

## College of Letters, Arts & Sciences – BS Biochemistry

### Academic Advising Hours:

**Location:** Main Hall 208

**Hours:** Monday–Friday: 9am–4pm Appointments Only (except Wednesday afternoons)

**Drop-in Advising every Wednesday from 1pm–4:30pm**

Call: (719) 255-3260

**Website:** [www.uccs.edu/advising](http://www.uccs.edu/advising)

### 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 24 credit hours of Military Leadership/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.*

#### UCCS Bachelor of Science, BS Biochemistry 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 & Sciences at UCCS.
- Courses numbered below 1000 do not count towards degree completion.

#### 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 Degree Audit
<b>Explore<sup>1</sup></b> – Society, Behavior and Health	See Degree Audit
<b>Explore<sup>1</sup></b> – Physical and Natural World	BIOL 1350
<b>Navigate<sup>2</sup></b>	Core HUM
<b>Summit</b>	CHEM 4921
<b>Writing Intensive Course (WIC)<sup>3</sup></b> <i>Two courses with at least one upper-division (3000+ level).</i>	CHEM 1513 HUM 3990
<b>Inclusiveness<sup>3</sup></b>	See Degree Audit
<b>Sustainability<sup>3</sup></b>	See Degree Audit

<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 BIOCHEMISTRY

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

Degree Requirements	Courses					
<p><b>BS Biochemistry Major</b> (58 hours)</p> <p>The BS Biochemistry major requires a minimum of 58 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>	CHEM 1401/1402	General Chemistry I and Lab				5
	CHEM 1511/1513	General Chemistry for Majors II and Lab				5
	CHEM 3201/3203	Organic Chemistry for Majors I and Lab				5
	CHEM 3211/3213	Organic Chemistry for Majors II and Lab				5
	CHEM 4001/4002	Analytical Chemistry and Lab				4
	CHEM 4221	Biochemistry I				3
	CHEM 4222	Biochemistry Laboratory				3
	CHEM 4231	Biochemistry II				3
	CHEM 4232 OR CHEM 4502	Advanced Techniques in Biochemistry OR Bioanalytical Techniques				3
	CHEM 4241	Biochemistry of the Gene				3
	CHEM 4251	Biochemistry of Membranes: Structure and Function				3
	CHEM 4701	Biophysical Chemistry				3
	CHEM 4921	Biochemistry of Human Health and Development				3
	Electives	Complete 10 hours of Upper Division (3000+ level) Chemistry Electives. Up to 7 hours may be CHEM 4904/4905.				10
	<b>Auxiliary Requirements</b>					
	BIOL 1350	General Biology II: Intro to the Cell				3
	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	
<p><b>Composition</b> (6 hours)</p>	Complete ENGL 1310, 1410, and the Writing Portfolio.					
	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 1330 is part of the auxiliary requirements.					
	MATH 1330					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 from any one discipline may be applied to the area requirements. &gt; Courses in the primary major may not be applied to area requirements. &gt; Courses may not be taken pass/fail.</p>	<b>HUMANITIES</b> – Complete 9 hours from the list of courses below. <i>Course selection must include one occurrence of Core Humanities from: HUM 3990, 3993, 3995, or 3997.</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 3550	FCS 3690	FCS 3890	FCS 4210
	FILM 1000	FILM 2000	FILM 3690	FR 3240	GER 3180	GER 3190
	HIST 1120	HIST 1130	HIST 1140	HIST 1400	HIST 1410	HIST 1540
	HIST 1550	HIST 1600	HIST 1610	<b>HUM 3990</b>	<b>HUM 3993</b>	<b>HUM 3995</b>
	<b>HUM 3997</b>	ID 2000	MUS 1000	MUS 2050	MUS 2850	PHIL 1000
	PHIL 1020	PHIL 1120	PHIL 1300	PHIL 3000	PHIL 3050	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 3550	WEST 4050	WEST 4280	WEST 4920
	<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
	ANTH4270	COMM 1020	COMM 2150	COMM 3440	COMM 4200	COMM 4220
	COMM 4250	ECON 1000	ECON 1010	ECON 1050	ECON 2020	ECON 2310
	ECON 3150	ECON 3710	GES 1980	GES 1990	GRNT 2300	GRNT 3000
	MSGP 4100	PHIL 3200	PHIL 3210	PHIL 4260	PHIL 4400	PSC 1010
	PSC 1100	PSC 2080	PSC 2100	PSC 3300	PSC 4190	PSC 4210
	PSC 4470	PSY 1000	PSY 3630	SOC 1110	SOC 2200	SOC 2220

	SOC 2250	SOC 2300	SOC 2500	SOC 3070	SOC 3340	SOC 3610
	WEST 1010	WEST 2500	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		
<b>Oral Communication, Cultural Diversity, and Global Awareness Requirements</b>  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.  <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>	<b>ORAL COMMUNICATION</b> – Complete one of the courses listed below.					
	BIOL 4040	CHEM 4911	CHEM 4921	COMM 2010*	COMM 2100*	COMM 3190
	COMM 3240*	COMM 4100	MATH 4040	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 3400	ANTH 3420*	ANTH 4420	ASL 4000
	COMM 3280	ENGL 3320*	ENGL 4060	FCS 3360	FCS 4210*	GES 4680
	HIST 1550	HIST 3520	HIST 3580	MUS 2050*	PHIL 3180*	PHIL 3230
	PHIL 4550	SOC 2200*	SOC 2250*	SOC 3220*	SOC 3250*	SOC 3290*
	SOC 3610	SOC 3630	SOC 4240*	SOC 4290*	SOC 4390*	SOC 4480*
	SOC 4530	SOC 4680	SPAN 4210*	SPAN 4420	THTR 3240	WEST 1010*
	WEST 2020	WEST 3090*	WEST 3130	WEST 3250	WEST 3290*	WEST 3360
	WEST 3420*	WEST 3520	WEST 3580	WEST 3760	WEST 4120*	WEST 4280*
	WEST 4390*	WEST 4480*	WEST 4530	WEST 4550	WEST 4680	WEST 4920*
	<b>GLOBAL AWARENESS</b> – Complete one of the courses listed below.					
	AH 3450	AH 3460	AH 4450	AH 4470	ANTH 1040*	ANTH 3040*
	ANTH 4270*	CHEM 1111*	CHEM 4521*	ECON 3590	ECON 3710*	ENGL 2600*
	ENGL 2610*	ENGL 4065	EUST 3000	FCS 3180*	FCS 3190*	FCS 3250
	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*	GES 4640	GRNT 3560	HIST 1110*	HIST 1120*
	HIST 1130*	HIST 1140*	HIST 1150	HIST 1300	HIST 1400*	HIST 1410*
	HIST 1600*	HIST 1610	HIST 3120*	HIST 3220*	HIST 3560*	HIST 3570
	HIST 3590*	HIST 3680	HIST 4050*	HIST 4060	HIST 4130*	HIST 4150*
	HIST 4160*	HIST 4280*	HIST 4860	ID 3579	ID 3700	ID 3710
	ID 3730	ID 3740	ID 3750	ID 3760	ID 3770	ID 3780
	ID 3790	ID 3800	MUS 3150*	PHIL 1300*	PHIL 1400	PHIL 3000*
PHIL 3100*	PHIL 3240*	PHIL 3345	PHIL 3400	PHIL 3480	PHIL 3490	
PHIL 3500	PSC 1010*	PSC 2070	PSC 2080*	PSC 2090	PSC 3240	
PSC 4170	PSC 4190*	PSC 4210*	PSC 4570	PSC 4580	PSC 4590	
PSY 3560	SOC 2220*	SOC 3340*	SOC 4380*	SOC 4450	SOC 4580	
SOC 4600	SOC 4660*	SOC 4700*	SPAN 3690*	WEST 3380*	WEST 3480*	
WEST 3560	WEST 3680	WEST 4050*	WEST 4060	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> (9 hours)	Complete additional courses to meet total and upper-division requirements for your degree program.					



## Four-Year Degree Plan – BS Biochemistry

The following four-year plan lists all the specific course requirements for the Bachelor of Science in Biochemistry 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 1330	4		CHEM 1511/1513	5
	CHEM 1401/1402	5		BIOL 1350	3
	GPS 1010	3		Explore – Society, Behavior and Health Course	3
		<b>TOTAL</b>	15		
				<b>TOTAL</b>	14

### Suggested Second Year

FALL			SPRING		
√	Course	Hours	√	Course	Hours
	CHEM 3201/3203	5		CHEM 3211/3213	5
	PES 1110/1160	5		PES 1120/2160	5
	Explore – Arts, Humanities & Cultures Course	3		Humanities Elective	3
	Social Science Elective	3		General Elective	3
		<b>TOTAL</b>	16		
				<b>TOTAL</b>	16

### Suggested Third Year

FALL			SPRING		
√	Course	Hours	√	Course	Hours
	CHEM 4001/4002	4		CHEM 4222	3
	CHEM 4221	3		CHEM 4231	3
	CHEM 4701	3		CHEM 4241	3
	HUM 3990	3		UD (Upper-Division) CHEM Elective	3
	Social Science Elective	3		Humanities Elective	3
		<b>TOTAL</b>	16		
				<b>TOTAL</b>	15

### Suggested Fourth Year

FALL			SPRING		
√	Course	Hours	√	Course	Hours
	CHEM 4232 or CHEM 4502	3		CHEM 4251	3
	CHEM 4921	3		UD CHEM Elective	3
	UD CHEM Elective	3		UD CHEM Elective	4
	Social Science Elective	3		General Elective	3
	General Elective	3			
		<b>TOTAL</b>	15		
				<b>TOTAL</b>	13