

GRADUATE DEGREE PROGRAM IN ECOLOGY

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) is a university-wide interdisciplinary program offering M.S. and Ph.D. degrees in Ecology.

The primary goal of the program is to provide training in current ecological methods, theories, concepts, controversies, and applications by drawing together individuals and synthesizing knowledge from a wider variety of traditional disciplinary areas of science. The program is a cooperative effort among over 155 faculty members from 17 departments and 6 colleges of the University who share a common interest in ecology.

Through the cooperation of the many academic departments and government agencies, the program offers a wide array of facilities, field research sites, equipment, and support services. Because of its location, one of the University's greatest resources is its accessibility to a wide variety of field study sites. Nearby major habitats include: shortgrass steppe and mixed grass prairies; sagebrush steppe; montane and subalpine meadows, forests; southwestern deserts; alpine peaks; river and lake systems; and numerous agroecosystems.

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

Graduate Master's Programs

- Master of Science in Ecology, Plan A and Plan B (<https://catalog.colostate.edu/general-catalog/university-wide-programs/interdisciplinary-studies/graduate-degree-program-ecology/ms-ecology/>)

Ph.D.

- Ph.D in Ecology (<https://catalog.colostate.edu/general-catalog/university-wide-programs/interdisciplinary-studies/graduate-degree-program-ecology/phd-ecology/>)
- Ph.D in Ecology, Human-Environment Interactions Specialization (<https://catalog.colostate.edu/general-catalog/university-wide-programs/interdisciplinary-studies/graduate-degree-program-ecology/phd-ecology-human-environment-interaction-specialization/>)

Courses

ECOL 505 Foundations of Ecology Credits: 3 (2-0-1)

Course Description: Overview of the science of ecology; what questions are asked, how they are answered.

Prerequisite: LAND 220 or LIFE 320 or NR 220 or LIFE 220.

Term Offered: Fall.

Grade Mode: Traditional.

Special Course Fee: No.

ECOL 540 Insect Ecology Credits: 3 (2-0-1)

Also Offered As: AB 540.

Course Description: Dynamics and regulation of insect populations, including predator-prey and host-parasite interactions, and pollination; insect diversity and declines, community structure and ecosystem services.

Prerequisite: BSPM 302 and LIFE 320.

Restriction: Must not be a: Freshman, Sophomore, Junior.

Registration Information: Senior standing. Must register for lecture and recitation. Credit allowed for only one of the following: AB 540, AB 581A2, ECOL 540, or ECOL 581A2.

Term Offered: Spring (odd years).

Grade Mode: Traditional.

Special Course Fee: No.

ECOL 571 Advanced Topics in Ecology Credits: Var[1-3] (0-0-0)

Course Description: Current research topics presented and analyzed by visiting scientists.

Prerequisite: None.

Registration Information: One course in ecological principles.

Term Offered: Spring.

Grade Mode: Traditional.

Special Course Fee: No.

ECOL 592 Interdisciplinary Seminar in Ecology Credits: Var[1-3] (0-0-0)

Course Description: Concepts and principles of basic and applied ecology in an interdisciplinary context.

Prerequisite: None.

Registration Information: One 300- or 400-level course in ecology.

Terms Offered: Fall, Spring.

Grade Mode: Instructor Option.

Special Course Fee: No.

ECOL 600 Community Ecology Credits: 3 (2-0-1)

Course Description: Current theories and tests of the dynamics and regulation of plant and animal communities.

Prerequisite: (STAT 100 to 499 - at least 1 course) and (MATH 141 or MATH 155 to 161 - at least 1 course or MATH 255 to 261 - at least 1 course) and (LAND 220 or LIFE 320 or NR 220 or LIFE 220).

Restriction: Must be a: Graduate, Professional.

Registration Information: Must register for lecture and recitation.

Term Offered: Spring.

Grade Mode: Traditional.

Special Course Fee: No.

ECOL 610 Ecosystem Ecology Credits: 3 (3-0-0)

Course Description: Concepts, methods, issues in ecosystem science: energy and matter cycling; systems perspectives, simulation modeling, sustainability, global change.

Prerequisite: LIFE 320 or ECOL 000 to 9999 - at least 1 course.

Restriction: Must be a: Graduate, Professional.

Term Offered: Fall (even years).

Grade Mode: Traditional.

Special Course Fee: No.

ECOL 620 Applications in Landscape Ecology Credits: 4 (2-2-1)

Course Description: Spatial patterning of landscape elements and dynamics of ecological systems; spatial heterogeneity. Influence on biotic and abiotic processes.

Prerequisite: None.

Restriction: Must be a: Graduate, Professional.

Registration Information: Must register for lecture, lab, and recitation. Previous coursework in geographic information systems, ecology, statistics, and mathematics.

Term Offered: Spring (odd years).

Grade Mode: Traditional.

Special Course Fee: No.

ECOL 693 Research Seminar Credit: 1 (0-0-1)

Course Description: Critique of research programs, plans, and ecological theory.

Prerequisite: None.

Restriction: Must be a: Graduate, Professional.

Registration Information: Written consent of instructor.

Terms Offered: Fall, Spring, Summer.

Grade Mode: S/U Sat/Unsat Only.

Special Course Fee: No.

ECOL 695 Independent Study Credits: Var[1-18] (0-0-0)

Course Description:

Prerequisite: None.

Restriction: Must be a: Graduate, Professional.

Terms Offered: Fall, Spring, Summer.

Grade Mode: Instructor Option.

Special Course Fee: No.

ECOL 698 Research Credits: Var[1-18] (0-0-0)

Course Description: Non-thesis research in ecology.

Prerequisite: None.

Restriction: Must be a: Graduate, Professional.

Terms Offered: Fall, Spring, Summer.

Grade Mode: Instructor Option.

Special Course Fee: No.

ECOL 699 Thesis Credits: Var[1-18] (0-0-0)

Course Description:

Prerequisite: None.

Restriction: Must be a: Graduate, Professional.

Terms Offered: Fall, Spring, Summer.

Grade Mode: Instructor Option.

Special Course Fee: No.

ECOL 799 Dissertation Credits: Var[1-18] (0-0-0)

Course Description:

Prerequisite: None.

Restriction: Must be a: Graduate, Professional.

Terms Offered: Fall, Spring, Summer.

Grade Mode: Instructor Option.

Special Course Fee: No.