

## FO 3012

### ***INTRODUCTION TO FOREST COMMUNITIES***

**May 28 – June 8, 2007**

***Instructors:*** Dr. Jim Shepard      Dr. Rick Maiers  
Thompson Hall 105      Thompson Hall 247  
325-2781      325-7481

***Guest Lecturers:*** Dr. Andy Ezell, Dr. Chris Dewey, Dr. Bruce Leopold

***Lecture Room:*** a208 Thompson Hall Annex

***Prerequisites:*** PSS 3303      Soils  
FO 2112/2111      Dendrology

***Objectives:*** Our objective is to provide students with an introduction to how landscapes and forest communities develop and are characterized and classified. This will include an introduction to the natural features of landscapes and forest communities, and their role in influencing land use. Instructional approaches will include lectures, field observations, and exercises that demonstrate various techniques used in ecology, silviculture, soils, hydrology, and watershed and wildlife management.

***Major Topics:***

1. Geology and physiography of Mississippi/Alabama
2. Characteristics and identification of forest soils
3. Ecological classification of forest communities
4. Relationships of landforms with soils and vegetation
5. Influence of landscape variation on land use
6. Methods of assessing vegetation structure and composition in forest communities

***References:*** Samuelson, Lisa J. and Hogan, Michael E. 2003. Forest Trees: A Guide to the Southeastern and Mid-Atlantic Regions of the United States. Prentis Hall. 429p.

Course materials will be provided in a 3-hole punched booklet (purchase from MSU bookstore) and from links to files and Web addresses on the course web page.

***Expectations of Student Behavior:*** Much of the work in this course is performed out of doors and within a crew format. In order to operate efficiently and make this course a meaningful learning experience, we expect that students will act responsibly, cooperatively, and with respect for fellow students and course instructors. Any activity deemed disruptive and not in agreement with these standards of behavior may result in a reduction of course grade or dismissal from the course.

***Course Rules:***

1. Attendance is mandatory.  
There are 10 class days, so 10 percent of the course grade will be deducted for each day of unexcused absence. Also, you are expected to arrive in class on time

and to be on the bus at designated departure times. One percent of the course grade will be deducted for each late appearance.

2. Use of tobacco products is not permitted in the classroom or on the busses.
3. Hardhats will be worn at all times when working in the field. Hats off during indoor classes.
4. Cell phones OFF during lectures and field exercises.

**Course**

**Evaluation:**

Students will be evaluated based upon daily quizzes, crew lab-exercise reports, field-trip quizzes, and a comprehensive final examination.

1. Daily quizzes will be given at the start of many of the days. Quizzes will be on materials covered during the previous day's lectures and field assignments.
2. Field quizzes will be given (often unannounced) to ensure that students are actively engaged in field activities and understand the materials being presented.
3. Crew lab-exercise reports will be required for some exercises. All members of the crew are required to contribute to the collection of data and preparation of the crew report. Other members of a crew must report any lack of participation by a crew member. Failure to do one's fair share of the work will result in a reduction of the individual student's grade for that report.
4. The final exam on Friday June 8 will consist of two parts. A field portion will test the student's knowledge of landscapes, soils and dendrology. A comprehensive written portion will cover all of the concepts and techniques presented during the course.

The final grade in the course will be based on the following weights:

Individual performance:

Daily Quizzes	15 %
Field Quizzes	10 %
Final Examination:	
Dendrology & Soils	10 %
Written	40 %

Crew performance:

Lab-exercise Reports	25 %
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**NOTE:** If a student's individual performance is less than 70% of the individual performance by the top student in the course, then crew performance will not be used in calculating that individual's final grade. A good crew grade will not be used to offset failure at the individual level.

Course grades will be assigned on the following scale:

90-100 percent	A
80-89 percent	B
70-79 percent	C
60-69 percent	D
< 60 percent	F

**SCHEDULE – INTRODUCTION TO FOREST COMMUNITIES**

<b>Date</b>	<b>Time</b>	<b>Activity</b>	<b>Bus/Van</b>
<b>Monday</b> May 28, 2007: <u>Introduction, Geology, and Physiography</u>			
Morning 8:00 A.M. A208 Thompson Hall Annex	8:00 Introduction to FO3012 (Shepard) <u>Lecture #1</u> : Geology, Physiography, & Ecological Classification of MS-AL (Shepard) <u>Lecture #2</u> : Soil Survey Overview and Exercise (Maiers) <u>Lecture #3</u> The Rock Cycle and Local Parent Materials (Dewey) Stream Table (Maiers) Local field tour: Local Physiography and Geology (Dewey)	Leave on field trip at 11:00 a.m.	
Afternoon	Continue Local Physiography and Geology tour	Return by 5:00 p.m.	
<b>Tuesday</b> May 29, 2007: <u>Local landforms, soils, and forest communities</u>			
Morning 8:00 A.M. A208 Thompson Hall Annex	<b>Turn in soil survey exercise</b> Quiz and review on Local Physiography and Geology <u>Lecture #4</u> : Soils review (Maiers) Practice soil texture (Maiers) and groundwater model lecture (Mrs. Dewey) Instructions for <u>Lab Exercise #1</u> : Landforms and soils Local field tour: Land use, local landforms, soils, & forest communities	Leave at 10:00 a.m.	
Afternoon	Continue local field tour Noxubee National Wildlife Refuge film and management plan for Loakfoma Lake (Mr. Henry Sansing)	Return by 6:00 p.m.	
Evening	Work on Lab Exercise #1A		
<b>Wednesday</b> May 30, 2007: <u>Landforms, Soils, and Forest Communities</u>			
Morning 8:00 A.M. A208 Thompson Hall Annex	<b>Turn in report for Lab Exercise #1A</b> : Landforms and Soils Quiz (Lecture #4 and Tues. field trip) and Review <u>Lecture #5</u> : Succession and Stand Description (Shepard) <u>Lecture #6</u> : Landforms, Lab Exercise #1B (Maiers) Field trip: Landforms, soils, and stand description (Switzer Road, John W. Starr Memorial Forest)	Leave at 9:15 a.m.	
Afternoon	Landforms and Soils (Keaton Tower Rd, Noxubee National Wildlife Refuge)	Return by 5:00 p.m.	
<b>Thursday</b> May 31, 2007: <u>Vegetation Analysis – Arboresecent Layer (Tombigbee National Forest)</u>			
Morning 8:00 A.M. A208 Thompson Hall Annex	<b>Turn in report for Lab Exercise #1B</b> : Landforms and Soils Quiz (Lecture #5 & 6 and Wednesday field trip) and review <u>Lecture #7</u> : Vegetation Sampling and Analysis in Forest Communities and Species-Area concept (Shepard) Instructions for Lab Exercises #3 and #4 (Shepard) Field Trip: Dendrology and Soils review (Noxubee Crest Natural Area, Tombigbee National Forest) <u>Lab Exercise #2</u> : Sampling Intensity with Plotless Methods	Leave at 9:30a.m.	

Afternoon	<u>Lab Exercise #3</u> : Veg. Analysis of the Arborescent Layer Return to campus: <b>Turn in</b> Data from Lab Exercise #2 and discuss Enter data for Lab Exercise #3 <b>Turn in computer printouts</b> for Lab Exercise #3	Return by 5:00 p.m.
<b>Friday June 1, 2007: Wildlife Habitat Assessment-Vegetation Surveys</b>		
Morning 8:00 A.M. A208 Thompson Hall Annex	Quiz (Lecture #7 and Thursday field trip) and review Discuss errors in computer printouts for Lab Exercise #3 <u>Lecture #8</u> : Wildlife Habitat Assessment (Leopold) and instructions for Lab Exercise #4 Field trip: Lab Exercise #4 John W. Starr Memorial Forest	Leave at 9:00 a.m.
Afternoon	Continue field trip for Lab Exercise #4	Return by 5:00 p.m.
<b>Weekend</b> (June 2-3)	Analyze data & <b>prepare report for Lab Exercise #4</b>	

## SECOND WEEK

Date	Time	Activity	Bus/Van
<b>Monday June 4, 2007: <u>Field Tour – Delta National Forest and Loess Hills</u></b>			
Morning <b>6:00 A.M.</b> A208 Thompson Hall Annex		<b>Turn in report for Lab Exercise #4</b> – Wildlife Habitat Assessment Travel to Delta National Forest (DNF) – Field tour and discussion <u>Lab Exercises #3</u> : Collect data for Arborescent Vegetation at old bottomland oak site at DNF	Leave at <b>6:10 a.m.</b>
Afternoon		Collect Arborescent Vegetation data for Lab Exercise #3 at Anderson-Tully loess site near Redwood, MS	Return at 8:00 p.m.
<b>Tuesday June 5, 2007: <u>Field Tour – Bankhead National Forest</u></b>			
Morning <b>Start at 6:00 a.m.</b> A208 Thompson Hall Annex		Travel to Bankhead National Forest (BNF) – Field tour of geology, physiography, and soils tour <u>Lab Exercise #3</u> : Collect data for Arborescent Vegetation at mesophytic cove site at BNF Lecture on the BNF (District Ranger Gaines)	<b>Leave at 6:10 a.m.</b>
Afternoon		Continue geology, physiography, and soils tour Artesian Wells	Return at 7:00 p.m.

<b>Wednesday June 6, 2007: <u>Analysis of data for arborescent vegetation in four communities</u></b>		
Morning Morning 8:00 A.M. A208 Thompson Hall Annex	Quiz (Delta, Loess Hills, Bankhead trips) Instructions for analyses & preparation of report for Lab Exercise #3 – Vegetation Analysis of Arborescent Layer at 4 sites. Enter data for Lab Exercise #3 from DNF, Redwood, and BNF Analyze data	
Afternoon	Continue analyses and write report for Lab Exercise #3.	
<b>Thursday June 7, 2007: <u>Species-Site Relations &amp; Dendrology</u></b>		
Morning Morning 8:00 A.M. A208 Thompson Hall Annex	<b>Turn in report</b> for Lab Exercise #3 – Veg. Analysis of Arborescent Layer Lecture # 9: Watershed Management (Maiers) <u>Lecture #10: Wetlands (Maiers)</u> Lecture #11: Jurisdictional Wetlands, legal perspective (Shepard) <u>Lecture #12: Species-Site relations (Ezell)</u> <u>Lab Exercise #5: Species-Site Relations at Site N1 (Noxubee Refuge)</u>	Leave at 10:00am
Afternoon	<u>Field Discussion: Wetlands Delineation</u> Return to campus: Synthesis and preparation for final exam on Friday	Return class room by 3:00 p.m. Finish by 6:00 pm
<b>Friday June 8, 2007: <u>Final Examination</u></b>		
Morning Morning 8:00 A.M. A208 Thompson Hall Annex	Instructions. Field portion of final examination (Dendrology and Soils) Return to campus: First half of final written examination	Leave at 8:20 a.m.; Return at 10:15am
Afternoon	Second half of final written examination <b>Turn in</b> map packets	END by 3:00 PM