CHEMISTRY B.S.



ACADEMIC ADVISING

Partnering with students to successfully navigate college

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

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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.

Major Requirements								
BS Chemistry Major	Course/Area	Course Title	Credit Hours					
(56 hours)	CHEM 1401/1402	General Chemistry I and Lab	5					
	CHEM 1511/1513	General Chemistry for Majors II and Lab	5					
Requires a minimum of 56 credit hours of CHEM course work	CHEM 3201/3203	Organic Chemistry for Majors I and Lab	5					
nours of CHEW Course work	CHEM 3211/3213	Organic Chemistry for Majors II and Lab	5					
Requires a minimum of 16 credit	CHEM 4001/4002	Analytical Chemistry I and Lab	4					
hours of upper-division (3000-4999	CHEM 4011/4012	Practical Instrumental Analysis and Lab						
level) CHEM course work.	CHEM 4101	Physical Chemistry: Quantum Mechanics and Molecular Spectroscopy	3					
All CHEM courses must have a grade	CHEM 4102	Experimental Physical Chemistry: Quantum Mechanics and Molecular Spectroscopy	1					
of "C" or better.	CHEM 4111	Physical Chemistry: Thermodynamics and Kinetics	3					
	CHEM 4112	Experimental Physical Chemistry: Thermodynamics and Kinetics	1					
•	CHEM 4211	Biochemistry Principles	3					
	CHEM 4301	Inorganic Chemistry I	3					
	CHEM 4311	Inorganic Chemistry II	3					
	CHEM 4312	Advanced Inorganic Chemistry Lab	1					
	CHEM 4911	Chemistry Capstone	3					
	Electives	Complete 6 hours of Upper-Division (3000+ level) Chemistry Electives. Up to 6 hours may be from CHEM 4904/4905.	6					
	Auxiliary Requirements							
	BIOL 1350	General Biology II	3					
	MATH 1350	Calculus I	4					
	MATH 1360	Calculus II	4					
	MATH 2350	Calculus III	4					
	PES 1110/1160	General Physics I and Lab	5					
	PES 1120/2160	General Physics II and Lab	5					
	PES 2130	General Physics III	3					

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G	General Education and Elective F	Requirements				
Composition (6 hours)	1. ENGL 1310 2. ENGL 1410 3. PORT 3000 (0 Credits) – Writing Portfolio					
Reasoning Skills (4 hours)	1. MATH 1350 2. CHEM 4001					
Area Requirements (27 hours) • Maximum 2 courses from any one discipline may be applied to the area	 Humanities – 9 credit hours of which 3 cred Social Sciences – 9 credit hours Natural Sciences – as listed in course requirements 	dits must be HUM3990. rements PES 1110, PES 1120, PES 1160, PES 2160				
requirements Courses may not be taken pass/fail	NOTE: 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 4911 (included in major requirements)				
degree	Writing Intensive Courses (WIC) Two courses with one upper-division (3000+ level)	 HUM 3990 (included in LAS area requirements) CHEM 1513 (included in major requirements) 				
	Inclusiveness	See Degree Audit				
	Sustainability	See Degree Audit				
General Electives (3 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
Je		ENGL 1310	3		ENGL 1410	3
ō		CHEM 1401/1402	5		CHEM 1511/1513	5
ä		MATH 1350	4		MATH 1360	4
Ϋ́		GPS 1010	3		Explore – Arts, Humanities & Cultures Course	3
		TOTAL	15		TOTAL	15

0,	1	FALL	Hours	J	SPRING	Hours
		CHEM 3201/3203	5		CHEM 3211/3213	5
≥		MATH 2350	4		PES 1120/2160	5
ear		PES 1110/1160	5		BIOL 1350	3
Υe		Explore – Society, Behavior and Health Course	3		General Electives	3
		TOTAL	17		TOTAL	16

	J	FALL	Hours	J	SPRING	Hours
ee		CHEM 4001/4002	4		CHEM 4011/4012	5
Jr.		CHEM 4101	3		CHEM 4111	3
ΙĒ		CHEM 4102	1		CHEM 4112	1
ear		CHEM 4211	3		PES 2130	3
× ×		HUM 3990	3		Social Science Elective	3
		TOTAL	14		TOTAL	15

<u>.</u>	1	FALL	Hours	1	SPRING	Hours
		CHEM 4301	3		CHEM 4311	3
l o		CHEM 4911	3		CHEM 4312	1
L.		Upper-Division (UD) CHEM Elective	3		UD CHEM Elective	3
ea		Humanities Elective	3		Humanities Elective	3
>		Social Science Elective	3		Social Science Elective	3
		TOTAL	15		TOTAL	13