BSC 4861L
Urban Ecological Field Studies
Spring 2019
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)
TA Contact Information	Amanda Lindsay Amanda.Lindsay@ucf.edu Kelsie Johnson Kelsie.Johnson@ucf.edu

Syllabus subject to change

Course Description

The purpose of the course is to teach students how to conduct research by designing experiments 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 questions and research methods that address these questions, 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 group 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 can change the environmental culture on campus. **Each group must do a community outreach activity to complete the service requirement**. These activities can include tabling to share project information 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 groups guided by the student's selections.
- Each group will formulate project goals/hypothesis and tentative testing methods, which will be presented to the class for feedback. The final goals/hypothesis and methods will be captured in a **formal proposal describing the project concept, the scientific methods to be used, and anticipated results.**
- Each group will conduct the proposed research, and write a final paper documenting the project concept (introduction), methods, results (data), and discussion (what does the data mean).
- A poster presentation will be created by each group communicating the research topic, methods, and final results. This 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. 2013. A Student Handbook for Writing in Biology, Fourth Edition.
  Massachusetts: Sinauer Associates, Inc. 235p.
- 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* (including how the project pertains to the three pillars of sustainability), *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: Group presentation to share project goals/hypothesis and research design (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 group 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 a *poster presentation* (scientific presentation style) highlighting their question, project methods, results and discussion of project relevance and findings. The *oral presentation* will be an individual powerpoint presentation, on the students 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 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 the lecture. 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 groups or in class. In the event of a scheduled absence, it is best to communicate with the instructor, project leader, and project group as soon as possible to make necessary arrangements. Nonparticipation 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	Unless excused, 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. *Student Accessibility Services*, 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 7)	• Review Course Expectations; Class Introductions, and Presentation of Group Projects
Wed (Jan 9)	• In Class: Secrets of the Longleaf Pine Movie
Thursday **(Jan 10)** *Friday* **(Jan 11)**	*Drop/Swap Deadline* *Add Deadline*
Friday (Jan 11)	• Lecture: UCF Arboretum and Natural Resource Programs; Urban Agriculture, Land Management, Urban Forestry, and Student Opportunities • Submit Group Project Requests • Submit Academic Assignment via Webcourses **(due at midnight);** MyPlan Personality Assessment
Monday (Jan 14)	• Lecture: Guest Speaker – UCF Science Liberian; 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 group project and submit a 5:3:1 paper review along with a proper literature citation of the article; **due in Webcourses Wednesday, Jan 16 by 10 AM** Assign Group Projects
Wed (Jan 16)	• Lecture: Guest Speaker – UCF Director, Landscape & Natural Resources and Arboretum; Dr. Patrick Bohlen Research Project Development: How to Develop a Good Research Question and Objective Exercise: Submit Research Question and Objective (1 per group**); due in Webcourses Friday, Jan 18 by 10 AM**
Friday (Jan 18)	• In class exercise: Work in groups on project outline, refine research question and objective as necessary; **meet in Biology computer lab room 305**
Monday (Jan 21)	• **No Class – Martin Luther King Holiday**
Wed (Jan 23)	• Lecture: Guest Speaker – UCF Biology Graduate Student; Ian Biazzo – Basic Statistics and Experimental Design
Friday (Jan 25)	• In Class Exercise: Work in groups on abstract, and proposal presentations; **meet in Biology computer lab room 305**
Monday (Jan 28)	• Proposal Presentations – Groups 1 & 2 share project goals/hypothesis and scientific design/methods. Two – three powerpoint slides and 10-minute presentation with 10 minutes for discussion; **due in Webcourses Monday, Jan 28 by 10 AM (1 per group)**
Wed (Jan 30)	• Proposal Presentations – Groups 3 & 4 share project goals/hypothesis and scientific design/methods. Two – three powerpoint slides and 10-minute presentation with 10 minutes for discussion; **due in Webcourses Wednesday, Jan 30 by 10 AM (1 per group)**
Friday (Feb 1)	• Project Abstract Drafts Due via email **AND** in Webcourses (1 per group) • In class exercise: Work on proposals; **meet in Biology computer lab room 305**
Monday (Feb 4)	• Feedback on Abstracts (via email) • Proposal Drafts Due via email **AND** in Webcourses (1 per group) • In class exercise: Work on abstracts
Wed (Feb 6)	• Feedback on Proposals (via email) • In class exercise: Finalize abstracts for submission
Friday (Feb 8)	• 1. Meet in class – Discussion on Project Problems and Solutions
Monday (Feb 11)	• *Work on project* • **SURE Applications Due (11:59 PM)**
Wed (Feb 13)	• *Work on project*
Friday (Feb 15)	• 2. Meet in class – Discussion on Project Problems and Solutions
Monday (Feb 18)	• *Work on Project*
Wed (Feb 20)	• *Work on Project*

Friday (Feb 22)	• 3. Meet in class – Discussion on Project Problems and Solutions
Monday (Feb 25)	• *Work on Project*
Wed (Feb 27)	• *Work on Project*
Friday (Mar 1)	• 4. Meet in class – Discussion on Project Problems and Solutions
Monday (Mar 4)	• *Work on Project*
Wed (Mar 6)	• *Work on Project*
Friday (Mar 9)	• 5. Meet in class – Discussion on Project Problems and Solutions
Monday (Mar 11)	• **No Class; Spring Break**
Wed (Mar 13)	• **No Class; Spring Break**
Friday (Mar 15)	• **No Class; Spring Break**
Monday (Mar 18)	• *Work on Project*
Wed (Mar 20)	• *Withdrawal Deadline* • *Work on Project*
Friday (Mar 22)	• 6. Meet in class – Discussion on Project Problems and Solutions
Monday (Mar 25)	• Review completed poster drafts in class (Groups 1 & 2)
Wed (Mar 27)	• Review completed poster drafts in class (Groups 3 & 4)
Friday (Mar 29)	• Final Poster Due – bring digital copy to class for group evaluation
Monday (Apr 1)	• *Practice Poster Presentation (Groups 1 and 2)*
Wed (Apr 3)	• *Practice Poster Presentation (Groups 3 and 4)*
Thursday (Apr 4)	• **SURE Conference**
Friday (Apr 5)	• Day Off to Celebrate SURE Success – Work on Final Paper
Monday (Apr 8)	• In class activity: FLTWS write up presentations (Group1)
Wed (Apr 10)	• In class activity: FLTWS write up presentations (Group 2)
Friday (Apr 12)	• In class activity: FLTWS write up presentations (Group 3)
Monday (Apr 15)	• In class activity: FLTWS write up presentations (Group 4)
Wed (Apr 17)	• Arbor Day Tree Planting Event
Friday (Apr 19)	• In class activity: Work on Final Paper; **meet in Biology computer lab room 305**
Monday (Apr 22)	• Final Paper Draft Due - Last day of class
Tuesday (Apr 23)	• Study Day
Final Exam	• Monday, April 29, 2019; 10 AM – 12:50 PM • Poster Presentations (judged by professionals) • **Final Paper Due**