

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

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).

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, 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 |
|---|-----------------------|
| Gateway | GPS 1010 |
| Explore¹ – Arts, Humanities and Cultures | See Degree Audit |
| Explore¹ – Society, Behavior and Health | See Degree Audit |
| Explore¹ – Physical and Natural World | BIOL 1350 |
| Navigate² | Core HUM |
| Summit | CHEM 4921 |
| Writing Intensive Course (WIC)³ <i>Two courses with at least one upper-division (3000+ level).</i> | CHEM 1513 HUM 3990 |
| Inclusiveness³ | See Degree Audit |
| Sustainability³ | See Degree Audit |

¹ Explore must be outside major and area requirements.

² Navigate must be outside major requirements.

³ 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

| Degree Requirements | Courses | | | | | |
|---|--|---|-----------|-----------------|-----------------|-----------------|
| <p>BS Biochemistry Major (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 |
| | Auxiliary Requirements | | | | | |
| | 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>Composition (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>Reasoning Skills (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>Area Requirements (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: > No more than two courses from any one discipline may be applied to the area requirements. > Courses in the primary major may not be applied to area requirements. > Courses may not be taken pass/fail.</p> | HUMANITIES – 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 | HUM 3990 | HUM 3993 | HUM 3995 |
| | HUM 3997 | 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 |
| | SOCIAL SCIENCE – 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 | | | | |
| | NATURAL SCIENCE – 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 | | |
| Oral Communication, Cultural Diversity, and Global Awareness Requirements 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> | ORAL COMMUNICATION – 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 | | | | | |
| | CULTURAL DIVERSITY – 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* |
| | GLOBAL AWARENESS – 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* | | | | | | |
| Compass Curriculum (12 hours) | Complete all Compass Curriculum requirements not already completed as part of the above program. The Gateway Seminar (GPS 1010) 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: www.uccs.edu/compasscurriculum . | | | | | |
| General Electives (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 |
| | | TOTAL | 15 | | |
| | | | | TOTAL | 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 |
| | | TOTAL | 16 | | |
| | | | | TOTAL | 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 |
| | | TOTAL | 16 | | |
| | | | | TOTAL | 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 | | | |
| | | TOTAL | 15 | | |
| | | | | TOTAL | 13 |