



EMORY

ROLLINS
SCHOOL OF
PUBLIC
HEALTH

DEPARTMENT: Biostatistics and Bioinformatics

COURSE NUMBER: 581

SECTION NUMBER:

CREDIT HOURS: 2

SEMESTER: Spring 2021

COURSE TITLE: Statistical Practice II

INSTRUCTOR NAME: TBD

INSTRUCTOR CONTACT INFORMATION

OFFICE HOURS

Teaching Assistant(s):

COURSE DESCRIPTION

This is a required course for the MPH and MSPH students in the Biostatistics and Bioinformatics program in their final spring semester. The purpose of the course is to help students with their capstone project in project management, manuscript writing, and oral presentation while they conduct their project with their individual BIOS advisors. Students will review journal articles to critique study design and statistical analysis methods in a journal club format. They will learn how to write journal articles section by section through lectures and homework assignments. They will develop a manuscript based on their capstone project. At the end of the semester, each student will give an oral presentation on his/her capstone project. Each student will also make a poster on his/her capstone project. Students will receive feedbacks from their peers and instructors to improve their writing and presentation skills. The prerequisite is BIOS 580 - Statistical Practice I.

MPH/MSPH FOUNDATIONAL COMPETENCIES:

Evidence-based Approaches to Public Health

1. Analyzing quantitative and qualitative data using biostatistics, informatics, and computer-based programming and software, as appropriate.
2. Interpret data analysis results for public health research, policy or practice.
3. Select communication strategies for different audiences and sectors

CONCENTRATION COMPETENCIES:

- BMPH3: Use statistical software for data management and exploratory data analysis.
- BMPH5: Explain fundamental concepts of probability and inference used in statistical methodology.
- BMPH6: Communicate the results of statistical analyses to a broad audience

EVALUATION

- Class attendance, participation 10%,
- Homework 30%
- Journal critique 10%
- Capstone project 20% (10% statistics, 10% interpretation)
- Capstone project oral presentation 10%
- Capstone project poster 20%

Grade scale:

- A = 90 -- 100%
- B+ = 85 – 90%
- B = 83 – 85%
- B- = 80 – 83%
- C = 65 – 80%
- F = <65%

COURSE STRUCTURE

The class will meet weekly. Lectures will be given on how to write each section of a manuscript or skills of presentations and examples will be analyzed. Three students will be working as a group for journal critiques and review each other's writing assignments during the semester. Each student will write a manuscript based on his/her capstone project. Each student will give 10-15-minute oral presentation of his/her capstone project using power point at the end of the class. In the final class meeting, all students will make a poster of their capstone project and participate in a poster exhibition to present their capstone projects. Best BIOS Master's thesis poster award will be given to the poster judged (by the faculty and students). Criteria for the award will be based on the content of the poster, the quality of the visual display of information on the poster, and the ability of the student to succinctly present the subject matter and interpret the findings.

MPH/MSPH Foundational Competencies assessed	Representative Assignment
Analyzing quantitative data using biostatistics, informatics, and computer-based programming and software, as appropriate	Data analysis results associated with the capstone project are summarized in written drafts.
Interpret results of data analysis for public health research, policy or practice	Data analysis results associated with the capstone project are summarized in written drafts.
Select communication strategies for different audiences and sectors	Oral and poster presentation of capstone project.
BIOS Foundational Competencies assessed	Representative Assignment
Use statistical software for data management and exploratory data analysis.	Data analysis results associated with the capstone project are summarized in written drafts.
Explain fundamental concepts of probability and inference used in statistical methodology.	Oral presentation of journal articles.
Communicate the results of statistical	Oral presentation of results from capstone research

analyses to a broad audience	and journal articles.
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COURSE POLICIES

Students are expected to attend at least 90% of the classes, hand in drafts on time, and revise drafts based on comments. They are also expected to give presentations on the prescheduled dates. Students are strongly encouraged to work together in critiquing and helping each other’s writings and presentations.

As the instructors of this course we endeavor to provide an inclusive learning environment. However, if you experience barriers to learning in this course, do not hesitate to discuss them with me and the Office for Equity and Inclusion, 404-727-9877.

RSPH POLICIES

Accessibility and Accommodations

Accessibility Services works with students who have disabilities to provide reasonable accommodations. In order to receive consideration for reasonable accommodations, you must contact the Office of Accessibility Services (OAS). It is the responsibility of the student to register with OAS. Please note that accommodations are not retroactive and that disability accommodations are not provided until an accommodation letter has been processed.

Students who registered with OAS and have a letter outlining their academic accommodations are strongly encouraged to coordinate a meeting time with me to discuss a protocol to implement the accommodations as needed throughout the semester. This meeting should occur as early in the semester as possible.

Contact Accessibility Services for more information at (404) 727-9877 or accessibility@emory.edu. Additional information is available at the OAS website at <http://equityandinclusion.emory.edu/access/students/index.html>

Honor Code

You are bound by Emory University’s Student Honor and Conduct Code. RSPH requires that all material submitted by a student fulfilling his or her academic course of study must be the original work of the student. Violations of academic honor include any action by a student indicating dishonesty or a lack of integrity in academic ethics. *Academic dishonesty refers to cheating, plagiarizing, assisting other students without authorization, lying, tampering, or stealing in performing any academic work, and will not be tolerated under any circumstances.*

The RSPH Honor Code states: “Plagiarism is the act of presenting as one’s own work the expression, words, or ideas of another person whether published or unpublished (including the work of another student). A writer’s work should be regarded as his/her own property.” (http://www.sph.emory.edu/cms/current_students/enrollment_services/honor_code.html)

COURSE OUTLINE

Week	Lectures	Presentations	Assignments
1	Project management, reproducible research	Form groups of 2-3 depending on the cohort size	Select research paper for group journal critique; Get familiar with a reference citation tool
2	Literature review, manuscript structure, reference citation. Avoid plagiarism, common grammar mistakes		Obtain 5-10 references most relevant to your project*
3	Oral presentation fundamentals		
4	How to write the background/ introduction	2 journal critique presentations	
5		5-6 journal critique presentations	Draft of background or introduction *
6	How to write the method section	2 journal critique presentations	
7		5-6 journal critique presentations	
8	How to write the results section, including figures, tables, and supplementary materials	2 journal critique presentations	Draft of Method*
9	How to write the discussion section	2 journal critique presentations	
10	Spring Break		
11	Work Day		Draft of Results with figures and tables*
12	Work Day		Draft of everything*
13	Revision		Revise manuscript based on advisor's comments
14	Poster creation		
15	Capstone Project Presentation Day	Everyone	With multiple sessions to give each student an opportunity for a 15 minute oral presentation
16	Posters presentation on the bridge	Everyone	Capstone manuscript due

*Students need submit this homework assignment for instructor's comments.