

FOR370 – Forest Management Decision Making and Planning
Spring 2013
Lectures: TuTh 9:30 – 10:50; 315 Bray
Labs: Wed 2:55 – 5:55; 210 Walters Hall/310 Baker Computer Lab

Professor:	Dr. John E. Wagner	Office:	304 Bray Hall
Office Phone:	470-6971	e-mail:	jewagner@esf.edu
Office Hours:	Open Door Policy; however, Appointments are Preferred		

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GUEST LECTURERS

Dr. David Newman	Dr. Eddie Bevilacqua
Dr. Chris Nowak	Dr. Ralph Nyland
Dr. Rene' Germain	Dr. John Stella
Mr. Patrick Penfield, SU Whitman School of Management	Ft. Drum Forester, TBA
Dr. Robert Malmshiemer	Mr. Bob Davis, ESF Forest Property Manager
Mr. Matt Smith, FiniteCarbon	Mr. Leonard J. Cronin - Finch Paper LLC

TEXT:

Bettinger, P., K. Boston, J.P. Siry, and D.L. Grebner. 2009. *Forest Management and Planning*. Elsevier Academic Press, New York, NY.

FOR370/570 Forest Management Decision Making and Planning Reader

SUSTAINABLE FOREST MANAGEMENT:

This course concentrates on the decision making and planning components of forest management. There is a focus on forest resources management within in the context of ecological, social, and economic sustainability. The course emphasis is on providing a sustainable forest planning and management framework.

OBJECTIVES:

Concepts

1. Use compound interest in forest management decisions.
2. Use forest growth and yield models and interpret their results.
3. Calculate annual harvest levels based on area and volume control.
4. Develop harvest schedules using decision models such as linear programming.
5. Assess forest management plans.

Skills

1. Ability to employ compound interest in evaluating forest management decision making and planning.
2. Ability to execute forest growth and yield models and interpret their results.
3. Ability to determine annual cut levels based on area control and volume control methods.
4. Ability to develop harvest schedules utilizing linear programming techniques.

5. Ability to develop timber management plans.

The grade you earn on any homework, project, or exam will be based on your ability to demonstrate an analysis level of knowledge. Table 1 illustrates Bloom's six cognitive levels of knowledge. They increase from the lowest level of definition to the highest level of evaluation.

Note: To demonstrate an analysis level of knowledge, you will have to use definition, comprehension, and application.

Table 1. Bloom's Cognitive Levels of Learning[§]

Cognitive Level	Activities
Knowledge	Remembering facts, data, terms, concepts, definitions, principles; Memorize and Recall
Comprehend	Explain, predict, interpret, infer, summarize, translate, give examples of the meaning of material to an intelligent person with no formal training in economics, forestry, managerial economics
Apply	Apply, solve, show make use of, modify, demonstrate, compute problems unlike those described in class
<i>Analyze</i>	<i>Breakdown material into component parts to describe, explain, and interpret interrelationships; compare & contrast</i>
Synthesize	Produce something new or original from component parts, design, construct, develop, formulate
Evaluate	Make a judgment based on a pre-established set of criteria, appraise, evaluate, justify, judge

[§]Bloom, B.S., ed. 1956. *Taxonomy of Educational Objectives, Vol. 1: Cognitive Domain*. McKay, NY.

CLASS VS. LABS

While the material presented in class and labs are related there is a philosophical difference between them. The material presented in class introduces concepts and is in part a synthesis of your professional degree program to date. The material presented in labs is more skills and tool oriented. Due to scheduling there may appear to be a disconnect between them.

CLASS ATTENDANCE:

Class attendance is vital -- absences, for any reason, do not relieve the student of the responsibility for assignments, laboratories, and lecture materials covered during the absence. If you encounter a situation beyond your control in which you will be missing **three (3)** or more days of class, you can contact the Office of Career and Counseling Services (110 Bray, 315-470-6660, Fax: 315-470-4728) and they will contact all your instructors for you. Supportive documentation may be required.

GRADING POLICY:

Grades will be based on the results of laboratory/homework assignments, forest plan assessment/synthesis/presentation, 2 exams, and a final exam.

All laboratory/homework assignments must be turned in by the assigned due date and time. Late laboratory/homework assignments will be penalized (unless the lateness is due to circumstances beyond the control of the student): **50% loss if turned in up to 24 hours late, 100% loss if turned in over 24 hours late**! If you turn in homework late, the homework must be physically given to the Graduate Teaching Assistant either during office hours or by appointment.

All exams will be comprehensive and will cover materials presented in lectures, readings, and laboratories. Exams are open notes and open book or take home. *All exams grades will be curved due to the structure of class (i.e. this will be the first class that will require you to synthesize the courses from your degree program's professional core) and the nature of the exam questions (i.e., essay). The exam questions are written to test the extent of your knowledge of the material present (i.e., an analysis level from Table 1).* The curving will be done statistically based on the distribution of the exam scores. Make-up exams will be given only for those students who provide a written, signed, and approved explanation of extenuating circumstances sufficient to justify their having missed the scheduled exam.

The course grade will be based on the following weighting and course letter-grades will be determined based on the following scale:

Item	Weight
Homework/Laboratory Assignments	30%
Forest Plan Assessment	10%
First Exam	20%
Second Exam	20%
Final	20%

The final grade will be calculated as follows:

Grade	Range
A	100% – 95%
A–	94.999% – 90.000%
B+	89.999% – 86.667%
B	86.666% – 83.334%
B–	83.333% – 80.000%
C+	79.999% – 76.667%
C	76.667% – 73.334%
C–	73.333% – 70.000%
D	69.999% – 60.000%
F	59.999% – 0%

End of Course

Survey As the end of the course survey provides me with useful information, I will use the following incentive system:

Class Participation Rate	Increase in Your Final Grade Percent
Greater than or equal to 50%	0.5%
Greater than or equal to 80%	1.0%
Greater than or equal to 90%	2.0%

The survey will close the day after the final is scheduled.

CELL PHONE, BEEPER, AND ETC.:

All cell phones, beepers, pagers, and similar electronic devices must have the ringer turned on *vibrate*. The only acceptable use of your electronic devices during class is to receive emergency messages. Texting friends, surfing the web, listening to music, and etc. do not constitute an emergency and will not be tolerated.

CLASS VIDEO OR AUDIO RECORDING POLICY:

Students are prohibited from recording classes using any medium.

LEARNING ADVICE:

This course will require, on average, three to four hours of study three times a week. The course uses material presented previously as a foundation for new material. Therefore, it is ill advised to try to cram for the exams. Work on understanding the definitions of the economic terms and concepts.

General Guidelines for Reading the Text (Adapted from Dr. Stehman)

1. Focus, you only want to go through this once, so eliminate distractions. If you are trying to read while watching TV and you know that you really can't do both, then postpone one activity until later.
2. Make it active: have your calculator, pen or pencil, and paper handy. Don't just read it like you would a novel (it obviously isn't a novel). Copy definitions and formulas, calculate examples, and interpret results.
3. Read the examples and descriptive material for motivation. Why do the authors want you to know about this? Do they convince you that this is important? Are there related examples you can think of that are more relevant to what you care about?
4. When you encounter a formula, copy it down. Repetition helps make the notation and formulas familiar. Write a word or words to indicate what this formula represents (e.g., Profit).
5. Think about how to interpret and use the result. For example, a harvest schedule developed using the linear programming solving methodology.
6. Look for information in the book that elaborates on the formula or application.
7. Before you end your study session, conduct a brief mental review of what you covered, and note for future reference any difficult topics you may need to revisit or ask about in class.
8. Reward yourself for accomplishing something. You had the discipline and patience to sit down and work on something that is not often inherently fun.

Work with the book (don't just read them) between each class. This will enhance your understanding of lectures, you will not fall behind, and you will not be faced with the onerous task of trying to do a whole 2-3 weeks work at once (and if you put it off that long, you probably aren't going to do the reading or work anyway). Consistency of effort is helpful with this type of material.

Maintaining a consistent approach to learning a subject is an important general element of learning (whether it is economics or anything else). A little bit of work every day over a long period of time results in major achievements. You will likely find that the hardest part is getting started. I have this problem all the time. When I'm really putting off getting to work, I will decide that if I work 15 minutes or so, I can stop. Sometimes the 15 minutes turns into an hour or two, sometimes it turns into 10 minutes. But whatever the case, 30 minutes is better than 15, 15 minutes is better than 10, 10 minutes is better than 5, and even 5 is better than nothing. The point is, do something!

ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES:

If you have an identified disability and will need accommodation, you should first contact the Office of Career and Counseling Services in 110 Bray Hall. They will discuss the ESF process and work with you to access supportive services. If you have a learning disability, the College will require you to provide supportive documentation and will develop an approved accommodation sheet for you. Accommodations will not be provided until the accommodation sheet is established and we meet to discuss its applicability to this course. Accommodations will not be provided retroactively. If you have any questions about disabilities, please contact me and/or the Office of Career and Counseling Services as soon as possible. All conversations will be confidential.

ESF STUDENT HANDBOOK:

A PDF version of the ESF Student Handbook can be downloaded from <http://www.esf.edu/students/handbook/>. This handbook serves as an official guidebook for ESF students. It outlines many of ESFs policies and services such as Codes of Student Conduct, Academic Policies, and Academic Grievance Procedures, etc. The Codes of Student Conduct spell out a student's rights as well as responsibilities. Inappropriate behaviors that disrupt the classroom learning environment will not be tolerated.

ESF JUDICIAL HANDBOOK:

A PDF version of the ESF Judicial Handbook can be downloaded from <http://www.esf.edu/students/handbook/>. This handbook outlines the policies, processes, and procedures of ESFs judicial system. It includes such topics as Philosophy of the Code, Student's Rights/Responsibilities, and Code of Student Conduct, etc. Student's Rights/Responsibilities spell out appropriate and inappropriate behaviors. Inappropriate behaviors that disrupt the classroom learning environment will not be tolerated.

			FOR370/570 Lecture Schedule	Spring 2013	25-Jan-2013
Date	Day	Lecture #	Topic	Reading Assignment	Lecturer
15-Jan	Tue	1	Course Introduction - Syllabus, Format, Instructor(s), etc.	2 - 13	Wagner
17-Jan	Thur	2	What is "Sustainable" Forest Management?	185 - 198; Reader #12; #14 & #15	Wagner
22-Jan	Tue	3	Management Plan In-Class Analysis (PA Plan)	185 - 198; Reader #14 & #15	Wagner
24-Jan	Thur		Forest Management Planning: Strategic, Tactical, Operational	258 - 265	Wagner
29-Jan	Tue	4	Describing Forest Resources	15 - 56	Nowak
31-Jan	Thur	5	<u>Class Canceled - NYSAF</u>		
5-Feb	Tue	6	<i>Guest Lecturer: Bob Davis, Director of Forest Properties at ESF</i>		
7-Feb	Thur	7	Even-aged Growth – Stand Table Projection		Nyland
12-Feb	Tue	8	Growth Models	15 - 29; 75 - 102	Bevilacqua
14-Feb	Thur	9	Uneven-aged Growth – Q Factors	Reader #17	Nyland
19-Feb	Tue	10	Classical Even-Aged Forest Regulation/Area & Volume Control	199 - 233; Reader #13 & #18	Wagner
21-Feb	Thur	11	Uneven-Aged Harvest Scheduling Approaches	Reader #13; #17; #19 & #18	Wagner
26-Feb	Tue		<u>Exam #1</u>		
28-Feb	Thur	12	Monitoring and Reporting	Reader #15	Nowak
5-Mar	Tue	13	Sustainability, Certification	282 - 290; Reader #6; #11 & #21	Nowak
7-Mar	Thur	14	Spatial and Temporal	58 - 74; 235 - 256; Reader #1 & #5	Wagner
12-Mar	Tue		<u>Spring Break</u>		
14-Mar	Thur		<u>Spring Break</u>		
19-Mar	Tue	15	Ordinances		Malmsheimer
21-Mar	Thur	16	Water Issues in Forest Management	Reader #3, #5, #7, #9	Stella
26-Mar	Tue	17	Property Taxes	44 - 45; 480a Handout	Newman
28-Mar	Thur	18	Valuation of Forest Based Ecosystem Services	185 - 198; 290 - 295; Reader #4; #6; #8; #12 & #21	Newman/Wagner
2-Apr	Tue	19	<i>Guest Lecture: Amy Stiefel, Forester - Ft. Drum</i>		
4-Apr	Thur		<u>Exam #2</u>		
9-Apr	Tue	20	Land Ownership and Tenure; Parcelization	Reader #2 & #16	Gremain
11-Apr	Thur	21	<i>Guest Lecturer: Matt Smith, FiniteCarbon</i>		
16-Apr	Tue	22	<i>Guest Lecture: Prof. Penfield, SU - Supply Chain Management</i>	268 - 279	
18-Apr	Thur	23	<i>Guest Lecture: Leonard J. Cronin - Finch Paper LLC</i>		
23-Apr	Tue	24	SII Assessment Tool/Handout Management Plans	Reader #20	Wagner/Nowak
25-Apr	Thur	25	Management Plans Presentations & Written Assessment	Reader #20	Wagner/Nowak
30-Apr	Tue	26	Wrap-up & Synthesis - Critique of Student Presentations		Wagner/Nowak

			FOR370/570 Lab Schedule	Spring 2013	25-Jan-2013
Date	Day	Lab #	Topic	Reading Assignment	Lecturer
16-Jan	Wed	1	Dubuar Forest Management Plan/Allegheny National Forest Plan		Nowak/Wagner
23-Jan	Wed	2	Compounding & Discounting - Computer Lab (310 Baker)	29 - 44	Wagner
30-Jan	Wed	3	Growth and Yield - Computer Lab (310 Baker)	15 - 29; 75 - 102	Wagner
6-Feb	Wed	4	Stand Table Projections		Wagner
13-Feb	Wed	5	Growth Models - Computer Lab (310 Baker)	15 - 29; 75 - 102	Bevilacqua
20-Feb	Wed	6	Introduction to Linear Program - Computer Lab (310 Baker)	125 - 140; 141 - 162	Wagner
27-Feb	Wed	7	LP Harvest Schedule - Computer Lab (310 Baker)	125 - 140; 141 - 162	Wagner
6-Mar	Wed	8	Sensitivity Analysis (Graduate Students) - Computer Lab (310 Baker)		Wagner
13-Mar	Wed		<u>Spring Break</u>		
20-Mar	Wed	9	Spatial Analysis and LP I - Computer Lab (310 Baker)	58 - 74; 235 - 256; Reader #1 & #5	Bevilacqua/Wagner
27-Mar	Wed	10	Spatial Analysis and LP II - Computer Lab (310 Baker)	58 - 74; 235 - 256; Reader #1 & #5	Wagner/Bevilacqua
3-Apr	Wed	11	<i>Field Trip - Bob O'Brian</i>		Wagner/Davis
10-Apr	Wed	12	<i>Field Trip - John Gibbs (DEC)</i>		Wagner/Davis
17-Apr	Wed	13	<i>Field Trip - Sturgis Lot</i>		Wagner/Davis
24-Apr	Wed	14	Work on critique of management plans/presentations		Wagner/Nowak