PH.D. IN ECOLOGY

Graduate Degree Program in Ecology
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The Graduate Degree Program in Ecology (GDPE) offers outstanding opportunities for graduate studies ecology. The overall objective of the PhD in Ecology program is to develop students as scientists and policy makers with interdisciplinary problem-solving skills to address global challenges in the ecological sciences from local to global scales. Students in the PhD program engage in independent and collaborative research guided by advisors in the program.

Students interested in graduate work should refer to the Graduate and Professional Bulletin (https://catalog.colostate.edu/general-catalog/graduate-bulletin/) or visit the Graduate Degree Program in Ecology (https://ecology.colostate.edu/)website for more information.

Learning Objectives

Students who earn a Ph.D. must demonstrate significant intellectual achievement, scholarly ability, and breadth of knowledge. Successful students in this Ph.D. program demonstrate the following:

1. Mastery of concepts and principles of ecology and working knowledge of relevant basic biology and quantitative methods, achieved through required and elective coursework;
2. Ability to critically review and interpret scientific information and originality in integrating that information to design ecological research. This is assessed through the research proposal and written and oral components of the Ph.D. preliminary examination;
3. Understanding and practice of research ethics, collaborative approaches, and broader issues related to social responsibility through coursework and research projects;
4. Proficiency in (1) written communication shown in the research proposal, dissertation and, ideally, peer-reviewed research articles and (2) oral communication shown in presentations at professional conferences or in the classroom, and the dissertation seminar.

Requirements Effective Fall 2024

Code	Title	Credits
COMMON CORE COURSES		
ECOL 505	Foundations of Ecology	3
ECOL 571	Advanced Topics in Ecology [1]	2
ECOL 592	Interdisciplinary Seminar in Ecology [1]	2
ECOLOGICAL SUBDISCIPLINES		
Take a minimum of 6 credits not taken elsewhere in the program from courses in a subdiscipline of ecology. Students are encouraged to explore options across departments. Example courses include the following:		6
ANTH 575	Paleoecology	
BZ 526/BSPM 526	Evolutionary Ecology	
BZ 535	Behavioral and Cognitive Ecology	
BZ 548	Theory of Population and Evolutionary Ecology	
ECOL 600	Community Ecology	
ECOL 610	Ecosystem Ecology	
ECOL 620	Applications in Landscape Ecology	
ESS 660	Biogeochemical Cycling in Ecosystems	
F 610	Advanced Forest Ecology	
FW 562	Fish and Wildlife Population Dynamics	
ECOLOGICAL TOOLS		
Take a minimum of 3 credits of any ecologically-relevant quantitative or qualitative course, as determined by student and committee. Students are encouraged to explore options across departments. Example courses include the following:		3
ANTH 554/ ESS 554	Ecological and Social Agent-based Modeling	
ESS 575	Models for Ecological Data	
FW 663	Sampling & Analysis Vertebrate Populations	
FW 673/STAT 673	Hierarchical Modeling in Ecology	
GR 503/NR 503	Remote Sensing and Image Analysis	
NR 505	Concepts in GIS	
NR 512	Spatial Statistical Modeling-Natural Resources	
NR 523/STAT 523	Quantitative Spatial Analysis	
SOC 610	Seminar in Methods of Qualitative Analysis	
STAR 511	Design and Data Analysis for Researchers I	
STAR 512	Design and Data Analysis for Researchers II	
PROFESSIONAL SKILLS		
Take a minimum of 1 credit of a course (or workshop such as through TILT or the Graduate School combined with a credit of Independent Study (ECOL 695) that will enhance the student's professional development and/or skills based on professional goals, as determined by student and committee. Students are encouraged to explore options across departments and programs. Example courses include the following:		1
BZ 560	Teaching and Communicating Science	
ECOL 693	Research Seminar	
ECOL 695	Independent Study	
GRAD 544	Ethical Conduct of Research	
DISSERTATION		**1**
Take a minimum of one credit:		
ECOL 799	Dissertation	
ELECTIVES		**54**
Additional relevant coursework, including research and dissesrtation credits, as determined by student and committee to meet the minimum Graduate School Credit Requirements of 72 credits total. Students are encouraged to explore options across departments and programs.		
Program Total Credits:		**72**

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

[1] Take two semesters; minimum 2 credits total to graduate.

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