FO 4323/6323 Forest Resource Management
Department of Forestry--Mississippi State University
Syllabus Fall 2015

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Course Description:
(Prerequisites: FO 4113/6113, FO 4223/6223, FO 4233/6233, FO 4231/6231, FO 4213/6213). Three hours lecture. Three hours laboratory provides application of quantitative decision making techniques to stand-level and forest -wide management problems. Topics include land classification, forest production, optimal rotation analysis, and harvest scheduling.

Course Objective:
The intent of this course is to provide the students with tools to analyze and manage a forest composed of multiple stands to meet a variety of ownership objectives. To accomplish this objective, we will explore classical through current approaches to the management of private and public forests. This will include land classification, prescription development, forest production, harvest scheduling and regulation. Emphasis in this course is practical exercises to illustrate concepts discussed in the lecture. The instructor's primary goal is for students to demonstrate their knowledge of quantitative tools to solve and assess forest management problems. Specific goals include:

Lectures: 12:30pm – 1:45pm, TTH, Thompson Hall, Room A220
Labs: 2:00pm – 5:50 pm, MT, Thompson Hall, Room a308

Prerequisites:
Forest Biometrics (FO 4213/6213), Forest Operations and Harvesting (FO 4233/4231, 6233/6231), Practice of Silvicultural (FO 4223/4221, FO 6223/6221), and Forest Resource Economics (FO 4113/6113) are prerequisites for this course. For graduate students, admission is subject to approval of instructor.

Primary Text:
Bettinger, P., Boston, K., Siry, J., and D.L. Grebner. 2009. Forest Management and Planning, 1st Edition. Academic Press, Elsevier, Inc. 331 p.

MyCourses:
Please visit http://mycourses.msstate.edu/. The instructor will list all assignments, grades, reading materials other than the required text, and other useful pieces of information. In addition, any use of the chat rooms, email, and bulletin boards for the course require that you behave in a professional manner. Therefore, use of profanities and transmission of obscene materials is prohibited.

Grading:
For undergraduate students, grades will be based on student presentations, 2 midterm lecture exams, lab project, and a final lecture exam. For graduate students, grades will be based on student presentations, 2 midterm lecture exams, a lab project, a final lecture exam, and a term paper. Final grades will be distributed as follows:

Undergraduate		Graduate	
Micro-Theme paper	5%	Micro-Theme paper	5%
Self-reflective paper	5%	Self-reflective paper	5%
Lab Project	20%	Lab Project	10%
Student presentation	20%	Student presentation	10%
2 Midterm lecture exams	30%	2 Midterm lecture exams	30%
Final Lecture Exam	20%	Term Paper	20%
		Final Lecture Exam	20%

Notes on grades: A= 90-100, B = 80-89.9, C = 70-79.9, D = 60-69.9, F = Below 60

Writing Assignments:

There will be three primary writing assignments that we will have this semester in class. This is in addition to the group lab project. More information about the assignments will be shared in class and on MyCourses. The assignments are:

Minor writing assignment
Journal writing: Once or twice a week throughout the semester, we will spend 5 to 10 minutes writing a self-reflective assessment of what you have read for homework or what we discussed in class. Students will then break up into small groups and share their thoughts (read what you wrote) to the other group members. I will pick these up at assigned points throughout the semester for review. This writing assignment will serve as a scaffolding work to help in the development of the "self-reflective" paper due at the end of the semester and mentioned below. Successful completion of all journal entries will result in a 10 point boost to your final exam grade.

Major writing assignments
Micro-theme paper: Students will be required to select a topic from a pre-defined list which will be handed out in class and will be available on MyCourses. Each student will let the instructor know about their selection via email with a short paragraph justification for why they chose that particular topic. They will be required to bring a 1st draft (in paper) on a specified date and participate within a group peer-review process. The student will then need to take those comments along with the instructor's and revise their manuscript and submit their final version on a pre-defined date.

Self-reflective paper: Students will be expected to write a self-reflective paper on what they have learned in this course. I will be interested in learning about their impressions on the use of the tools learned in class, the learning process, etc. This paper must be approximately 5 pages in length. A first draft of the self-reflective paper will be due mid-way through the semester (dates are listed in the topic schedule). Like the micro-theme paper, students will go through a group –peer review process. The final version will be due on the last day of class. More information about this assignment will be distributed in class and on MyCourses.

Bonus Points:
During the semester I will be giving assignments either in class or out of class to improve in-class participation. These assignments will not be graded, but will count as "bonus" points to be used on your lecture exams. These "bonus points" will be added to the total score of your two lecture exams before averaging. For instance, if you received scores of 75 and 85 on lecture exams your average (which is only 30% of your overall grade) is an 80. If you received 10 "bonus points," then your lecture exam average would be 85 ((75+85+10)/2).

Class attendance scores are a type of bonus point. The scores are adjusted downwards 1 point for each class missed with an unexcused absence (please note MSU policy). For instance, all students receive 5 points towards their final course grade for attending all lecture sessions. For each class they miss, they will receive 1 point less towards their final grade until their 5 points are diminished.

Lab exercises are intended to help you master old and new techniques depending on the specific topic. Lab time is dedicated for each student to complete the assignment, but assignments are not officially due until the beginning of the next lab period. Student assignments will be graded in the form of a "check mark", "check mark plus", or a "check mark minus". Student receiving a "check minus" on a lab assignment have only one week to write their assignment immediately after the return of their originally graded assignment. **No late assignments are accepted**. The number of completed lab assignments goes towards the lab project grade.

Special assignments may be given throughout the semester. These could take the form of a snap quiz or a very brief writing assignment in class. These will be awarded a bonus point status.

There will be no make up exams or quizzes!

Lecture Exam Dates:
September 24, November 3, and December 8 (12-3 pm), 2015.

Exam Protocol:
- Bring a calculator (a back up won't hurt), ruler, pens, pencils, and erasers.
- Arrive on time or earlier.
- Leave one empty seat between each student in class unless class enrollment prohibits this action. This is not possible in the lab rooms like A308.
- All materials except the above should be place on the floor or on a chair pushed under the table.
- **Exams and quizzes will encompass materials from lecture and reading assignments!!**
- **All midterm lecture exams are comprehensive!!**
- **Final lecture exam is comprehensive!!**

Lab Project:
The goal of doing the class project is to help students pull together the concepts they learn in lecture and lab for developing an abridged assessment of alternative forest management strategies. This will be important when they take Professional Practices FO 4423/6423. The project packet will contain the specific information necessary for completing the assignment.

Lab Project Presentation:
The lab project will be presented to the class as a group. Powerpoint will be the software of use for making this presentation. Additional details will be provided at a later date.

Final Project Due: 12/1 at 5:00 pm
No credit will be given for a final project submitted after this date and time! Project papers must be submitted in one file and will be submitted through the Turnitin add on within myCourses.

MSU Policies that Directly Affect the Course:

***University Academic Attendance Policy* (AOP 12.09 - Class Attendance):** For more information, please visit this link http://www.msstate.edu/dept/audit/1209.html.

Persons with Disabilities: For more information on MSU policies see http://www.msstate.edu/dept/audit/91121.html.

Academic Misconduct (AUP 12.07 – Academic Misconduct): Sanctions for academic misconduct include a grade of F in the course and suspension from the University. For more information see: http://www.msstate.edu/dept/audit/1207.html.

TENTATIVE LECTURE TOPIC SCHEDULE

I. Background Concepts

Week 1:

8/18:	Introduction
8/29:	Land Classification
Reading:	Bettinger, Boston, Siry, and Grebner, Chapters 1 & 3

Week 2:

8/25:	Land Classification and GIS
8/27:	Land Classification and GIS
Reading:	Bettinger, Boston, Siry, and Grebner, Chapters 3 & 2
Due 8/27:	Selection of micro-topic assignment

Week 3:

9/1:	Valuing and Characterizing Forest Conditions
9/3:	Valuing and Characterizing Forest Conditions
Reading:	Bettinger, Boston, Siry, and Grebner, Chapters 2; Handouts

Week 4:

9/8:	Silvicultural Systems and Stand Prescriptions by Dr. Scott Roberts
9/10:	Estimation and Projection of Stand and Forest Conditions
Reading:	Bettinger, Boston, Siry, and Grebner, Chapters 4; Handouts
Due 9/8:	1st draft of mico-theme assignments

Week 5:

9/15:	Estimation and Projection of Stand and Forest Conditions
9/17:	Linear Programming (LP) Problem Formulation and Solving Problems
Reading:	Bettinger, Boston, Siry, and Grebner, Chapters 4, 5, & 6
Due 9/16:	Instructor returns feedback for micro-theme assignments

Week 6:

9/22:	Linear Programming (LP) Problem Formulation and Solving Problems
9/23:	Review Session

9/24: Exam #1
Reading: Bettinger, Boston, Siry, and Grebner, Chapters 6 & 7
Due 9/22: Final version of micro-theme assignment

II. Forest Level Management and Planning

Week 7:
9/29: Review Exam/Linear Programming
10/1: Classical Forest Management Techniques
Reading: Bettinger, Boston, Siry, and Grebner, Chapters 9 & 10

Week 8:
10/6: No Class
10/8: No Class
Reading: Bettinger, Boston, Siry, and Grebner, Chapter 11
Due 10/8: 1st draft of self-reflective assignment

Week 9:
10/13: Timber Harvest Scheduling with LP
10/15: Timber Harvest Scheduling with LP
Reading: Bettinger, Boston, Siry, and Grebner, Chapter 7

Week 10:
10/20: Advanced Forest Planning Techniques
10/22: Timber Harvest Scheduling with LP No class Fall Break
Reading: Bettinger, Boston, Siry, and Grebner, Chapter 7

Week 11:
10/27: Spatial Adjacency Issues
10/28: Review Session
10/29: Risk Analysis
Reading: Bettinger, Boston, Siry, and Grebner, Chapter 8 & 12

III. Special Forest Management Topics and Issues

Week 12:
11/3: Exam #2
11/5: Harvest Scheduling Tommy Tadlock Plum Creek

Week 13:
11/10: TBA Reviewed exam #2
11/12: Student Presentations
Reading: Bettinger, Boston, Siry, and Grebner, Chapter 15; Handouts

Week 14:
11/17: Student Presentations
11/19: Student Presentations

Reading: Handouts

Week 15:

11/24: No Class (Thanksgiving)
11/26: No Class (Thanksgiving)
Reading: Handouts

Week 16:

12/1: Review Out of town.

Due 12/1: Final version of self-reflective writing assignment

Due 12/1: Final Project

Exam Week:

12/8: Final Exam 12:00-3:00 pm

TENTATIVE LABORATORY TOPIC SCHEDULE

		Dates
Week 1:	GIS Basics (Khanal)	8/17-8/21
Week 2:	Land Classification with GIS (Khanal)	8/24-8/28
Week 3:	Financial Analysis/Forest Production/Optimal Rotation	8/31-9/4
Week 4	No Lab	9/7-9/11
Week 5:	Linear Programming Problem Formulation/Graphical Solutions	9/14-9/18
Week 6:	Timber Harvest Scheduling with LP	9/21-9/25
Week 7:	Timber Harvest Scheduling with LP	9/28-10/2
Week 8:	Work on Group Projects[+] (Khanal)	10/5-10/9
Week 9:	Work on Group Projects[+] (Khanal)	10/12-10/16
Week 10:	Work on Group Projects[+] (Khanal)	10/19-10/23
Week 11:	Work on Group Projects[+] (Khanal)	10/26-10/30
Week 12:	Work on Group Projects[+] (Khanal)	11/2-11/6
Week 13:	Work on Group Projects[+] (Khanal)	11/9-11/13
Week 14:	Work on Group Projects+ (Khanal)	11/16-11/20
Week 15:	No Lab (Thanksgiving Holiday)	11/23-11/27
Week 16:	No Lab sessions	11/30-12/4

[+] Even though work on group projects is expected outside of lab periods, attendance on these dates is required. Failure to attend will adversely affect the class attendance grade.