

## FOR481 Forest Planning

*Spring 2009*

---

Instructor: Woodam Chung  
 Office: FOR 207B  
 Phone: (406) 243-6606  
 Email: [woodam.chung@umontana.edu](mailto:woodam.chung@umontana.edu)  
 Office Hours: TR 9:30A – 12:00P and 2:00P – 3:00P or by appointment

Teaching Assistant: Pablo Aracena  
 Office: FOR 207  
 Phone: (406) 243-4264  
 Email: [pablo.aracena@umontana.edu](mailto:pablo.aracena@umontana.edu)  
 Office Hours: MWF 9:00A – 11:00A and 3:00P – 5:00P

Class Times: Two 1.5-hour lectures (FOR305): TR 12:40P - 2:00P

Required Text: Forest Management by Davis, Johnson, Bettinger, and Howard, 4th Edition (McGraw-Hill or Waveland Press)

### Course Objectives:

Introduce skills in developing quantitative problem statements, solution procedures, and solution interpretation for complex forest planning problems with emphasis on management activities for sustainable forestry. This course is designed to follow silviculture (FOR 347) and forest economics (FOR 320).

### Course Policies:

- All assignments are due at the BEGINNING of class.
- All work must be neat, legible and complete.
- Work that does not confirm to the above requirements and the designated format may not be accepted.
- Any requests for deviations in the course policies, schedule, or deadlines must be made in writing to the instructor. Email is acceptable but should be confirmed as having been received.

### Grading:

• Problem Sets	7 @ 25 pts	175	(35%)
• Group Project	1 @ 75 pts	75	(15%)
• Midterm	1 @ 100 pts	100	(20%)
• Final	1 @ 150 pts	150	(30%)
		500	(100%)

- Letter grades will be based on the following. Depending upon class performance, the curve may be shifted downward but not upward.

A	93% – 100%	C	73% – 77%
A-	90% – 93%	C-	70% – 73%
B+	87% – 90%	D+	67% – 70%
B	83% – 87%	D	63% – 67%
B-	80% – 83%	D-	60% – 63%
C+	77% – 80%	F	0% – 60%

- MIDTERM: Thursday, March 19, 12:40P – 2:00P
- FINAL: Wednesday, May 13, 1:10P – 3:10P
- EXAMS: Open Book, Open Notes. Optional quizzes may be given during the classes which can substitute partially for the midterm and final exam.
- PROBLEM SETS: Homework sets can be resubmitted once to recover 50% of points lost.
- GROUP PROJECT: Each student will participate in a group project. The project will be presented to the class in the last week of class. A student drawn at random from the team will make the 10 minute presentation. The project will be graded (Acceptable/Not Acceptable). Group members must be present in order to receive credit.
- GRADUATE CREDIT: Each student taking FOR 481 for graduate credit is required to complete an individual student project in addition to the homework and examinations. The student must submit a project proposal to the instructor for approval. The project will be graded Acceptable/Not Acceptable and completion of an acceptable project is essential to receive credit for the course.

Student Conduct Code

*All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University.*

*All students need to be familiar with the Student Conduct Code. The Code is available for review online at <http://ordway.umt.edu/SA/documents/fromWeb/StudentConductCode1.pdf>.*

# FOR 481 Forest Planning

## Spring 2009

### OUTLINE

### Readings

#### INTRODUCTION

Introduction to Forest Management	P. 3-25
Concepts and Criteria for Forest Management	P. 26-60
Basic Elements and Methods of Forest Management Planning	P. 61-77
Why Make a Plan?	P. 109-114
Levels of Planning	P. 85-92

#### FRAMEWORK FOR DECISION MAKING

Elements	P. 259-271
Applications	P. 272-287
Introduction to Linear Programming	P. 288-305
Steps in Problem Formulation/Jerry Wilcox Problem	P. 305-313

#### STRATEGIC FOREST PLANNING (strata-based)

Classical Approaches to Forest Planning	
Structure of the Regulated Forest	P. 97-109
Strategies of Forest Regulation	P. 527-545
Forest Planning with Multiple Goals	
General Approach/Daniel Pickett Problem	P. 575-582
Using a Model I Structure	P. 583-607
Using a Model II Structure	P. 608-628
Multiple Objectives--Goal Programming	P. 302-305
Mixed Integer Programming	P.271, 299-301

#### STRATEGIC FOREST PLANNING (non-strata based)

Issues	P. 737-741
Heuristics (Simulated Annealing)	P. 741-748
	P. 752-755

#### TACTICAL PLANNING

Tactical Planning Considerations	P. 760-764
Adjacency Constraints	P. 774-781