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Fall 9-1-2001

### FOR 447.01: Advanced Silviculture

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**FORESTRY 447**  
**ADVANCED SILVICULTURE**  
Autumn 2001

Instructor: John Goodburn  
Office: Rm. 464 Science Complex  
Telephone: 243-4295 Email: goodburn@forestry.umt.edu  
Office hours: Mon. 1:00-2:30 pm, Tues. 9:30-11:00 am, Wed. 11:00 – 12:00  
(or by advance appointment)

Lecture and Discussion Tues. & Thurs. 8:10 -9:00 a.m. Journalism 306  
Lab/Field Work Tues. 1:30 - 5:30 p.m. TBA  
(Field labs will meet at vans in parking lot south of Science Complex building)

### Course Description

This course will examine a range of silvicultural topics at an advanced level. We will consider silvicultural systems, thinning/stand density concepts, regeneration practices, stand assessment, and stand prescriptions. We will study silviculture of various forest regions in the United States. *Silviculture* is the theory and practice of influencing forest regeneration, species composition, and growth to accomplish a specified set of resource objectives. Silviculture can be thought of as applied forest ecology. We will be examining alternative silvicultural strategies that follow from an understanding of natural stand dynamics and the seral stages various species occupy in ecological succession.

### Readings

**Optional text:** Regional Silviculture of the United States. John W. Barrett, ed. 1995.

**Reading assignments** will come from the above text and from supplementary sources (books and journals). The Barrett text is on reserve at the Mansfield Library. Most readings will either be handed out as hard copies or will be available over the internet on the Mansfield Library website for Electronic Reserves (ERes). Items on electronic reserve will also be available as hardcopy versions on traditional reserves at the Mansfield Library.

### Labs

Labs will be a major component of the course and will allow you an opportunity to practice different skills and to learn from professional in the field. Tuesday field labs will generally meet at the vans in the parking lot south of the Science Complex.

\*\* Unless lab is scheduled to be indoors, always wear appropriate field clothes and footwear (boots) to labs. If rain is forecast, bring rain gear and do not expect lab to be canceled on account of bad weather. \*\*

\*\*\* NOTE THAT WE HAVE ONE WEEKEND LAB LEAVING NOON FRIDAY 9/28 AND RETURNING SATURDAY NIGHT. This lab will visit the Miller Creek Demonstration Forest and Coram Experimental Forest near Glacier N.P. \*\*\*

### Grading System

Lab assignments, Silv. Prescriptions	-	35%
Quizzes (Week 5 and Week 13)	-	20%
First midterm exam	-	20%
Class participation	-	5%
Final exam	-	20%

# FORESTRY 447 - ADVANCED SILVICULTURE

Autumn 2001

## Course Outline

### *Lecture Schedule*

<u>Topic area</u>	<u>Forest Region</u>
Week 1 and 2 Site and Stand Assessment/ Stand History	Northern Rocky Mountain Region
Weeks 3 and 4 Silvicultural Systems	The Northeastern Region
Weeks 5 and 6 Control of Stand Density Species Composition	Southern Pine Region Central Hardwoods
Weeks 7 and 8 Uneven-aged Management	DF/Ppine Northern Hardwoods
Weeks 9-15 Wildlife Management Insects and Disease Silvicultural Prescriptions Modeling the effects of Silvicultural treatments	Pacific Northwest various regions

### *Field Lab Schedule*

<u>Date</u>	<u>Activity</u>	<u>Field trip/Lab Location</u>
9/11/01	Stand Assessment I	Lubrecht Experimental Forest
9/18/01	Stand Assessment II	Lubrecht Experimental Forest
9/25/01 (optional)	Effects of alternative silvicultural regimes in Lodgepole pine (McCaughey)	Tenderfoot Experimental Forest White Sulfur Springs, MT
9/28-29/01	Stand dynamics and silviculture of Western larch-fir forests (R. Shearer)	Coram Experimental Forest Hungry Horse, MT
10/09/01	Fuels management prescription in P. pine-larch -fir (S. Klinkhammer)	Seeley Lake Ranger District, Lolo National Forest
10/16/01	Ecosystem management burns, Forest health issues (S. Slaughter)	Ninemile Ranger District, Lolo National Forest
10/23/01	Uneven-aged management in Ponderosa pine (C. Fiedler)	Lubrecht Experimental Forest
10/30/01	Uneven-aged management II	Lubrecht Experimental Forest
11/6/01	Computer Lab Exercise	Journalism 106
11/13/01	Computer Lab Exercise	Journalism 106
11/20/01	Computer Lab Exercise	Journalism 106