

Biology 356, Fall 2014

Dendrology

Course Goals: The goal of this course is for you to learn to recognize the principal woody plant species in the major North American forest regions, and to learn to recognize some of the most highly invasive woody plants of eastern North America. You will also become familiar with broad aspects of the ecology and management of these regions (including animal habitats), and the value of many trees for timber and other forest products.

This course supports the following NREM student learning outcomes: To anticipate, analyze and evaluate natural resource issues; to assess and synthesize information fairly and objectively; to formulate evaluate and explain alternative solutions to complex problems and to recommend and defend the best alternative; to work effectively individually and with others, and to communicate effectively.

Required Text: 1) Forestry 356 course pack, 2) Field Guide to Trees of North America (National Wildlife Federation)

Grading: The first three exams will include sight identification of species, and a written section over the other topics covered in each section. There will also be five quizzes to test your sight ID, and a number of written exercises and projects scattered through the semester. The final two weeks of the semester we concentrate on winter ID, with a fourth exam on the last day of test that is outdoors and tests your winter ID skills.

Total points will depend on the number of quizzes, exercises and projects that we have, but will be around 350 divided up among exams, quizzes, and exercises/projects:

Professionalism – regular attendance, engagement and participation in the course – is an important component of our curriculum. I understand and can accommodate unusual situations that arise that make it impossible to come to class or that result in late assignments. Coming to class is like coming to work – you need to let the boss know, so please send me an e-mail if this happens. Late work will be accepted if you've kept me in the loop. Everyone has a bad day, so doing well in this component of the class earns you a dropped lowest quiz score.

Statement on Disabilities: Any student who feels s/he may need an accommodation based on the impact of a disability should contact me privately to discuss your specific needs. For further information or to coordinate an accommodation, please contact the Disability Resources Office 4-6624 in room 1076 Student Services Building, or e-mail the office at awoniyib@iastate.edu.

Course Outline:

Section 1: August 24 – September 23

- Week 1 August 26, 28: Introduction; historical forest - Louis and Clark Expedition.
- Week 2 September 2, 4: Finish Louis and Clark; fire and oak regeneration.
- Week 3 September 9, 11: **Lab Quiz 1**; Modern forest conditions.
- Week 4 September 16, 18: Finish tree regeneration; disturbance & wildlife habitat.
- Week 5 September 23, 25: **Lab Quiz 2**; **Exam 1**; finish wildlife habitat;

Lab material for this section—Morphology, species of the Eastern Deciduous Forest (EDF)

Section 2: September 28 – October 28

- Week 6: September 30, October 2: The value of dead trees
- Week 7 October 7, 9: Historical southern and northern forest conditions.
- Week 8 October 14, 16: **Lab Quiz 3**; Current southern and northern forest conditions.
- Week 9 October 21, 23: Ecological Forestry: balance between timber and other values.
- Week 10 October 28, 30: **Lab Quiz 4**; **Exam 2**; finish ecological forestry.

Lab material for this section – Non-native species; Southern species (Piedmont & Coastal Plain), Northern species (New England/Great Lakes/Boreal)

Section 3: November 4 – December 4 (no class Nov. 23 & 25 Thanksgiving break)

- Week 11 November 4, 6: Historical and modern western forests, including fire & disturbance
- Week 12 November 11, 13: Finish western forests.
- Week 13 November 18, 20: **Lab Quiz 5**, **EXAM 3**; western forest management and restoration challenges.

Lab – Western species (Rocky Mountain & Pacific Coast)

Thanksgiving break: November 24-28

- Week 14 December 2, 4: Winter identification (twigs and bark)
- Week 15: December 8, 10: **EXAM 4 twigs and bark**