



Landscape Ecology and Conservation Option

in the Environmental Science and Resource Management major

<http://www.cfr.washington.edu/Acad/undergrad/esrm/index.htm>

Landscape ecology is an integrated approach to studying the interaction of physical, biological, and social processes on ecological systems at a wide range of spatial scales. The Landscape Ecology and Conservation option focuses on applied aspects of landscape ecology that create, sustain, and alter landscapes to achieve biological diversity and integrity as well as social purposes.

Required Option Courses (34+ credits)

(Fulfills most ESRM major restricted electives)

ESRM 350 (5) Wildlife Biology and Conservation
ESRM 425 (5) Ecosystem Management
ESRM 427 (3) Integrated Management of Forest Landscapes in a Changing World
ESRM 430 (3) Aerial Photos/Remote Sensing Natural Resources
ESRM 441 (5) Landscape Ecology
ESRM 465 (3) Economics of Conservation
ESRM 470 (5) Natural Resource Policy and Planning
QSCI 482 (5) Stat. Inference in Applied Research¹

Recommended General Electives:

BIOL 356 Foundations in Ecology (3)
BIOL 470 Biogeography (4)
BIOL 472 Community Ecology (4)
BIOL 476 Conservation Biology (5)
ESRM 315 Natural Resource Issues: Old-Growth and Forest Management (5)
ESRM 328 Forestry-Fisheries Interactions (4)
ESRM 350 Wildlife Biology and Conservation (5)
ESRM 381 Wildland Recreation and Amenities Mgmt (3)
ESRM 415 Biology, Ecology, and Management of Plant Invasions (5)
ESRM 420 Wildland Fire Management (5)
ESRM 426 Wildland Hydrology (4)
ESRM 450 Wildlife Ecology and Conservation (5)
GEOG 205 Intro to the Physical Sciences and the Environment (5)
HSTAA 221 Environmental History of the U.S.
PHIL 243 Introduction to Environmental Ethics (5)

¹A minor in Quantitative Science is recommended for graduate study, see <http://depts.washington.edu/cqs/> for details about the minor.

Recommended Capstone Experience

To fulfill the 10 credit major capstone requirement, students are strongly encouraged to select the Proposal (ESRM 494), then either the Senior Thesis (ESRM 496) or Senior Project (ESRM 495). The award-winning UW-REN Restoration Ecology Capstone (ESRM 462-464) is also available.

Capstone projects will typically require investigation of the ecology and conservation of a particular site or region, including a combination of ecological and social inquiry, data collection or compilation, data management, spatial analysis, and conservation or land-use planning recommendations. Requirements include a project proposal, data collection or project implementation, analysis of data/project, final written report of findings/project, and an oral presentation.

Career Opportunities and Graduate Study

The option offers students postgraduate opportunities in conservation, land-use planning, natural resource management, and ecological research. Some examples of groups that have interests in landscape ecology include Environmental NGOs (e.g., The Nature Conservancy, Trust for Public Land, The World Wildlife Fund), local land trusts, timber and mining companies, state wildlife and natural resource agencies, the U.S. Forest Service, the U.S. Fish and Wildlife Service, the U.S. Bureau of Land Management, the U.S. Environmental Protection Agency, environmental consulting firms, and city and county planning offices. The option will also prepare students for graduate work in ecology, conservation biology, natural resources, and land-use planning.

CFR and Affiliated Faculty: Josh Lawler (lead), Jon Bakker, Susan Bolton, Gordon Bradley, Bob Edmonds, Greg Ettl, Jerry Franklin, John Marzluff, Don McKenzie, Monika Moskal, David Peterson, Clare Ryan, Doug Sprugel, Christian Torgersen, Kristiina Vogt