INSTRUCTOR

Dr. Dean W. Coble, Forestry Building 213, 936-468-2179
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Office Hours: Monday, Wednesday, & Friday: 9 – 10 am
              Tuesday & Thursday: 9:30 – 11:00 am
              Tuesday & Thursday 1 – 3 pm
              Or by appointment

TIME AND PLACE

When: MWF, 10:00 – 10:50 am
Where: Forestry 205 and Computer Lab.

COURSE DESCRIPTION

3 semester hours, 3 hours lecture per week. Concepts of stand-level and forest-level timber harvesting schedules. Prerequisite: FOR 317. Fall only.

PROGRAM LEARNING OUTCOMES

Forestry 411 is a required class for all forest management majors and thus competency is required. The student must pass this course, otherwise the course will have to be repeated. The course is designed to address the following Program Learning Outcomes (PLOs), as stated in the BSF Program Matrix:

1) Demonstrate understanding and competency of forest ecology and biology,
2) Demonstrate understanding and competency in the measurement of forest resources,
3) Demonstrate understanding and competency in managing forest resources,
4) Demonstrate understanding and competency of forest resource policy, economics, and administration, and
5) Demonstrate understanding and competency in oral and written communication skills.

The above PLOs are also recognized as vital components by the Society of American Foresters, the program’s accrediting agency.

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<th>B.S. Forestry Program Learning Outcomes</th>
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<td><strong>Proficiency Levels</strong></td>
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A – Advanced – FOR 411 supports Program Learning Outcome by providing students with transitional, high level topic-specific information, activities, and opportunities that enable the students to apply their critical thinking and tactical skills to resolve increasingly challenging strategic situations.

**STUDENT LEARNING OUTCOMES**

Upon successful completion of this course, the student will:

1) Understand mathematical programming techniques used to help design forest management plans and harvest schedules (PLO #2 and 3),

2) Be able to use computer programs to find optimal solutions to quantitative problems in harvest scheduling, wood flow analysis, and balancing multiple as well as conflicting land use objectives. (PLO #1, 2, and 3), and

3) Be able to interpret results of a forest planning analysis in the context of forest management objectives, forest finance decisions, and long-term sustainability (PLO #1, 3, 4, and 5).

**COURSE GOALS AND OBJECTIVES**

This course is designed to teach forestry undergraduate and graduate students techniques in mathematical programming (e.g., linear programming, integer programming) as they are applied to forest resource management problems. The students will use mathematical optimization
techniques to determine the best solution for forest resource management decisions, especially harvest schedules and wood flow analysis. This class will emphasize the application of mathematical programming (using Excel) over the theoretical considerations (i.e., we will not prove theorems!).

REQUIRED TEXT


COURSE REQUIREMENTS AND GRADING SYSTEM

Grades will be based on the number of points earned in assigned projects. A total of 360 points are possible. On a percentage basis, final grades will be computed as: 90+ = A, 80 – 89 = B, 70 – 79 = C, 60 – 69 = D.

Projects: There will be 8 graded projects, each worth 20 points, for a total of 160 points. Projects are due the week following when they were assigned. You can work together on the projects. There will be a final project worth 200 points. The 8 graded projects and final project together total 360 possible points.

ATTENDANCE POLICY

As future forestry professionals, I expect every person to attend class. I will keep attendance records, which I will use to decide “borderline” grades. For instance, if you regularly attend class and your final grade is “89”, I will be highly inclined to give you an “A” for the class.

ACADEMIC INTEGRITY (SFA Policy A-9.1)

Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism.

Definition of Academic Dishonesty: Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3)
incorporating the words or ideas of an author into one's paper without giving the author due credit. Please read the complete policy at http://www.sfasu.edu/policies/academic_integrity.asp

In this class, you can work together on the homework assignments. However, I expect each person to turn in their own results; i.e., you cannot make copies of another person’s work and turn it in as your own. Plagiarism will not be tolerated. Plagiarism to any degree will result in a “zero” for the assignment. On the exams, you must work alone. You will receive an automatic “zero” if caught cheating on an exam. The profession of forestry cannot embrace those that do not live by and adhere to the Society of American Foresters' Code of Ethics.

WITHHELD GRADES (Semester Grades Policy A-54)

A grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances and is done at the discretion of the instructor of record with the approval of the academic chair/director. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.

STUDENTS WITH DISABILITIES

To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to http://www.sfasu.edu/disabilityservices/.

SOCIAL JUSTICE STATEMENT

The Arthur Temple College of Forestry and Agriculture at SFASU is committed to social justice. I concur with that commitment and expect to maintain a positive learning environment based upon open communication, mutual respect, and non-discrimination. Our University does not discriminate on the basis of race, sex, age, disability, veteran status, religion, sexual orientation, color or national origin. Any suggestions as to how to further such a positive and open environment in this class will be appreciated and given serious consideration.
COURSE CONTENT AND TENTATIVE SCHEDULE

**Week 1:** Introduction (chapter 1).

**Week 2:** Formulation of Linear Programming Problems (chapter 2).

**Week 3:** Solution of Linear Programming Problems (chapter 3).

**Week 4:** Simple Even-Aged Forest Management (chapter 4).

**Week 5:** Regulation with Linear Programming (chapter 5).

**Week 6:** Dynamic Model of an Even-Aged Forest (chapter 6).

**Week 7:** Economic Objectives and Environmental Policies for Even-Aged Forests (chapter 7).

**Week 8:** Goal Programming (chapter 10).

**Week 9:** Integer Programming (chapter 11).

**Week 10:** Even-aged Forest Management Simulation (chapter 15) & Final Project.

**Week 11:** Final Project.

**Week 12:** Final Project.

**Week 13:** Final Project.

**Week 14:** Thanksgiving Break & Final Project

**Week 15:** Dead Week - Final Project

**Week 16:** Final Exam Week; Turn in Final Project (there will be no final exam for this class).