

# Fire Ecology and Management Lab (UG)

FOR 3214 (1 credit) Spring, 2012

## Instructors

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**Office hours:** TBD

**Lab Hours:** Friday afternoon, usually starting 5<sup>th</sup> Period and lasting through Period 8

**Objectives and Learning Outcomes:** At the end of this course, each student will be able to:

- Assess and design prescribed burning plans for a variety of ecosystems and goals, and participate in several prescribed burns;
- Model critical factors in fire behavior and effects on vegetation and wildlife;
- Identify and frame a pertinent research question to be answered through an experimental approach

## Required Texts

1. *A Guide for Prescribed Fire in Southern Forests* (<http://www.bugwood.org/pfire/index.html>)

## Class Format, Make-up and Attendance Policies

- Weekly labs, including prescribed burning implementations when weather permits, field exercises, and field trips to local land management agencies and prescribed fire examples

Enrollment in Lecture portion (2 credits) of this class is *strongly encouraged*. Make-up work for legitimate excuses will be evaluated on a case-by-case basis, and will involve assignments that equal the time commitment of the lab exercise. Attendance will be taken into consideration when assigning the 10% of your grade associated with class participation. A maximum of 2 make-up assignments for the semester are allowed, after which 5% of your grade per lab missed will be subtracted from your final grade.

## Evaluation of Student Performance

- 35% Lab exercises; summaries and short assignments  
50% Preparation of prescribed burn plan and lab quiz (15% quiz)  
15% Participation and attendance

## Grading Scale

|                         |             |              |
|-------------------------|-------------|--------------|
| 90-93.3% A-             | 93.4-96.6 A | 96.7-100 A+  |
| 80-83.3% B-             | 83.4-86.6 B | 86.7-89.9 B+ |
| 70-73.3% C-             | 73.4-76.6 C | 76.7-79.9 C+ |
| 60-63.3% D-             | 63.4-66.6 D | 66.7-69.9 D+ |
| Less than 60%= E (Fail) |             |              |

## Assignments

### Field Activities:

1. Participation in several prescribed burns at Austin Cary Memorial Forest, the Ordway Preserve (or other properties) during winter and early spring (weather and landowners permitting).
2. Field observations and planning for class burns.
3. Field boots, long pants, long sleeved shirts and hard hats are required for field activities; pants and shirts should be 100% cotton fabric; gloves and eye protection are recommended; nomex shirts and pants, and helmets will be provided at fires.

### Assignments:

1. Prescribed burn plan
2. Various short field or lab exercise assignments coordinated with topics as listed below

## Schedule of Lab Topics- If we can burn, we will—so this schedule is flexible...

**Week 1.** Austin Cary Memorial Forest or pumper/safety/ hand tool instruction

**Week 2.** Measuring fire weather and fuel loads in southern fuel types

**Week 3.** Firing techniques

**Week 4.** Modeling systems for fire behavior prediction

**Week 5.** TBA

**Week 6.** Predicting smoke movement and risk

**Week 7.** Dendrochronology and fire history

**Week 8.** Assessing ecological fire effects

**Week 9.** Lab quiz

**Week 10.** *Spring Break*

**Week 11.** Conclave (no class)- visit NATL on your own to work on burn plan

**Week 12.** Visit with agency PR officer

**Week 13.** Assessing wildland-urban-interface fire risk

**Week 14.** Fire suppression, NFDRS

**Week 15.** TBA

## Additional References

**Web Sites:** [Fire Effects Information System](#)

[Fire Management Software](#)

[Fire News](#)

[FIREWISE](#)

[Florida Division of Forestry](#) (weather, drought index, etc)

[National Interagency Fire Center](#)

[Tall Timbers Research Center](#)

[USFS – Fire](#)

[USFS – Southern Research Station, Interface South](#)

[USFS – Southern Appalachian Forest Ecosystems](#)

[University of California Forest Products Lab](#)

### **Important Literature Sources:**

International Journal of Wildland Fire

Ecological Applications

Wildfire

Fire Ecology (available on-line at <http://www.fireecology.net/pages/13>)

Forest Ecology and Management

Journal of Forestry

Southern, Western, Northern Journals of Applied Forestry

Proceedings of Tall Timber Fire Ecology Conferences

USDA Forest Service General Technical Reports, Research Notes, and Research Papers

**Supplemental Texts** (appropriate sections will be made available in the Class reader or may be available in the Library):

Agee, J. K. 1993. Fire ecology of Pacific Northwest forests. Island Press, Washington, DC, 493 p.

Biswell, H. H., 1989. Prescribed burning in California wildlands vegetation management.

University of California Press, Berkeley, CA. 255 p.

DeBano, L.F., D.G. Neary, P.F. Ffolliott. 1998. *Fire's effects on ecosystems*. J. Wiley, NY.

Pyne, Andrews and Laven. 1996. *Introduction to Wildland Fire (2<sup>nd</sup> Edition)*, John Wiley and Sons.

Whelan, R. J., 1995. The ecology of fire. Cambridge U. Press, Cambridge, MA. 346 p.

Wright, H. A., Bailey A. W. 1982. Fire ecology; United States and southern Canada.

### **Other Information**

**Academic Honesty:** In 1995 the UF student body enacted a new honor code and voluntarily committed itself to the highest standards of honesty and integrity. By enrolling at the University, and in this course, you commit yourself to that standard. The honor code, in part, states "On all work submitted for credit by students at the university, the following pledge is either required or implied: 'On my honor, I have neither given nor received unauthorized aid in doing this assignment.'" Failure to comply with this commitment may result in disciplinary actions up to and including failing this course and expulsion from the University.

**UF Counseling Services:** Students experiencing crisis or personal problems that interfere with their general well being are encouraged to utilize the University's counseling resources. Both the Counseling Center and Student Mental Health provide confidential counseling services at no cost for currently enrolled students. Resources are available on-campus for students having personal problems or lacking clear career and academic goals, which interfere with their academic performance. These resources include:

1. University Counseling Center, 301 Peabody Hall (next to Criser Hall), 392-1575, personal and career counseling; [www.counsel.ufl.edu](http://www.counsel.ufl.edu)
2. Student Mental Health Services, Student Health Care Center (2<sup>nd</sup> floor, Student Health Services, Infirmary), 392-1171, personal counseling; <http://shcc.ufl.edu/smhs/>
3. Center for Sexual Assault/Abuse Recovery & Education (CARE), Student Health Care Center, Infirmary Rm 245, 392-1161, ext 4362, sexual assault counseling; and self help information tab at [www.counsel.ufl.edu](http://www.counsel.ufl.edu)
4. Career Resource Center, Reitz Union, 1<sup>st</sup> floor, 392-1601; career development assistance, counseling; <http://www.crc.ufl.edu/>.

#### **Students with Disabilities Act:**

The Dean of Students Office coordinates the needed accommodations of students with disabilities. This includes the registration of disabilities, academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services, and mediating faculty-student disability related issues. *Dean of Students Office*, 202 Peabody Hall, 392-8565, [www.dso.ufl.edu](http://www.dso.ufl.edu).