

Wildland Fire Ecology
FW446/546; FOR 446/546

Credit hours: 3

Term offered: Winter

Instructor: Rick Miller

Course objectives:

By the end of this unit, undergraduate students should be able to:

1. Explain fire histories and current fire dynamics associated with major forest, range and wetland ecosystems;
2. Evaluate the rigor and quality of fire history and fire ecology studies and to the extent they can be extrapolated across the landscape;
3. List under what conditions prescribed fire and/or wildland fire may or may not aid in ecosystem restoration; and
4. Develop a framework of questions to properly address ecological restoration issues related to fire.

Additionally, graduate students should be able to:

1. Critique the strengths and weaknesses of journal articles related to the natural fire histories and wildland fire ecology;
2. Synthesize and integrate key social and environmental issues surrounding fire and forest restoration; and
3. Extrapolate relevant course information to their graduate research project and related experience.

Course content: This course will familiarize students with the fire histories and ecology of major forest, rangeland and wetland ecosystems as they relate to natural and anthropogenic fire and/or fire exclusion. This includes an understanding of: (1) how fire interacts with physical and biotic components of ecosystems (i.e., plant communities, fuels, weather, topography, and soils) to affect landscape composition and structure, historically and currently; (2) the role of fire as an ecosystem process - its effects on ecosystem structure, composition, and processes, including plant and wildlife populations; and (3) the utilization of fire (prescribed and/or wildland use) in natural resource management, restoration, and wildlife habitat enhancement; and basic approaches to these.

Prerequisite(s): Course work in Ecology and Natural Resource Management.

Text(s): Optional

Agee, J.K. 1993. *Fire Ecology of Pacific Northwest Forests*. Island Press.

Term paper(s): None

Testing: Two midterms and a final.

Students for whom the course is intended: Undergraduate and graduate students interested in the ecological aspects of fire ecology. Corsslisted with Forest Resources.