

INTEGRATIVE AND SYSTEMS BIOLOGY, PHD

Graduate Program Director: Michael Wunder

Website: <https://clas.ucdenver.edu/integrative-biology/academics/graduate-programs> (<https://clas.ucdenver.edu/integrative-biology/academics/graduate-programs/>)

Introduction

Please click here to see Integrative Biology department information

The PhD program in Integrative and Systems Biology at the University of Colorado Denver is a multidisciplinary, dual campus program that offers students opportunities to address complex questions in biology using computational, laboratory and field approaches. The more than 40 program faculty members allow students to participate on a diversity of projects at all levels of biological organization, ranging from ecology and environmental microbiology to biochemistry, developmental biology and neuroscience. Depending on the track an incoming student chooses, the approach will either be to explore the problem at multiple levels of biological organization (integrative biology) or to explore the multi-component nature of a biological system (systems biology).

The PhD program is research-based. Applicants to the program must have a declared area of specialization that aligns with the research focus of a program graduate faculty member. Faculty expertise can be found undergraduate faculty profiles on the Department of Integrative Biology website (clas.ucdenver.edu/biology/). Students must contact prospective faculty advisors to determine if openings are available within the faculty member's research group.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Biology advisor to confirm the best plans of study before finalizing them.

Graduate Education Policies and Procedures apply to this program.

Program Requirements

The PhD degree requirements comprise six phases. First, students must complete a minimum of 60 credits, including 30 dissertation credits. Up to 30 hours of graduate level courses from other programs may be transferred and counted toward the degree. Students must also pass the Preliminary Exam, form an Advisory Committee and an Examination Committee, meet the academic residency requirement, pass the comprehensive exam, and write and orally defend a dissertation. Students must earn a minimum grade of B- (2.7) in all courses that apply to the degree and must achieve a minimum cumulative GPA of 3.0. All graded attempts in required and elective courses are calculated in the GPA. Courses taken using P+/P/F or S/U grading cannot apply to degree requirements.

Research-based PhD degree program **requires**

1. Completing 60 credits including 30 of dissertation
2. Meeting minimum academic residency requirements
3. Passing the Preliminary Exam
4. Forming Advisory and Examination committees

5. Writing and defending research proposal
6. Passing the Comprehensive Exam
7. Writing and defending dissertation (including >one publishable unit)

Code	Title	Hours
<i>Complete all of the following required courses:</i>		<i>18</i>
BIOL 6002	Biology Skills Sets - Pedagogy (taken in the first year; only required for students supported by a Graduate Teaching Assistantship)	
BIOL 6655	Seminar (taken two different times in the student's career)	
BIOL 6705	Biological Research Workshop (taken two different times in the student's career)	
BIOL 6764	Biological Data Analysis (taken in the first year)	
BIOL 7010	Integrative and Systems Biology (taken in the first year)	
BIOL 7050	Special Topics (a minimum of 3 credits must be completed, but students may take up to 9 credits)	
<i>Students should complete a minimum of 12 elective credit hours from graduate level Biology coursework. ¹</i>		<i>12</i>
<i>Complete dissertation after passing the Comprehensive Exam.</i>		<i>30</i>
BIOL 8990	Doctoral Dissertation	
Total Hours		60

¹ Master's Thesis (BIOL 6950) credits will not apply to the PhD.

To learn more about the Student Learning Outcomes for this program, please visit our website. (https://clas.ucdenver.edu/integrative-biology/sites/default/files/attached-files/biology_phd_learning_goals_2020.pdf)