

FORESTRY 302 – PRACTICE OF SILVICULTURE

INSTRUCTOR: Dr. John Adams

OFFICE: Reese Hall #111

PHONE: 257-4985

OFFICE HOURS: 8:00-12:00 M-F

TEXTBOOK: Silviculture, Concepts and Applications. Ralph D. Nyland.
Waveland Press, Inc. 682 p.

GRADING:
93-100 = A
85-92 = B
75-84 = C
65-74 = D
Below 65 = F

APPROACH: This course will be 2.5 hours of lecture and 4 hours of lab per week. The labs are designed to relate to matters being covered in the lecture. The textbook will serve as a general guide to the lectures, supplemented by reading in the current literature, required readings and handouts.

EXPECTATIONS: Students will have a working knowledge of the basic silvicultural concepts and their use in the management of our forest resources.

TERM PROJECTS: Lab reports on designated labs will be required by work student.

COURSE OUTLINE:

- Week 1:
 1. Introduction to Silviculture and review ecology principles.
 2. Silviculture and Ethics.
 3. The stand and the forest.

- Week 2:
 1. Introduction to intermediate operation.
 2. Objectives of thinnings.
 3. Economics and wood production.
 4. The individual tree.

- Week 3:
 1. Methods of thinning
 2. Application of thinning methods
 3. Rotation length and stand density

- Week 4: 1. Release Operations
2. Role of herbicides (past and present)
3. Cleaning
4. Liberation
- Week 5: 1. Improvement operations
2. Salvage operations
3. Control cutting
- Week 6: 1. Seed biology
2. Natural and Artificial seeding
3. Species Adaptations
4. Direct seedling, pro and con
- Week 7: 1. Production of plant stock
2. Species selection and provenance
3. Tree improvement comparatives
4. Progeny test and seed orchards
5. Exotics
- Week 8: 1. Production of plant stock
2. Nursery Operations
3. Seedlings, tublings, and cloval stock
- Week 9: 1. Tree planting
2. Core of planting stock
3. Planting methods
4. Density of plantation
5. Protection
- Week 10: 1. Silviculture systems and reproduction
2. Clearcutting
3. Reproductive choices
4. The environment and clearcutting
- Week 11: 1. Shelterwood and seed tree
2. Selection of trees
3. Application
4. Environmental concerns
- Week 12: 1. Selection
2. Maintenance on uneven age stands
3. Application of the selection
4. Misc. – Pruning, site prep, vegetative reproduction