

## College of Letters, Arts and Sciences – BS Chemistry

### Contact Information:

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### Student Success Center Advising Hours:

Monday: 9am-5pm Walk-in Advising  
Tuesday-Friday: 9am-4pm Appointments Only

To schedule an appointment, call 719-255-3260. The Student Success Center is located in Main Hall 208.

## General Academic Information

### Academic Policies

It is the responsibility of each student to know and follow all Academic policies established by the University and the College of Letters, Arts & Sciences (LAS) that are set forth in the Catalog ([catalog.uccs.edu](http://catalog.uccs.edu)).

### Course Prerequisites

Students are responsible for knowing and completing all course prerequisites. Course prerequisites are strictly enforced for all classes at UCCS.

### Restrictions and Limitations

Students may apply a maximum of 30 credit hours towards the bachelor's degree from course work taken outside the College of Letters, Arts & Sciences. Students may apply a maximum of 8 credit hours of independent study towards the major area of study and a maximum of 16 credit hours towards the bachelor's degree. Students may apply a maximum of 21 credit hours of Military Science/ROTC towards general electives and towards the bachelor's degree.

### Probation/Suspension

To remain in good academic standing within the College of Letters, Arts & Sciences, students must maintain a cumulative CU GPA of 2.0, or better. Students whose cumulative CU GPA falls below a 2.0 will be placed on probation for the next semester in which they are enrolled. While on probation students must achieve a minimum semester GPA of a 2.25. If the required semester GPA is not met, the student will be suspended from the College of Letters, Arts & Sciences for a full academic year (Fall and Spring semesters). PLEASE NOTE: *While on probation, registration for the subsequent semester will be blocked until final grades are posted for the current semester. This is to verify that the minimum semester GPA for each student has been fulfilled.*

### Compass Curriculum

Compass Curriculum is the campus-wide general education program at UCCS. The Compass Curriculum has multiple components many of which will coincide with the degree requirements listed in this guide. Please visit the Compass Curriculum website at [www.uccs.edu/compasscurriculum](http://www.uccs.edu/compasscurriculum), review your degree audit, or check out the Compass Curriculum advising guide for specific course details. The required components are listed below and referenced in the guide.

#### REQUIRED COMPASS CURRICULUM COMPONENTS:

Component	Course
<b>Gateway</b>	GPS 1010
<b>Explore<sup>1</sup></b> – Arts, Humanities and Cultures	See List
<b>Explore<sup>1</sup></b> – Society, Behavior and Health	See List
<b>Explore<sup>1</sup></b> – Physical and Natural World	See List
<b>Navigate<sup>2</sup></b>	HUM 3990
<b>Summit</b>	CHEM 4911
<b>Writing Intensive Course (WIC)<sup>3</sup></b> <i>Two courses with at least one upper-division (3000+ level).</i>	CHEM 1331 HUM 3990
<b>Inclusiveness<sup>3</sup></b>	See List
<b>Sustainability<sup>3</sup></b>	See List

<sup>1</sup> Explore must be outside major and area requirements.

<sup>2</sup> Navigate must be outside major requirements.

<sup>3</sup> Can count towards other requirements within the Compass Curriculum or within a student's degree program.



# DEPARTMENT OF CHEMISTRY/BIOCHEMISTRY – BS CHEMISTRY

Department website: [www.uccs.edu/chemistry](http://www.uccs.edu/chemistry)

Degree Requirements	Courses					
<p><b>BS Chemistry Major</b> (56 hours)</p> <p>The Chemistry major requires a minimum of 56 credit hours of CHEM course work and a minimum of 16 credit hours of upper-division (3000+ level) CHEM course work.</p> <p>All CHEM courses must have a grade of "C" or better.</p> <p>All auxiliary requirements must be completed in addition to the required major courses.</p>	Course Number	Course Title				Credit Hours
	CHEM 1301	General Chemistry I				5
	CHEM 1331	General Chemistry II for Majors				5
	CHEM 3201/CHEM 3203	Organic Chemistry I and Lab for Majors				5
	CHEM 3211/CHEM 3213	Organic Chemistry II and Lab for Majors				5
	CHEM 4001/CHEM 4002	Analytical Chemistry I and Lab				4
	CHEM 4011/4012	Practical Instrumental Analysis and Lab				5
	CHEM 4101	Physical Chemistry: Quantum Mechanics and Molecular Spectroscopy				3
	CHEM 4102	Experimental Physical Chemistry: Quantum Mechanics and Molecular Spectroscopy				1
	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 4911	Chemistry Capstone				2
	Electives	<i>Complete 8 hours of Upper Division (3000+ level) Chemistry Electives. Up to 8 hours may be CHEM 4904/4905.</i>				8
	<b>Auxiliary Requirements</b>					
	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	
<p><b>Composition</b> (6 hours)</p>	<i>Complete ENGL 1310, 1410, and the Writing Portfolio.</i>					
	ENGL 1310	Rhetoric & Writing I				3
	ENGL 1410	Rhetoric & Writing II				3
	PORT 3000	Writing Portfolio Assessment				0
<p><b>Reasoning Skills</b> (4 hours)</p>	Complete the courses listed below. Please note that CHEM 4001 is a required major course and MATH 1350 is part of the auxiliary requirements.					
	MATH 1350	CHEM 4001				
<p><b>Area Requirements</b> (27 hours)</p> <p>All LAS students are required to complete 9 credit hours in each of three areas - humanities, social sciences, and natural sciences. The total requirement is 27 hours.</p> <p>Specific Limitations: &gt; No more than two courses</p>	<b>HUMANITIES</b> – Complete 9 hours from the list of courses below. <i>Course selection must include one occurrence of HUM 3990.</i>					
	AH 1000	AH 1001	AH 2800	AH 2810	AH 2820	AH 2860
	AH 2890	AH 3430	COMM 2250	COMM 3100	COMM 3500	COMM 4000
	ENGL 1500	ENGL 2600	ENGL 2610	ENGL 3320	ENGL 3900	FCS 3180
	FCS 3190	FCS 3240	FCS 3690	FCS 3890	FCS 4210	FILM 1000
	FILM 2000	FILM 3690	FR 3240	GER 3180	GER 3190	HIST 1110
	HIST 1120	HIST 1130	HIST 1140	HIST 1400	HIST 1410	HIST 1600
	HIST 1610	<b>HUM 3990</b>	ID 2000	MUS 1000	MUS 2050	MUS 2850
	PHIL 1000	PHIL 1020	PHIL 1120	PHIL 1300	PHIL 3100	PHIL 3160
	PHIL 3180	PHIL 4070	SPAN 3690	SPAN 4210	THTR 1000	THTR 3201
	THTR 3202	VA 1010	VA 1020	WEST 2030	WEST 2040	WEST 3020
	WEST 3100	WEST 3460	WEST 3550	WEST 4050	WEST 4280	

<p>from any one discipline may be applied to the area requirements.</p> <p>&gt; Courses in the primary major may not be applied to area requirements.</p> <p>&gt; Courses may not be taken pass/fail.</p>	<b>SOCIAL SCIENCE</b> – Complete 9 hours from the list of courses below.					
	ANTH 1020	ANTH 1040	ANTH 2800	ANTH 3040	ANTH 3260	ANTH 3270
	COMM 1020	COMM 2150	COMM 3440	COMM 4200	COMM 4220	COMM 4250
	ECON 1000	ECON 1010	ECON 1050	ECON 2020	ECON 3150	ECON 3710
	GES 1980	GES 1990	GRNT 3000	PHIL 3200	PHIL 4260	PSC 1010
	PSC 1100	PSC 2080	PSC 2100	PSC 3300	PSC 4190	PSC 4210
	PSC 4470	PSY 1000	SOC 1110	SOC 2120	SOC 2200	SOC 2220
	SOC 2250	SOC 2500	SOC 3340	SOC 3610	WEST1010	WEST 3000
	WEST 3060	WEST 3070	WEST 3090	WEST 3620	WEST 4100	WEST 4120
	<b>NATURAL SCIENCE</b> – Complete the courses below. Please note that these courses also are part of the auxiliary requirements for the major.					
PES 1110	PES 1120	PES 1160	PES 2160			
<p><b>Oral Communication, Cultural Diversity, and Global Awareness Requirements</b></p> <p>Students are required to take one course with a substantial component involving oral communication, one course that increases their awareness of cultural diversity, and one course that increases their awareness of global issues.</p> <p><i>All courses in this section can count towards other requirements. Courses marked with an asterisk (*) can count towards specific requirements; courses without an asterisk will count towards General Electives.</i></p>	<b>ORAL COMMUNICATION</b> – Complete one of the courses listed below.					
	CHEM 4911*	CHEM 4921*	COMM 2010	COMM 2100	COMM 3240	COMM 4100
	PES 4810	PHIL 1040	PHIL 4950	TED 4600	TED 4700	THTR 2020
	THTR 2030	THTR 2040	THTR 2050	THTR 3100		
	<b>CULTURAL DIVERSITY</b> – Complete one of the courses listed below.					
	AH 3430	ANTH 3250	ANTH 3420	ASL 4000	COMM 3280	ENGL 3320*
	ENGL 4060	FCS 3360	FCS 4210*	GES 4680	HIST 3520	HIST 3580
	MUS 2050*	PHIL 3180*	PHIL 3230	PHIL 4550	SOC 2200*	SOC 2250*
	SOC 3220	SOC 3250	SOC 3290	SOC 4240	SOC 4290	SOC 4390
	SOC 4680	SPAN 4210*	SPAN 4420	THTR 3240	WEST 1010*	WEST 2020
	WEST 3090	WEST 3130	WEST 3150	WEST 3250	WEST 3290	WEST 3360
	WEST 3420	WEST 3520	WEST 3580	WEST 4120*	WEST 4280*	WEST 4550
	WEST 4680					
	<b>GLOBAL AWARENESS</b> – Complete one of the courses listed below.					
	ANTH 1040*	ANTH 3040*	AH 3450	AH 3460	AH 4450	AH 4470
	BIOL 1510*	CHEM 1111*	CHEM 4521*	ECON 3590	ECON 3710*	ENGL 2600*
	ENGL 2610*	ENGL 4065	FCS 3180*	FCS 3190*	FCS 3250	FCS 3340
	FCS 3380	FCS 3690*	FCS 3890*	FILM 2000*	FILM 3690*	FR 3250
	GER 3180*	GER 3190*	GES 1980*	GES 1990*	GES 3070	GES 3400
	GES 3820	GES 3980	GRNT 3560	GES 4640	HIST 1110*	HIST 1120*
	HIST 1130*	HIST 1140*	HIST 1400*	HIST 1410*	HIST 1600*	HIST 1610*
	HIST 3220	HIST 3560	HIST 3590	HIST 3680	HIST 4050	HIST 4060
	HIST 4130	HIST 4150	HIST 4160	HIST 4280	HIST 4860	MUS 3150
	PHIL 1300*	PHIL1400	PHIL 3100*	PHIL 3240	PHIL 3400	PHIL 3480
	PHIL 3490	PHIL 3500	PSC 1010*	PSC 2070	PSC 2080*	PSC 2090
	PSC 4170	PSC 4190*	PSC 4210*	PSC 4570	PSC 4580	PSC 4590
	PSY 3560	SOC 2220*	SOC 3340*	SOC 4380	SOC 4700*	SPAN 3690*
	WEST 3340	WEST 3380	WEST 3480*	WEST 3560	WEST 3680	WEST 4050
WEST 4060	WEST 4150	WEST 4170	WEST 4380	WEST 4700*		
<b>Compass Curriculum</b> (12 hours)	Complete all Compass Curriculum requirements not already completed as part of the above program. The Gateway Seminar ( <b>GPS 1010</b> ) must be completed by all students. Explore courses must be completed outside of the major and Area Requirements. All other Compass Curriculum requirements can be completed within the degree requirements above. To see a list of all Compass Curriculum courses, please visit: <a href="http://www.uccs.edu/compasscurriculum">www.uccs.edu/compasscurriculum</a> .					
<b>General Electives</b> (3 hours)	Complete additional courses to meet total and upper-division requirements for your degree program.					

**UCCS Bachelor of Science, BS Chemistry Major Degree Requirements**

- > A minimum of 120 hours must be completed with a cumulative CU grade point average of 2.0; at least 45 of these hours must be at the upper-division level (courses numbered 3000-4999).
- > No more than 60 hours of CHEM course work can count towards the degree.
- > The last 30 hours of the degree must be completed while registered in the College of Letters, Arts and Sciences at UCCS.
- > Courses numbered below 1000 do not count towards degree completion.



## Four-Year Degree Plan – BS Chemistry

The following four-year plan lists all the specific course requirements for the Bachelor of Science in Chemistry degree at UCCS. The order in which these courses are taken may vary with course availability. **Students are responsible for completing all course prerequisites.** Please note that this is a *suggested* degree program; your program may vary.

### Suggested First Year

FALL			SPRING		
√	Course	Hours	√	Course	Hours
	ENGL 1310	3		ENGL 1410	3
	MATH 1350	4		MATH 1360	4
	CHEM 1301	5		CHEM 1331	5
	GPS 1010	3		Explore – Arts, Humanities & Cultures Course	3
	<b>TOTAL</b>	15		<b>TOTAL</b>	15

### Suggested Second Year

FALL			SPRING		
√	Course	Hours	√	Course	Hours
	PES 1110/1160	5		PES 1120/2160	5
	MATH 2350	4		CHEM 3211/3213	5
	CHEM 3201/3203	5		Explore – Society, Behavior and Health Course	3
				Humanities Elective	3
	<b>TOTAL</b>	14		<b>TOTAL</b>	16

### Suggested Third Year

FALL			SPRING		
√	Course	Hours	√	Course	Hours
	CHEM 4001/4002	4		CHEM 4011/4012	5
	CHEM 4101	3		CHEM 4111	3
	CHEM 4102	1		CHEM 4112	1
	PES 2130	3		HUM 3990	3
	Social Science Elective	3		Explore – Physical & Natural World	3
	<b>TOTAL</b>	14		<b>TOTAL</b>	15

### Suggested Fourth Year

FALL			SPRING		
√	Course	Hours	√	Course	Hours
	CHEM 4211	3		CHEM 4311	3
	CHEM 4301	3		CHEM 4911	2
	Upper Division (UD) CHEM Elective	4		UD CHEM Elective	4
	General Elective	3		Humanities Elective	3
	Social Science Elective	3		Social Science Elective	3
	<b>TOTAL</b>	16		<b>TOTAL</b>	15