

FOR TRANSFER STUDENTS

PROGRAM OVERVIEW

Biology is the study of life, and integrative biology emphasizes the study and understanding of living organisms at different levels of organization, from molecular biology to biosphere ecology. We teach biology students core information that serves as a foundation for advanced study and professional training. This basic knowledge includes concepts central to our understanding of molecular biology, as well as the relationship between structure and function, and the genetic mechanisms of inheritance. In addition, biology students are educated in cell biology and genetics, as well as the technological breakthroughs that have led to discoveries in these fields. They learn how organisms adapt to diverse environments and about energy flow and nutrient cycles through ecosystems, worldwide biodiversity and how ecological function can be altered by human impacts.

The Microbiology Track studies organisms that, for the most part, are not easily visible with the naked eye, including algae, archaea, bacteria, fungi, protozoa, and viruses. Microbes are notorious for causing disease, but microbes also play critical roles in maintaining human health and supporting life on Earth. In the Microbiology track, you will explore microbes in the context of medicine, molecular biology, cell biology, genetics, immunology, biotechnology, ecology, and evolution. The Microbiology track prepares students for careers in many fields including medicine, agriculture, public health, government, environmental science, basic research, education, industrial microbiology, food microbiology, and pharmaceuticals.

ACADEMIC ADVISING

The College of Liberal Arts and Sciences (CLAS) supports students to graduation using a shared advising system. CLAS students have two academic advisors with whom they should meet regularly to discuss academic and degree progress: a CLAS Academic Advisor and a major advisor.

For questions related to CU Denver Core Curriculum, CLAS, general graduation requirements, university/college academic policies, or campus resources contact:

CLAS Academic Advising

clas.advising@ucdenver.edu

Visit the CLAS Advising website [here](#)

North Classroom (NC) 1030

303-315-7100

For questions related to major requirements, major course prerequisites, or evaluation of transfer coursework in your major contact:

Biology Major Advising

[CLAS Major Advising Contact Information](#)

Visit the department website [here](#)

Science Building (SI) 2071

303-315-7600

For questions about admission requirements, transfer policies, applying, and the transfer process contact:

Office of Admissions

admissions@ucdenver.edu

Visit the Admissions website [here](#)

Student Commons Building (SCB) 1005

303-315-2601

GENERAL GRADUATION REQUIREMENTS & POLICIES

All CU Denver CLAS students are required to complete the following minimum general graduation requirements to be eligible to apply for graduation:

1. Complete a minimum of 120 credit hours
2. Achieve a minimum 2.0 CU cumulative grade point average (GPA)
3. Complete a minimum of 45 upper-division (3000- to 4000-level) credit hours
4. Complete all CU Denver Core, CLAS, and major requirements
5. Complete a minimum of 30 CLAS credit hours with letter grades at CU Denver

*The following are **maximum** credit hours that can apply toward the minimum 120 credit hours required for graduation:*

- 16 credit hours Pass/Fail
- 12 credit hours of Independent Study/Directed Research
- 12 credit hours of internship credit
- 8 credit hours of physical education credit

PROGRAM REQUIREMENTS & POLICIES

The following program requirements are based on degree requirements for the current Catalog year at CU Denver and are subject to change. Students are responsible for completing degree requirements based on the Catalog year for which they are admitted.

Students are responsible for meeting with the major advisor to confirm major requirements. In addition to completing all CU Denver Core and CLAS requirements, students completing the Biology Microbiology B.S. Degree are required to complete the following minimum program requirements:

1. Students must complete a total of 51 credit hours, including a minimum of 36 BIOL credit hours and a minimum of 15 credit hours in ancillary coursework.
2. Students must complete a minimum of 18 upper division (3000- level and above) BIOL credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. Students must complete a minimum of 18 upper division (3000-level and above) BIOL credit hours with CU Denver faculty and at least 3 credits must be at 4000-level or higher.
5. Upper division BIOL courses more than ten years old will not count automatically to the Major, but can be evaluated individually for their current relevance to the degree program through a petition process with the Department of Integrative Biology Curriculum Committee. Approval for courses older than ten years is not guaranteed so students may be required to update their knowledge by taking additional courses when past courses are outdated.
6. Undergraduate students may count up to six credit hours of independent study or internship (any combination of BIOL 3840 Independent Study, BIOL 3939 Internship, BIOL 4840 Independent Study, BIOL 4880 Directed Research) toward the upper-division Biology electives requirement in the major.

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COURSEWORK THAT CAN BE COMPLETED AT PREVIOUS INSTITUTION

The following is a “bucket” of requirements students can complete prior to transferring to CU Denver, including equivalent Colorado Community College System (CCCS) courses. To determine the equivalencies of courses to be completed at non-CU Denver institutions, students can visit www.transferology.com. **It is critical students connect with a CU Denver academic advisor to ensure planned courses will transfer *and* apply to CU Denver degree requirements.** All non-CU Denver coursework must be completed with a C- or better to be eligible for transfer.

Students interested in completing an Associate (A.A. or A.S.) Degree or a [Colorado Statewide Transfer Articulation Agreement or Degree with Designation \(DWD\)](#) must work with their community/junior college academic advisor to create an academic plan that accounts for all degree or transfer articulation agreement requirements. Colorado Community College Students may also explore the option to complete [Reverse Transfer](#) at CU Denver.

CU Denver Requirements	CU Denver Credits	CCCS Equivalent Courses & Notes	CCCS Credits
CU Denver Core Curriculum Requirements	34 - 40		
ENGL 1020 – Core Composition I	3	ENG 1021	
ENGL 2030 – Core Composition II	3	ENG 1022	
Mathematics	3 - 4	MAT 1340 or 1420 or 1440 <i>recommended</i> or GT-MA1	
Arts	3	GT-AH	
Humanities	3	GT-AH or GT-HI	
Behavioral Sciences	3 - 4	GT-SS	
Social Sciences	3 - 4	GT-SS or GT-HI*	
Natural/Physical Science with lab	4 - 5	BIO 1111 or GT-SC1	
Natural/Physical Science without lab or Math	3 - 5	BIO 1112 or GT-SC2 or GT-MA1 (<i>except the course used for Core Math</i>) or GT-SC1	
International Perspectives	3	Additional GT-AH, HI, SS* (<i>see note below</i>)	
Cultural Diversity	3	<i>To be completed at CU Denver. This requirement must be completed with an upper-division course and CCCS courses will not apply.</i>	---
CLAS Graduation Requirements	15 - 29		
CLAS Communicative Skills	3	COM 1150 or PHI 1013	
CLAS Second Language	0 - 10	e.g., SPA 1012 or ASL 1122 <i>Students have several options to fulfill this requirement. Please consult a CU Denver CLAS Academic Advisor.</i>	
CLAS Humanities	3	Any transferrable LIT, HIS, HUM, or PHI course (<i>PHI 113 recommended</i>)	
CLAS Behavioral Sciences	3 - 4	Any transferrable ANT, COM, or PSY course (<i>except GT-SC courses</i>)	
CLAS Social Sciences	3 - 4	Any transferrable ECO, ETH, GEO, PSC, or SOC course (<i>except GT-SC courses</i>)	
CLAS Natural/Physical Science with lab	3 - 5	CHE 1111 or GT-SC1 <i>If students complete only one science course with a lab for the CU Denver Core Curriculum, this course must have an associated lab.</i>	
BIOL Major Courses	17		
BIOL 2020 & 2021 Molecules to Cells (Gen Bio) with lab	4	BIO 1111 <i>Course can fulfill CU Denver Core Natural/Physical Science with lab</i>	
BIOL 2010 & 2011 Organisms to Ecosystems (Gen Bio) with lab	4	BIO 1112 <i>Course can fulfill CU Denver Core Natural/Physical Science with lab</i>	
CHEM 2031 & 2038 General Chemistry I with lab	4	CHE 1111 <i>Course can fulfill CU Denver CLAS Natural/Physical Science with lab</i>	
CHEM 2061 & 2068 General Chemistry II with lab	5	CHE 1112	
Minimum Applicable Transfer Credit Hours Recommended:	60	<i>Students completing less than 60 applicable transfer credit hours will have additional credit hours to complete at CU Denver. Students needing general elective credits should consult a CU Denver CLAS Academic Advisor.</i>	

***The applicability of Guaranteed Transfer (GT Pathways) courses to specific CU Denver Core Curriculum requirements requires completion of a block of five courses: two GT-AH courses; one GT-HI course; one GT-SS course; and one additional GT-AH, GT-HI, or GT-SS course.**

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SAMPLE PLAN – COURSEWORK TO BE COMPLETED AT CU DENVER

Based on successful completion of 60 applicable transfer credit hours and the complete “bucket” of requirements outlined above, students would have the following remaining to complete at CU Denver. At CU Denver, students must tailor this plan based on their chosen Biology track, the evaluation of previously completed college coursework (e.g., AP, IB, CLEP, dual/concurrent enrollment, and transfer credit), course availability, individual preferences related to course load, summer term courses, part-time or full-time student status, or add-on programs such as certificates, minors, double-majors, or dual-degrees.

Note: this plan assumes students have completed the CLAS Second Language proficiency requirement. Students must demonstrate second language proficiency through a 2nd semester college-level course equivalent (e.g., SPA 1012 or ASL 1122) with a C- or higher, satisfactory proficiency testing (BYU FLATS, CLEP), or submitting their high school transcript demonstrating completion of a 2nd year (Level II) high school course with a minimum grade of “C-” (1.7) in the 2nd semester of the 2nd year or later. Students may have additional options to fulfill this requirement and should consult a CU Denver CLAS Academic Advisor. **Students who have not fulfilled this requirement must work with a CU Denver CLAS Academic Advisor to modify this plan.**

Year Three	Fall	CRS	Spring	CRS
	BIOL 3832 ^{PE} or BIOL 3124 ^{PE}	3	BIOL 3650 ^{PE}	3
	MATH 1401 ^{PE} or BIOL 3762 ^{PE} or MATH 4830 ^{PE}	3-4	BIOL 3651 ^{PE}	2
	BIOL Upper-Division Course ^{PE}	3	BIOL Upper-Division Course ^{PE}	3
	ENGL 4175 ^{PE} , ENGL 3154 ^{PE} , ENGL 4280 ^{PE} , ENGL 4180 ^{PE} or COMM 4550 ^{PE}	3	CU Denver Core Cultural Diversity	3
	General Elective	3	Upper-Division General Elective	3
	Total Credit Hours	15-16	Total Credit Hours	14
Year Four	Fall	CRS	Spring	CRS
	BIOL Upper-Division Microbiology Course ^{PE}	3	BIOL 4000-Level Microbiology Course ^{PE}	3
	BIOL Upper-Division Course ^{PE}	3	BIOL Upper-Division Microbiology Course ^{PE}	3
	Upper-Division General Elective	3	BIOL Upper-Division Course ^{PE} (Consider Internship/Directed Research)	2
	Upper-Division General Elective	3	Upper-Division General Elective	3
	General Elective	4	General Elective	4
	Total Credit Hours	16	Total Credit Hours	15

^M Major Course Available ^C CU Denver Core Course ^{PE} Prerequisite Enforced ^{PR} Prerequisite Recommended