

# BIOLOGY - INTEGRATIVE BIOLOGY TRACK, BS

## Introduction

The Integrative Biology Track is very flexible and offers students with diverse interests an opportunity to fully explore the field of biology. This Track is also great for students interested in becoming K12 Teachers because it allows them to take a diverse set of courses, so they are prepared to teach all aspects of biology.

## Program Delivery

- This is an on-campus program.

## Declaring This Major

- Click here (<http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-liberal-arts-sciences/#policiestext>) to go to information about declaring a major.

## General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (<http://catalog.ucdenver.edu/cu-denver/undergraduate/graduation/>)
- CU Denver Core Curriculum (<http://catalog.ucdenver.edu/cu-denver/undergraduate/graduation-undergraduate-core-requirements/>)
- College of Liberal Arts & Sciences Graduation Requirements (<http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-liberal-arts-sciences/#graduationrequirements>)
- Click here (<http://catalog.ucdenver.edu/cu-denver/undergraduate/academic-policies-procedures/>) for information about Academic Policies

## Program Requirements

- Students must complete a minimum of 36 BIOL credit hours.
- Students must complete a minimum of 15 credit hours in ancillary coursework.
- Students must complete a minimum of 18 upper division (3000- level and above) BIOL credit hours.
- 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.
- Students must complete a minimum of 18 upper division (3000-level and above) BIOL credit hours with CU Denver faculty and at least 6 credits must be at 4000-level or higher.

## Program Restrictions, Allowances and Recommendations

- Courses more than ten years old will not count automatically, 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.

- 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.

| Code  | Title  | Hours      |
|---|--|------------|
| <b>Complete the following required biology courses:</b>   |  | <b>20</b>  |
| BIOL 2010   | Organisms to Ecosystems (Gen Bio)  |            |
|   | or BIOL 203C Honors Organisms to Ecosystems (Gen Bio)                          |            |
| BIOL 2011   | Organisms to Ecosystems Lab (Gen Bio)  |            |
|   | or BIOL 2031 Honors Organisms to Ecosystems Lab (Gen Bio)                      |            |
| BIOL 2020   | Molecules to Cells (Gen Bio)   |            |
|   | or BIOL 204C Honors Molecules to Cells (Gen Bio)                               |            |
| BIOL 2021   | Molecules to Cells Lab (Gen Bio)   |            |
|   | or BIOL 2041 Honors Molecules to Cells Lab (Gen Bio)                           |            |
| BIOL 3411   | Principles of Ecology  |            |
| BIOL 3445   | Introduction to Evolution  |            |
| BIOL 3611   | General Cell Biology   |            |
| BIOL 3832   | General Genetics   |            |
|   | or BIOL 3124 Introduction to Molecular Biology                                 |            |
| <b>Complete the following required ancillary classes:</b>   |  | <b>9</b>   |
| CHEM 2031   | General Chemistry I  |            |
|   | or CHEM 208H Honors General Chemistry I  |            |
| CHEM 2038   | General Chemistry Laboratory I   |            |
|   | or CHEM 203C Majors General Chemistry I Laboratory                             |            |
|   | or CHEM 203H Honors General Chemistry I Laboratory                             |            |
| CHEM 2061   | General Chemistry II   |            |
|   | or CHEM 209H Honors General Chemistry II Lecture                               |            |
| CHEM 2068   | General Chemistry Laboratory II  |            |
|   | or CHEM 206C Majors General Chemistry II Laboratory                            |            |
|   | or CHEM 206H Honors General Chemistry II Laboratory                            |            |
| <b>Choose one quantitative class from this list:</b>  |  | <b>3-4</b> |
| BIOL 3763   | Biostatistics  |            |
| MATH 1401   | Calculus I   |            |
| MATH 4830   | Applied Statistics   |            |
| <b>Choose one writing intensive class from this list:</b>   |  | <b>3</b>   |
| COMM 4550   | Rhetorics of Medicine & Health   |            |
| ENGL 3154   | Technical Writing (also satisfies CLAS Communicative Skills requirement)       |            |
| ENGL 4175   | Writing in the Sciences (also satisfies CLAS Communicative Skills requirement) |            |
| ENGL 4180   | Argumentation and Logic (also satisfies CLAS Humanities requirement)           |            |
| ENGL 4280   | Proposal and Grant Writing (also satisfies CLAS Humanities requirement)        |            |
| <b>Choose at least one upper division BIOL lab class.</b>   |  | <b>3</b>   |
| <b>Choose at least two three credit hour 4000 level BIOL classes (must be taken from a UCD faculty) Excludes, BIOL 4840, BIOL 4880 and BIOL 4125.</b> |  | <b>6</b>   |

**Choose any BIOL credits that have not been used anywhere else above to reach 36 total credits in BIOL (courses for non-science majors excluded).**

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**Total Hours** **44-45**

To learn more about the Student Learning Outcomes for this program, please visit our website. ([https://clas.ucdenver.edu/integrative-biology/academics/undergraduate-programs/#biology\\_major-73](https://clas.ucdenver.edu/integrative-biology/academics/undergraduate-programs/#biology_major-73))

To review the Degree Map for this program, please visit our website (<https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/>).