

# PH.D. IN BIOLOGICAL SCIENCE



Studies in the Department of Biology's Ph.D. in Biological Science program span everything from molecules to ecosystems and involve the study of organisms across all domains of life. Topics are rooted in both basic and applied research. Students work and study at sites within Colorado, across the United States, and worldwide. Some general areas of investigation include:

- anatomy/morphology
- behavior
- bioinformatics
- biological science education
- biotechnology
- cell biology
- conservation biology
- developmental biology
- disease biology
- ecology
- ecosystem science
- evolutionary biology
- genetics and genomics
- global change biology
- molecular biology
- neurobiology
- physiology
- systematics
- systems biology
- synthetic biology
- theoretical/mathematical biology

## Learning Objectives

1. Develop a broad background in the diverse fields that make up the biological sciences and a deep scholarly and technical expertise in their specific field(s) of study.

2. Present to scientific audiences in the form of peer-reviewed scientific papers, poster presentations, and/or oral conference presentations to refine their oral and written communication skills.
3. Develop effective mentoring and teaching skills to communicate content in the biological sciences to students at an undergraduate level.
4. Identify the skills and professional development opportunities necessary for them to succeed in one or more of the diverse career tracks available to individuals with training in the biological sciences.

Students interested in graduate work should refer to the Graduate and Professional Bulletin (<https://catalog.colostate.edu/general-catalog/graduate-bulletin/>) and the Department of Biology (<https://www.biology.colostate.edu/graduate-students-2/>).

## Requirements Effective Fall 2018

Code	Title	Credits
<b>Ph.D. with prior Master's Degree</b>		
	Credit from Master's Degree	30
	Coursework completed in consultation with advisor <sup>1</sup>	42
BZ 799	Dissertation	
<b>Program Total Credits</b>		<b>72</b>

<sup>1</sup> A minimum of 32 credits earned at CSU since admission to the Graduate School. A minimum of 21 credits earned at CSU at the 500-level or higher.

Code	Title	Credits
<b>Ph.D. without prior Master's Degree</b>		
	Coursework completed in consultation with advisor <sup>1</sup>	72
BZ 799	Dissertation	
<b>Program Total Credits</b>		<b>72</b>

<sup>1</sup> A minimum of 62 credits earned at CSU since admission to the Graduate School. A minimum of 37 credits earned at CSU at the 500-level or higher. If students perform a continuous Master's/Ph.D. program at CSU, all credits earned for the Master's degree can be counted toward the Ph.D. credit requirements.

**A minimum of 72 credits are required to complete this program.**

### Additional Program Requirements:

- No specific courses must be taken in satisfaction of Departmental degree requirements; however, the candidate must be able to demonstrate a general knowledge of biological science as well as competence in specific areas of concentration.
- A graduate student participating in an advanced degree program of the Department of Biology must meet with the Graduate Advisory Committee at least once annually, and the student shall submit an annual report of progress toward the degree, signed by their Graduate Advisory Committee, to the Department Chair for review.
- A graduate degree in Biological Science indicates that the individual has achieved a professional level of competence in research as well as formal classwork. Consequently satisfactory progress in a research program must parallel the effort in coursework.

- A preliminary examination, administered by the Graduate Advisory Committee and consisting of both written and oral components, must be passed at least two semesters prior to the dissertation defense and graduation.
- A completed dissertation must be submitted to the Graduate Advisory Committee and approved following a successful oral defense (final examination).

## Requirements for All Graduate Degrees

For more information, please visit Requirements for All Graduate Degrees (<https://catalog.colostate.edu/general-catalog/graduate-bulletin/graduate-study/procedures-requirements-all-degrees/>) in the Graduate and Professional Bulletin (<https://catalog.colostate.edu/general-catalog/graduate-bulletin/>).

## Summary of Procedures for the Master's and Doctoral Degrees

NOTE: Each semester the Graduate School publishes a schedule of deadlines. Deadlines are available on the Graduate School website (<https://graduateschool.colostate.edu/deadline-dates/>). Students should consult this schedule whenever they approach important steps in their careers.

Forms (<https://graduateschool.colostate.edu/forms/>) are available online.

Step	Due Date
1. Application for admission (online)	Six months before first registration
2. Diagnostic examination when required	Before first registration
3. Appointment of advisor	Before first registration
4. Selection of graduate committee	Before the time of fourth regular semester registration
5. Filing of program of study (GS Form 6)	Before the time of fourth regular semester registration
6. Preliminary examination (Ph.D. and PD)	Two terms prior to final examination
7. Report of preliminary examination (GS Form 16) - (Ph.D. and PD)	Within two working days after results are known
8. Changes in committee (GS Form 9A)	When change is made
9. Application for Graduation (GS Form 25)	Refer to published deadlines from the Graduate School Website
9a. Reapplication for Graduation (online)	Failure to graduate requires Reapplication for Graduation (online) for the next time term for which you are applying
10. Submit thesis or dissertation to committee	At least two weeks prior to the examination or at the discretion of the graduate committee
11. Final examination	Refer to published deadlines from the Graduate School Website
12. Report of final examination (GS Form 24)	Within two working days after results are known; refer to published deadlines from the Graduate School website

13. Submit a signed Thesis/ Dissertation Submission Form (GS Form 30) to the Graduate School and Submit the Survey of Earned Doctorates (Ph.D. only) prior to submitting the electronic thesis/ dissertation	Refer to published deadlines from the Graduate School website.
14. Submit the thesis/dissertation electronically	Refer to published deadlines from the Graduate School website
15. Graduation	Ceremony information is available from the Graduate School website