

Forest Ecology of the Pacific Northwest

CRN: 40069 (UG), 40070 (MES)

5 credits UG, 4 credits (MES) - First Session

Anne Fiala, 867-6788, fialaa@evergreen.edu

Class website: <http://academic.evergreen.edu/f/fialaa/forestecology2006.htm>

T, W, Th 9-11 a.m. (lecture); W 1-5 p.m. (lab)



Prerequisites: Introduction to Environmental Studies or equivalent.

Special expenses: \$100 for field trip and van rental expenses.

This course is designed for students interested in learning about Pacific Northwest (PNW) forests. Class time will be divided between lecture, discussion, and primarily field-based labs. Students will develop vegetation data collection skills during the weekly labs. There will also be one 2-night 3-day field trip to visit multiple forest structure types in Washington and/or Oregon. There will be weekly quizzes and a comprehensive final exam.

Reading materials:

- Forest Ecology: A foundation for sustainable forest management and environmental ethics in forestry, **Third Edition**. By J.P. Kimmins (Required)
- Weekly readings from the peer-reviewed primary literature
- Plants of the Pacific Northwest Coast By Pojar and Mackinnon (OPTIONAL - Recommended for people interested in Plant ID)
- Manual of Oregon Trees and Shrubs – Edward Jensen *et al.* (OPTIONAL – Also recommended for people interested in Plant ID)

Lecture and/or discussion topics will include (subject to modification):

- Introduction to forest ecology
- Forest ecosystems and types in the PNW
- Energy transfer in forest ecosystems/ Nutrient cycling
- Below-ground processes/soils
- Population ecology
- Community ecology
- Biodiversity and wildlife in the forest
- Forest structure – historical range of variability and current status
- Succession
- Roles of disturbance in forests – wind, fire, insects, disease
- Forest management practices
- Productivity
- “Hot” topics in PNW Forests – e.g. Fire

Field lab topics (held on campus or at Capitol Forest) will include (subject to modification):

- Forest structure and composition
- Forest succession
- Soils

Field trip location (still to be finalized):

- The 3-day 2-night trip will likely involve traveling a transect that crosses the Crest of the Cascades. We will visit the Wind River Canopy Crane Research Facility (Carson, WA), The Metolius and Eastern Cascades, including the B&B Complex Fire that burned in Summer 2003 (near Sisters, OR), and the HJ Andrews Long Term Ecological Research Station (Blue River, OR) during the fourth week of the course.