PH.D. IN ECOLOGY, HUMAN-ENVIRONMENT INTERACTIONS SPECIALIZATION

Graduate Degree Program in Ecology
Ruth Hufbauer, Director
Johnson Hall 102
Phone: 970-491-4373
ecology.colostate.edu (https://ecology.colostate.edu/)

The Graduate Degree Program in Ecology (GDPE) offers outstanding opportunities for graduate studies ecology, including social-environmental systems. Students can specialize in Human-Environment Interactions as part of their PhD in Ecology degree plan. The HEI program aims to develop students as scientists and policy makers with interdisciplinary problem-solving skills focused particularly on social-environmental approaches to addressing global challenges in the ecological sciences from local to global scales. Students specializing in Human-Environment Interactions 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 and qualitative methods, achieved through required and elective coursework;
2. Ability to critically review and interpret scientific information and originality in integrating that information to design research pertinent to human-ecological issues. This ability 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;
5. Understanding of social-ecological systems and how humans interact and influence their environments, and how those environments affect humans, achieved through required and elective coursework;
6. Appreciation of the need to include diverse stakeholder or rightsholder voices in development of solutions that sustain livelihoods and the environment achieved through required and elective coursework.

Requirements Effective Fall 2024

Code	Title	Credits
COMMON CORE COURSES		
ANTH 530	Human-Environment Interactions	3
ECOL 505	Foundations of Ecology	3
ECOL 571	Advanced Topics in Ecology [1]	2
ECOL 592	Interdisciplinary Seminar in Ecology [1]	2
ECOLOGICAL SUBDISCIPLINES		**6**
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:		
ANTH 575	Paleoecology	
BZ 525	Advanced Conservation & Evolutionary Genomics	
BZ 526/BSPM 526	Evolutionary Ecology	
BZ 548	Theory of Population and Evolutionary Ecology	
BZ 535	Behavioral and Cognitive 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	
HUMAN-ENVIRONMENT INTERACTIONS		**3**
Take a minimum of 3 credits to expand expertise in human-environment interactions. Example courses include the following:		
ANTH 515	Culture and Environment	
ANTH 529	Anthropology and Sustainable Development	
ANTH 535	Globalization and Culture Change	
ANTH 540	Medical Anthropology	
ANTH 545	Global Mental Health--Theory and Method	
ANTH 555	Paleoindian Archaeology	
ANTH 571	Anthropology and Global Health	
ANTH 572	Human Origins	
NR 625	Community-Based Natural Resource Management	
POLS 739	International Environmental Politics	
SOC 668	Environmental Sociology	
ECOLOGICAL TOOLS		**3**
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:		
ESS 575	Models for Ecological Data	
FW 663	Sampling & Analysis Vertebrate Populations	
FW 673/STAT 673	Hierarchical Modeling in Ecology	
NR 512	Spatial Statistical Modeling-Natural Resources	

NR 523/STAT 523	Quantitative Spatial Analysis	
STAR 511	Design and Data Analysis for Researchers I	
STAR 512	Design and Data Analysis for Researchers II	
EDRM 704	Qualitative Research	
EDRM 706	Analysis of Variance--Education Research	
POLS 621	Qualitative Methods in Political Science	
SOC 610	Seminar in Methods of Qualitative Analysis	
PROFESSIONAL SKILLS		**1**
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:		
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		**48**
Additional relevant coursework and 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 one 2-credit offering or two 1-credit offerings; minimum 2 credits total to gradute.

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