

BSC 4861L
Urban Ecological Field Studies
Spring 2020
www.arboretum.ucf.edu

Office Hrs:	Wednesday, 11:30am-12:30pm at the Arboretum, and by appointment
Instructor Contact Information	Jennifer Elliott Jennifer.Elliott@ucf.edu 407-823-4702 (office) Arboretum Office (Trailer 525)
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Syllabus subject to change

Course Description

The purpose of the course is to introduce students how to field biology research by designing projects that ask and seek to provide insight into urban ecosystem questions. Additionally, students will be guided in effectively communicating scientific information, and the important role of science in the world. Once fundamental information is obtained on the project topic, students will be asked to design and implement a research-based project, and publicly communicate the results.

Projects

Students will spend a minimum of 80 hours throughout the semester, no less than 5 hours/week, on their assigned project (unless specified in course schedule below). Students will spend time reflecting on their learning experiences through class conversations, and presentations (poster and oral). Student projects will address the three components of sustainability: human interactions (people), economic impacts (profit), and ecology (planet). Students will develop project objectives and research methods that address these objectives, implement projects, and communicate the results publicly through judged poster presentations. All projects are conducted on the UCF main campus and local conservation areas, provide a service to the UCF Arboretum and Natural Resource Programs, and focus on urban ecology.

Obstacles may arise throughout the semester and students are expected to communicate issues to the instructor and project leaders immediately for resolution. If any student has a valid objection to a proposed project or team placement, he or she must let the instructor know **BEFORE** proposals are written and projects begin.

Service:

Projects will provide a service to the Department of Landscape & Natural Resources and the Arboretum by addressing questions that guide the environmental culture on campus. **Each team must do a community outreach activity to complete the service requirement of this course.** These activities can include tabling to share project information, presenting project at the annual Arbor Day celebration, or hosting a volunteer event.

Course Requirements:

This course requires both in-class and out-of-class research time. The research activities will address a local question, support our course objectives, involve a connection between the individual and the world, and challenge students to be engaged as citizens. The course will include written papers, and oral and poster presentations. Motivated students who are willing to learn new things, and complete projects within the proposed timeframe are encouraged to enroll in this course. Professional, adult behavior is expected at all times!

Course Objectives:

- Develop an understanding of urban ecology including ecological sustainability that involves human interactions (people), economic impacts (profit), and ecological health (planet).
- Explore how urban ecosystems are connected to natural ecosystems.
- Use research methods to answer real-world questions.
- Publicly communicate scientific information through poster and oral presentations.
- Enhance group communication skills, and personally reflect on strengths and areas of improvement.

Project Objectives and Requirements:

- Instructor will present projects, and students will identify their prioritized choices. The instructor and project leaders will then create teams guided by the student's selections.
- Each team will formulate project objectives/hypothesis and tentative methods, which will be presented to the class for feedback. The final objectives/hypothesis and methods will be captured in a **formal proposal describing the project concept/objectives, project methods, and anticipated results.**
- Each team will conduct the proposed research, and write a final paper documenting the project concept/objectives and background information (introduction), methods, results (data), and discussion (what do the data mean).
- A poster presentation will be created by each team communicating the research topic, methods, and final results. Posters will be judged by professional scientists and biologists as well as being presented at the Showcase of Undergraduate Research Excellence (SURE), and other appropriate local meetings and/or conferences when possible.

Required Reading Materials:

- Knisely, K. 2017. A Student Handbook for Writing in Biology, Fifth Edition. Massachusetts: Sinauer Associates, Inc.
- Peer-reviewed scientific journal articles will be used to develop and support projects

Evaluation Procedures

Grade Category: Project Proposal

Description of Requirements: Students will develop a project proposal that will focus on their assigned group project. Students will be expected to write a research proposal that will include an *introduction* (background information and project objectives/hypothesis), *methods* to be used to accomplish the project objective, and *anticipated results*. Properly cited literature using APA style (style used in peer-reviewed journals) must be used.

Total: 20 points

Grade Category: Proposal Presentations

Description of Requirements: Team presentation to share project objectives/hypothesis and research methods. Presentation will consist of two – three powerpoint slides and a 10-minute presentation with 5 minutes for discussion.

Total: 10 points

Grade Category: Implementation of Projects

Description of Requirements: Students will spend a minimum of five hours per week implementing their team project. Points will be earned by actively participating in class and group project activities.

Total: 20 points

Grade Category: Poster and Oral Presentations

Description of Requirements: Students will create: (1) a group *poster presentation* (scientific presentation style) highlighting their project objective/question, methods, results, and discussion of the project relevance and findings; and (2) an individual *oral presentation* in powerpoint on the student's assigned Florida Chapter of the Wildlife Society (FLTWS) website write-up.

Total: 30 points (15 points each)

Grade Category: Final Paper

Description of Requirements: Students will be expected to turn in a final research paper that includes how their project supports urban ecological research on campus, the main goals of the project, methods used to complete the project, results, and a discussion of the project relevance.

Total: 20 points

Grading Scale: A (100-90), B+ (89-85), B (84-80), C+ (79-75), C (74-70), D (69-60), F (59-0)

Technology Requirements:

Technology	Expectations for Use
E-mail:	Use of email is permitted to schedule appointments with the instructor, to ask questions, or to notify instructor of absences. Grades will not be provided over email. Communication with classmates via email will be done at the student's discretion.
WebCT:	WebCourses will be used for this class.
Computer Software	Students must use Microsoft Word, Excel, and Power Point

Additional Policies

Grading and evaluation	Grades will be calculated according to the above evaluation procedures. If grades are distributed in class, and the student is absent on that day(s), an appointment must be made to get the grade from the instructor. Grades will not be given over the phone, or via email.
Attendance and participation	Attendance will not be kept. If students can not attend class, it is their responsibility to get the notes/resources to understand the key components of what was missed in class. A large percentage of the course grade comes from participation in class conversations/activities. If students must be absent, the absence must be communicated BEFORE the student's scheduled time to meet with teams or in class. In the event of a scheduled absence, it is best to communicate with the instructor, project leader, and project team as soon as possible to make necessary arrangements. Non participation in class activities or coming to class unprepared will result in a loss of points in the "project implementation" category. Arriving late and leaving early will carry the same penalty.
Late and make-up	Work turned in late will lose 25% of the grade per day.
Academic integrity	Integrity, scholarship, community, creativity, and excellence are the core values that guide our conduct, performance, and decisions as members of the UCF Community as reflected in the UCF Creed. Plagiarism and cheating contradict these values and are very serious academic offenses. Penalties can include a failing grade on an assignment or in the course, or suspension or expulsion from the university. Students are expected to familiarize themselves with and follow the University's Rules of Conduct.
Accommodations for the differently-abled (alternate testing opportunities, support for signers, etc.)	The University of Central Florida is committed to providing reasonable accommodations for all persons with disabilities. This syllabus is available in alternate formats upon request. Students with disabilities who need accommodations in this course must contact the instructor at the beginning of the semester to discuss needed accommodations. No accommodations will be provided until the student has met with the instructor to request the necessary accommodations. Students who need accommodations should register with Student Accessibility Services before requesting accommodations from the professors. <i>Student Accessibility Services</i> , Ferrell Commons 7F, Room 185, phone (407) 823-2371. TTY/TDD please phone (407) 823-2116
Obligatory note from the UCF Administration	Faculty are required to document students' enrollment at the beginning of each semester. In order to document that you began this course, please complete the academic assignment in WebCourses by the end of the first week of classes. Failure to do so may result in a delay in the disbursement of or decline in your financial aid.

Course Schedule, Critical Themes & Goals (subject to change):

Class Schedule	
Monday (Jan 6)	<ul style="list-style-type: none"> Review course expectations, class introductions, and presentation of team projects
Wed (Jan 8)	<ul style="list-style-type: none"> Lecture: UCF Arboretum and Natural Resource Programs; Urban Ecology/Agriculture, Land Management, Urban Forestry, and Student Opportunities
Thursday (Jan 9)	Drop/Swap Deadline
Friday (Jan 10)	Add Deadline
Friday (Jan 10)	<ul style="list-style-type: none"> Submit 5:3:1 via Webcourses for Secrets of the Longleaf Pine Documentary (link in Webcourses) Submit Team Project Requests via Webcourses Submit Academic Assignment via Webcourses: (1) upload 250-word essay: your major, academic year, why you took the class, your strengths and interests (2) headshot in Webcourses, (3) professional email account
Monday (Jan 13)	<ul style="list-style-type: none"> Assign Team Projects Turtle Summer Internship Presentation Lecture: Guest Speaker – UCF Science Librarian; Sandra (Sandy) Avila Library Resources: How to Find Peer Reviewed Papers, How to Properly Cite Exercise: Find one peer reviewed scientific journal article that pertains to your team project and submit a 5:3:1 paper review along with a proper literature citation of the article; due in Webcourses Wednesday, Jan 15 by 10 AM
Wed (Jan 15)	<ul style="list-style-type: none"> In class exercise: Work in teams on project outline, refine research objective/question as necessary Exercise: Submit Research Objective/Question (1 per team); due in Webcourses Friday, Jan 17 by 10 AM
Friday (Jan 17)	<ul style="list-style-type: none"> Lecture: Guest Speaker – UCF Biology Graduate Student; Ian Biazzo – Basic Statistics and Experimental Design
Monday (Jan 20)	<ul style="list-style-type: none"> No Class – Martin Luther King Holiday
Wed (Jan 22)	<ul style="list-style-type: none"> Lecture: Guest Speaker – Associate Professor, UCF Biology Department; Dr. John Fauth Restoration Ecology: Sandhill and Scrub Ecosystems
Friday (Jan 24)	<ul style="list-style-type: none"> In Class Exercise: Work in teams on abstract, and proposal presentations (methods)
Monday (Jan 27)	<ul style="list-style-type: none"> Proposal Presentations – Teams 1 & 2 share project objectives/hypothesis and scientific design/methods. Two – three powerpoint slides and 10-minute presentation with 10 minutes for discussion; presentation due in Webcourses Monday, Jan 27 by 10 AM (1 per group)
Wed (Jan 29)	<ul style="list-style-type: none"> Proposal Presentations – Teams 3 & 4 share project objectives/hypothesis and scientific design/methods. Two – three powerpoint slides and 10-minute presentation with 10 minutes for discussion; presentation due in Webcourses Wednesday, Jan 29 by 10 AM (1 per group)
Friday (Jan 31)	<ul style="list-style-type: none"> Project Abstract Drafts Due via email AND in Webcourses (1 per team) In class exercise: Work on proposals
Monday (Feb 3)	<ul style="list-style-type: none"> Project Proposal Due via email AND in Webcourses (1 per team) In class exercise: Finalize abstracts for submission, submit if ready; due Monday Feb 10
Wed (Feb 5)	<ul style="list-style-type: none"> Meet in class – Project/Proposal Discussion
Friday (Feb 7)	<ul style="list-style-type: none"> Work on project
Monday (Feb 10)	<ul style="list-style-type: none"> Work on project SURE Applications Due (11:59 PM) FINAL Abstract Due in Webcourses (1 per team)
Wed (Feb 12)	<ul style="list-style-type: none"> Work on project

Friday (Feb 14)	<ul style="list-style-type: none"> Meet in class – Discussion on Project Problems and Solutions
Monday (Feb 17)	<ul style="list-style-type: none"> Work on Project
Wed (Feb 19)	<ul style="list-style-type: none"> Work on Project
Friday (Feb 21)	<ul style="list-style-type: none"> Meet in class – Discussion on Project Problems and Solutions
Monday (Feb 24)	<ul style="list-style-type: none"> Work on Project
Wed (Feb 26)	<ul style="list-style-type: none"> Work on Project
Friday (Feb 28)	<ul style="list-style-type: none"> Meet in class – Discussion on Project Problems and Solutions
Monday (Mar 2)	<ul style="list-style-type: none"> Work on Project
Wed (Mar 4)	<ul style="list-style-type: none"> Work on Project
Friday (Mar 6)	<ul style="list-style-type: none"> Meet in class – Discussion on Project Problems and Solutions
Monday (Mar 9)	<ul style="list-style-type: none"> No Class; Spring Break
Wed (Mar 11)	<ul style="list-style-type: none"> No Class; Spring Break
Friday (Mar 13)	<ul style="list-style-type: none"> No Class; Spring Break
Monday (Mar 16)	<ul style="list-style-type: none"> Review poster drafts in class (All Teams)
Wed (Mar 18)	<ul style="list-style-type: none"> Review poster edits in class (All Teams)
Friday (Mar 20)	<ul style="list-style-type: none"> Final Poster Due – bring digital copy to class for public evaluation, and submit in Webcourses (1 per team)
Monday (Mar 23)	<ul style="list-style-type: none"> Practice Poster Presentations (All Teams)
Wed (Mar 25)	<ul style="list-style-type: none"> FLTWS Spring Meeting (Jacksonville)
Friday (Mar 27)	<ul style="list-style-type: none"> FLTWS Spring Meeting (Jacksonville)
Monday (Mar 30)	<ul style="list-style-type: none"> Practice Poster Presentation (Teams 1 and 2)
Wed (Apr 1)	<ul style="list-style-type: none"> Practice Poster Presentation (Teams 3 and 4)
Thursday (Apr 2)	<ul style="list-style-type: none"> SURE Conference
Friday (Apr 3)	<ul style="list-style-type: none"> Day Off to Celebrate SURE Success – Work on Final Paper
Monday (Apr 6)	<ul style="list-style-type: none"> In class activity: FLTWS write up presentations (Team 1)
Wed (Apr 8)	<ul style="list-style-type: none"> In class activity: FLTWS write up presentations (Team 2)
Friday (Apr 10)	<ul style="list-style-type: none"> In class activity: FLTWS write up presentations (Team 3)
Monday (Apr 13)	<ul style="list-style-type: none"> In class activity: FLTWS write up presentations (Team 4)
Wed (Apr 15)	<ul style="list-style-type: none"> Arbor Day Celebration FLTWS write-up due in Webcourses (1 per individual)
Friday (Apr 17)	<ul style="list-style-type: none"> In class activity: Work on Final Paper
Monday (Apr 20)	<ul style="list-style-type: none"> Final Paper Draft Due - Last day of class
Tues Apr 21 – Mon Apr 27	<ul style="list-style-type: none"> Final Exam Period
Final Exam	<ul style="list-style-type: none"> Monday, April 27, 2020; 10 AM – 12:50 PM Poster Presentations (judged by professionals) Final Paper Due in Webcourses