHIL 3130 OR PHIL 3160	3		UD CHEM Elective	4
F.		SOC 1110	4		Social Science Elective	2
ea		General Elective	3		General Elective	3
>		General Elective	3		General Elective	1
		TOTAL	16		TOTAL	13