Course Number and Title

ZOO6927-Spring2020: How to Save your Experiment

Catalog Description

This is a graduate level course in statistical ecology and evolution methods and concepts. This course is aimed at Graduate students in the biological sciences facing unplanned field work constraints, sampling difficulties, drastic change of plans or methodological challenges mainly due -but not limited to- the COVID-19 pandemic. This is a semester long lab-meeting where the joint discussions are focused on the stats, sampling problems due to broken experiments, fewer data collection events, etc...

Credit Hours

3 credit hours

Pre-requisites and Co-requisites

None

Course Objectives In this course, every single student will get the opportunity to:

1. Present the research/analytical problem they're facing to the class and the instructor, and receive feedback from other students and the instructor.
2. Actively work for a few weeks on solving the difficulties on a one-on-one basis with the instructor
3. Present again the implemented solution and/or path forward to the rest of the class and discuss it as a group.

Instructor Information

Name: José Miguel Ponciano
Office location: Carr Hall 309
Telephone: (352)-231-0997 (cell)
E-mail address: josemi@ufl.edu
Web site: http://people.biology.ufl.edu/josemi/
Office hours: by appointment.

Course Meeting Time(s)

Tuesdays and Thursdays, 12:50-2:45 PM (periods 6 and 7), via ZOOM

Course Meeting Location(s)

Online, synchronous.

Recommended Materials

Textbooks or Other Readings (Not required)

Rice 1995. Mathematical Statistics.

Pielou, E.C. 1969. An introduction to mathematical ecology

Boswell, M.T., Ord, J.K. and G.P. Patil. 1979. Chance mechanisms underlying univariate distributions. In "Statistical Distributions in Ecological Work", pp 3-156. International Cooperative Publishing House.

Ewens, W. 2004. Mathematical Population Genetics 1- Theoretical Introduction. Springer Verlag.

Readings

None required.

Course Website

Course materials and related information will be posted on the course E-Learning website at http://lss.at.ufl.edu. You are responsible for all announcements made in class and/or posted on the course website for this course.

Software (Required)

R, freely distributed at http://www.r-project.org

Course Outline

Each class, two students will do a short presentation. Each student will do two presentations during the semester. The first one will consist of an introduction to their study system and an explanation by them of the problem they are confronting. We will follow this presentation by a joint discussion, have an ideas rain of possible solutions to the problem, etc… Once that initial presentation is done, every student will meet one on one with me regularly at their convenience to work out the stats, plan the analyses/fixes, etc. Once each student has revised their project data analysis with me, they will present it a second time to the class, and we will all discuss the results and future work. During the first day of class, we will introduce ourselves to the rest of the class and set up the calendar of presentations.

Attendance Policy

Students are expected to be on time for class. A maximum of 3 absences are allowed. Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at: https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx.

Grading

- Presentation of own work with a detailed description of sampling/stats problem: 50%, graded in scale from 0-100%
- Presentation of modified data analysis approach and results after discussion with class group: 50%, graded in scale from 0-100%
- Final grade will be the sum of the grades of presentation 1 and 2.

Grading Scale

Point Range (%)	Letter Grade	GPA equivalent
≥ 90.00	A	4.0
86.7 – 89.9	A-	3.67
83.3 – 86.6	B+	3.33
80.0 – 83.2	B	3.0
76.7 – 79.9	B-	2.67
73.3 – 76.6	C+	2.33
70.0 – 73.2	C	2.0
66.7 – 69.9	C-	1.67
63.3 – 66.6	D+	1.33
60.0 – 36.2	D	1.0
56.7 – 59.9	D-	0.67
< 56.7	E	0

Note that a "C-" will not be a qualifying grade for critical tracking courses. In order to graduate, students must have an overall GPA and an upper-division GPA of 2.0 or better (C or better). Note: a C- average is equivalent to a GPA of 1.67, and therefore, it does not satisfy this graduation requirement. For more information on grades and grading policies, please visit: http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html

Grade Curve Policy

No grading curve

Make-up Exam Policy

No make up exam will be needed. Special temporal accommodations to present your work due to time constrains because of the pandemic can be granted, please discuss with instructor possible time constrains as early as possible in the semester.

Conduct in Class

Please be courteous. Do not engage in side-conversations during lecture or lab. This can be distracting to other students and your instructor or TA.

Only approved electronic devices may be used in class, and only for the purpose of taking notes or otherwise participating in classroom activities. Approved devices include laptops and tablets. Please discuss with the instructor in advance if you feel you have a legitimate need for an electronic device other than a laptop or tablet.

Academic Honesty and the Honor Code

Each student is responsible for reviewing and adhering to the UF Student Honor Code: https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/. If you witness any instances of academic dishonesty, please notify your instructor, TA, or the Dean of Students Office (352-392-1261). You can collect data together, help each other in the field, discuss ideas, practice

presentations in front of one another, make up practice exams, critique drafts of each other's reports, etc. Despite this "group learning", the final product that you turn in for grading must reflect your own work. Any contribution from another individual must be credited (e.g., include an acknowledgement section that says "I thank person X and person Y for their helpful comments on a previous draft, and person Z for providing insights about differential equations.").

No discussion is permitted during exams; nor should any student discuss an exam given in class with a student who is taking a makeup (and has not yet taken an exam).

Accommodations for Students with Disabilities

Students who require accommodations for a disability must contact the UF Disability Resource Center (https://www.dso.ufl.edu/drc) to request an Accommodation Letter. No accommodations are available to students until the letter is provided to the instructor. Once your instructor receives your letter, your instructor and TA will be happy to work with you to arrange the necessary accommodations.

UF Counseling, Self-Help, and Career Services

- Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include:
    - The UF Counseling & Wellness Center (http://www.counseling.ufl.edu/cwc/, 352-392-1575) offers counseling services for depression, anxiety, and other mental health concerns. For Emergency Assistance, please see http://www.counseling.ufl.edu/cwc/Emergency-Services.
    - Many students experience stress and anxiety related to academic performance and college life. In addition to counseling services, the UF Counseling & Wellness Center provides self-help resources that you may find helpful: http://www.counseling.ufl.edu/cwc/SelfHelp-Resources.aspx.
    - The UF Career Resource Center (http://www.crc.ufl.edu/, Reitz Union, 392-1601) offers career and job search services.

Software use

All faculty, staff and student of the University are required and expected to obey laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate.

U Matter, We Care

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other

helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

Course Evaluations:

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at https://evaluations.ufl.edu. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at https://evaluations.ufl.edu/results/.