FO 3203 – FOREST FIRE
Spring 2012

Instructor: Scott Roberts
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Meeting Times and Locations:

Lecture	Tues/Thurs	12:30 - 1:45	Thompson Hall Annex Rm 313
Laboratory	Thurs	2:00 - 4:45	Thompson Hall Annex Rm 313

Objective:

The objective of this course is to introduce students to basic principles of fire and fire behavior, the use and control of fire, and the effects of fire in forest ecosystems. Topics to be covered include legal issues surrounding prescribed burning in Mississippi and across the South, fuels, fire weather, fire behavior, fire effects, and fire management. Laboratory assignments will provide practical experiences which build upon lecture materials. The course will cover the materials from the S-290 National Interagency Fire Center (NIFC) course as required by the Mississippi Forestry Commission to become a Certified Prescribed Burn Manager in the state.

The course will:

- Familiarize students with the importance of fire from historical, societal, and ecological perspectives
- Explain the importance of fire, and how fire is used as a management tool
- Provide students with general knowledge concerning fire and fire behavior
- Discuss the importance of weather and fuel conditions on fire behavior
- Expose students to prescribed burning techniques and burn program administration
- Discuss the ecological impacts that fire can have on forest ecosystems

This course is designed to qualify students as Certified Prescribed Burn Managers by the State of Mississippi. The Mississippi Forestry Commission has outlined four requirements for students in this course to become Certified Prescribed Burn Managers.

- The S-290 course must be incorporated into the class work, and students must pass the final exam used in S-290.
- Information on smoke management and screening for smoke sensitive and critical areas must be included at part of the course.
- Students must pass the final exam, currently given in the Prescribed Burning Short Course offered by MSU Continuing Education, with a score of 80% or better.
- The Forest Fire (FO 3203) course in the College of Forest Resources curriculum must be passed with a minimum grade of “C”.

***References*:**

The following materials will be posted on MyCourses. Other readings and course materials assigned during the semester will also be posted.

USDA Forest Service. 1994. **Intermediate Wildland Fire Behavior, S-290**. Student Workbook. 360 p. (NFES 2378)

Schroeder, M.J. and C.C. Buck. 1970. **Fire Weather**. USDA Forest Service, Agric. Handb. 360. 229p. (NFES 1174)

Wade, D.D. and J.D. Lunsford. 1989. **A guide for prescribed fire in Southern forests**. USDA Forest Service, Tech. Publ. R8-TP 11. 56 p. (NFES 2108)

Londo, A.J., B. Oswald, and C.A. Dicus. 2005. **Living on the Edge**: Wildland Fire Management Laboratory Manual. Interactive Training Media, Inc. Tallahassee, FL. 212p.

Evaluation:

Students will be evaluated based upon their performance on hour examinations, the final examination, and laboratory assignments.

Grades will be based on:

90% or better	A
80-89%	B
70-79%	C
60-69%	D
59% or less	F

Weighting of points for the final grade will be:

Final examination	40%
Hour examinations (2)	40%
Laboratory exercises	20%

Hour exams will cover materials presented in both lectures and labs. They will consist of questions from the S-290 materials in addition to questions developed by the instructor. The final exam will be comprehensive, covering all materials presented in both lecture and lab. The final will include questions from the Prescribed Burning Short Course, questions from the S-290 final exam, and additional questions covering materials presented in class. Missed exams cannot be made up without a valid excuse. Working on your senior project will not qualify as a valid excuse. Nor does “I had to work” or “My dog ate my alarm clock.” **Notify me as soon as possible if you know that you will miss an exam and we can negotiate the terms of your punishment**. Do not wait until after the fact. An unexcused exam absence will result in a grade of zero.

Laboratory grades will be based on attendance and written laboratory assignments. **Attendance at labs is mandatory**. For each unexcused absence from the laboratory, 10% will be deducted from the laboratory portion of your course grade. ***All lab assignments must be completed, even if they're turned in late! Failure to complete and turn in all lab assignments will result in a letter-grade reduction <u>for the entire course</u>.*** Labs will not meet each week. It is the student's responsibility to know when labs are scheduled. In addition, students should regularly check their **official MSU email account** for announcements related to labs and lecture. Notices for laboratory exercises may not be made until the morning of the day of the exercise, so please check your email regularly and come to Thursday lecture dressed appropriately for outdoor exercises. This includes **boots and a hard hat**. If the opportunity arises to participate in a prescribed burn, we will go out at the start of the lecture period on Thursday and continue to the end of lab. The laboratory and lecture were set up in this manner to facilitate being able to participate in prescribed burns.

We will be using *Living on the Edge Wildland Fire Management: A Laboratory Manual* for laboratory exercises. The exercises to be used will be announced prior to laboratory, either in class or through the official email list. Students will work alone or in groups of two or three to complete laboratory assignments and ultimately to prepare a prescribed burning plan. When working in groups, a single written assignment will be submitted with each member receiving the same grade. Grades will be based on *<u>content, presentation, and overall appearance</u>*.

Expectations of students:

Students will be expected to abide by the MSU Honor Code, which simply states:

> ***"As a Mississippi State University student I will conduct myself with honor and integrity at all times. I will not lie, cheat, or steal, nor will I accept the actions of those who do."***

Persons found violating the honor code on exams or assignments will receive no credit for that exercise and will be reported to the University's Honor Code Council Office. The MSU policy regarding the honor code can be found online at http://www.honorcode.msstate.edu/. A full copy of the honor code operating procedures has been posted on the course MyCourses site.

Professional behavior is expected at all times. The Department of Forestry has developed a set of professional expectations for all students in the forestry program or taking forestry courses. Please be familiar with these expectations. Failure to abide by these guidelines (as determined by the instructor) may result in the offending student(s) losing 5% off their final course grade for each offense.

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TENTATIVE COURSE OUTLINE

Wk #	Date	Day	Topic	Assigned Reading
1	Jan 10	T	Introduction	
	12	Th	Fire History	
2	17	T	Fire history (cont.)	
	19	Th	Legal Environment for Prescribed Burning	Eshee & Savelle (1993); Haines & Cleaves (1999)
3	24	T	Fire Fundamentals	S-290 – Unit 0
	26	Th	Fire Behavior	S-290 – Unit 1
4	31	T	Fire Behavior	S-290 – Unit 10
	Feb 2	Th	Fuels	S-290 – Unit 7
5	7	T	Fuels	S-290 – Unit 8; Schroeder & Buck – Ch 8
	9	Th	Topography	S-290 – Unit 6
6	14	T	**1st Midterm Exam (lectures 1-6)**	
	16	Th	Weather – Basic Concepts, Temperature	S-290 – Units 2 & 3; Schroeder & Buck – Ch 8
7	21	T	Weather – Atmospheric Moisture	S-290 – Unit 3; Schroeder & Buck – Ch 3
	23	Th	Weather – Atmospheric Stability	S-290 – Unit 4; Schroeder & Buck – Ch 4
8	28	T	Weather – Atmospheric Stability	Schroeder & Buck – Ch 10
	Mar 1	Th	Weather – Clouds	S-290 – Unit 4; Schroeder & Buck – Ch 9

FO 3203 – TENTATIVE COURSE OUTLINE (cont.)

Wk #	Date	Day	Topic	Assigned Reading
9	Mar 6	T	Weather – Winds	S-290 – Unit 5; Schroeder & Buck – Ch 6, 7
	8	Th	**2nd Midterm Exam (lectures 7-9f)**	
10	13	T	***Spring Break – No Class***	
	15	Th	***Spring Break – No Class***	
11	20	T	Weather – Fire weather information/forecasts	S-290 – Unit 9
	22	Th	Smoke Management	MS Smoke Management Guidelines
12	27	T	Prescribed Burn Planning	Wade (1989)
	29	Th	Prescribed Burn Planning	
13	Apr 3	T	Fire Ecology – Fire Effects on Flora	Brown & Smith (2000)
	5	Th	Fire Ecology – Fire Effects on Flora	
14	10	T	Fire Ecology – Fire Effects on Soil & Water	Neary et al. (2005)
	12	Th	Fire Ecology – Fire Effects on Fauna	Smith (2000)
15	17	T	Wildland/Urban Interface (tentative)	
	19	Th	Wildland/Urban Interface (tentative)	
16	24	T	Review	
	26	Th	**Final Exam 12:30 – 3:30 (tentative)**	
	May 2	**T**	**Final Exam 12:00 – 3:00 (scheduled)**	