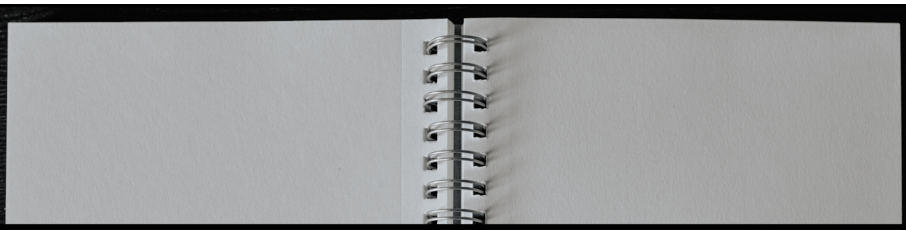


Data Collection & Management

LAS 6292 Spring 20024



Instructor

Dr. Emilio M. Bruna
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(352) 846-0634

Class Sessions

Fridays 12:50-3:50
Grinter Hall 376



Figure 1: Course Objectives

This course is a practical introduction to methods, tools, and best practices for collecting, organizing, managing, and visualizing qualitative and quantitative data. It is designed for graduate students from all disciplines at any stage of their program. At the conclusion of the course students will be able to:

1. Describe the different types of research data;
2. Explain the need for and benefits of data management and sharing;
3. Describe and implement best practices for the collection, storage, management, archiving, and sharing of research data;
4. Find, download, and analyze publicly available data from repositories;
5. Carry out simple and reproducible data corrections and data set organization;
6. Describe public policies and agency requirements for data management and sharing;
7. Articulate the major legal and ethical considerations regarding data collection, use, and storage (e.g., privacy/human subjects, intellectual property, international law);
8. Create and Implement Data Management Plan in funder-specific formats;
9. Identify and properly use tools for more efficient and secure data collection in the field.

Course Format: This course is taught (mostly) as an active-learning workshop. Students are expected to complete reading or watch some short video lectures prior class. The in-class session will typically include an opportunity to ask questions about the pre-class materials and for me to demonstrate challenging concepts; occasionally there will be a class discussion about the reading. Most of the session, however, will be spent working - sometimes in groups, sometimes individually - on exercises that reinforce the session's concepts and techniques. During class I will be circulating between groups to assist with the assignment, work through mistakes, and discuss how the techniques can be applied to your research.



Figure 2: Required Course Materials

Students are not required to purchase any textbooks or course materials. All class materials & assignments are on the class website (<https://las6292.netlify.app/>). Some assigned readings may come from the *New York Times* and have dynamic multimedia data visualizations and video that can't

be appreciated in the posted .pdf format. *Students in this class should sign up for free online access to the New York Times* by following the instructions at [this UF Libraries Website](#).

Materials and Supplies Fees: None.

Figure 3: Instructor Office Hours

Time and Signup: Wednesday & Thursday 10:30-11:45 am (in-person & online). Drop by anytime or sign up for a specific time here: <https://embruna.youcanbook.me>. If you can't make it these days/times please let us know - we will find a time to meet that works for you.

- **Location - in-person:** The Tropical Ecology & Conservation Lab is located next to the Rawlings Hall bus stop (711 Newell Drive; to find a map click the "Contact" link at [BrunaLab.org](https://embruna.youcanbook.me)).
 - **Location - online:** use the zoom link on the course Canvas page. I am online the entire session.
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COURSE OUTLINE & CRITICAL DATES

Week	Dates	Topic
1	1/12	'Data' across disciplines and the Research Data Life Cycle
2	1/19	File Formats, Naming Conventions, Data Storage & Security
3	1/26	Structure & Format of Data & Datasets
4	2/2	Reproducible Data (Re)organization
5	2/9	QA/AC 1: Data Entry & Validation
6	2/16	QA/QC 2: Correction & Synthesis with Open Refine
7	2/23	QA/QC 3: Visualizing Data (to Find Mistakes)
8	3/1	Documentation: Metadata & Codebooks; Data Sharing, Reuse, & Archives
9	3/8	Data Management Plans
10	3/15	No Class - Spring Break
11	3/22	Efficient Data Collection
12	3/29	Transcription & Translation
13	4/5	Paperless Data Collection
14	4/12	Automated Data Extraction
15	4/19	Legal & Ethical Issues
Finals Week	4/30	Submission of Final Projects by 5 pm

ASSIGNMENTS & EVALUATION

Final Course Grades: Course grades will be based on the percentage of total points earned and will be assigned with the following scale: **A:** >93% **A-:** 92-90% **B+:** 89-87% **B:** 86-83% **B-:** 82-80% **C+:** 79-77% **C:** 76-73% **C-:** 72-70%. **D+:** 69-67% **D-:** 62-60% **E:** 59% and below. **The final course grade is based on the following assignments:**

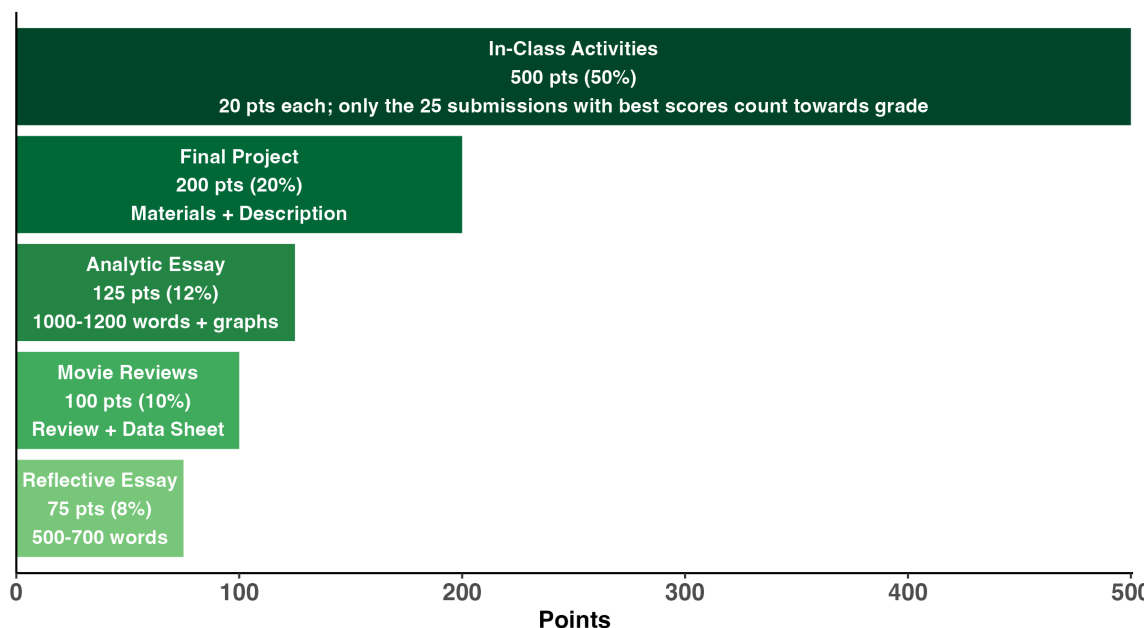
Assignment	Points (%)	Due
Weekly in-class exercises	350 (35%)	Following Friday at 9 am
Data Management Plan	150 (15%)	23 March
Individual Data Cleanup Project	500 (50%)	30 April
TOTAL	1000 (100%)	

Note that there is no Final Exam in this course (the Individual Project is due on the scheduled date of the final exam). **Note also that each of the 14 in-class exercises are each worth 25 points.** Most of the in-class assignments involve hands-on practice with data collection or manipulation. In some weeks, however, assignment will be the submission of questions for group discussion or brief reflection on the issues from the readings. Most in-class assignments are designed to be completed during the class session, but to ensure students master the concepts rather than rush through them *they can be submitted anytime before 9 am the following Friday.*

Assignments and Grades

Learning in our class is achieved with an diverse array of methods ranging from in-class data analysis to discussions of readings to projects. In most class sessions you will also be working with groups of students to complete an in-class activity that reinforces the major themes of the day's topic.

Figure 4: Assignments (1000 points total)



In-class Assignments are due by the following class session. Late assignments will lose 10 pts.

Regrades: Requests for re-evaluation of assignments must be accompanied by an explanation for why you think you deserve additional credit and the number of additional points you think you deserve. The deadline for submission is one week after the work was returned.

Grade Assignment (based on % of total points earned): A = 94–100%, A- = 90–93%, B+ = 87–89%, B = 84–86%, B- = 80–83%, C+ = 77–79%, C = 74–76%, C- = 70–73%, D+ = 67–69%, D = 64–66%, D- = 60–63%, E < 60

Grade Points: For information on how UF assigns grade points, visit:
<<https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>

