

# FOR 272 : FOREST ENTOMOLOGY/PATHOLOGY

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## Transcript title

Forest Entomology/Pathology

## Credits

3

## Grading mode

Standard letter grades

## Total contact hours

50

## Lecture hours

20

## Lab hours

30

## Recommended preparation

FOR 240A and FOR 241A.

## Course Description

Emphasizes the recognition and effects of diseases, insects and mammals affecting forest ecosystems in the Pacific Northwest. Course will examine the role of insects, diseases and animals in forest functioning, health and management, as well as control measures and integrated pest management. Lab work is largely field-based and emphasizes identification of damaging forest insects and diseases common in Oregon. Second course in the sequence of FOR 271, FOR 272, and FOR 273.

## Course learning outcomes

1. Ability to describe and recognize stages of forest stand development.
2. Be able to apply crown classification system in even-aged stands.
3. Ability to interpret and use site index curves to determine forest site quality.
4. Be able to determine general growth patterns from examination of tree growth rings.
5. Be able to determine stand type from a diameter distribution graph.
6. Be able to collect diameter data and construct a diameter distribution graph.
7. Know how to properly use an increment borer to determine tree age.
8. Be familiar with silvicultural methods of regeneration and the kinds of stands they produce.
9. Understanding of basic terms, methods, and procedures involved in forest site preparation and tree planting.
10. Be able to correctly plant conifer seedlings.

## Content outline

• Insect life cycles • Ecological role of insects • Structure of insects • Insect taxonomy • Bark beetles • Forest health and beetle infestations • Pheromones in biology and management • Wood borers, shoot borers and defoliators • Forests and fungi • Forest diseases • Damage surveys • Disease life cycles and environmental resistance • Root diseases •

Tree decays – heart, sap, and root rots • Natural role of insects and diseases • Control of pests - biological • Control of forest pests - direct and silvicultural • Mistletoes and rusts • Mistletoe evaluation and control • Animal and abiotic damage • Integrated pest management • IPM case studies

## Required materials

Requires textbook, see syllabus for details.