



EMORY

ROLLINS
SCHOOL OF
PUBLIC
HEALTH

DEPARTMENT: Biostatistics and Bioinformatics

COURSE NUMBER: BIOS 724 SECTION NUMBER:

CREDIT HOURS:

SEMESTER:

COURSE TITLE:

CLASS HOURS AND LOCATION:

INSTRUCTOR NAME:

INSTRUCTOR CONTACT INFORMATION

EMAIL: msy.lau@emory.edu

PHONE: 404-727-2352

SCHOOL ADDRESS OR MAILBOX LOCATION: GCR 370

OFFICE HOURS Wednesday 11:00 – 11:45 pm

Teaching Assistant(s): pending

COURSE DESCRIPTION

To familiarize students with important concepts, transmission models and computational tools in infectious diseases modeling. Students are expected to be familiar with basic calculus, laws of probability and R programming skills. BIOS 524 is preferred but not required.

EVALUATION

Evaluation will be based on class attendance (10%), homework (30%), an in-class exam (30%) and a written report (30%).

COURSE STRUCTURE

This course will include lectures, homework, in-class exam and students will be required to submit a written final report. Students will learn some key concepts and models for infectious diseases transmission. Homework and the final written report may require minimal R programming.

COURSE POLICIES

As the instructor of this course I 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 CALENDAR

1. Basic concepts in infectious diseases transmission
2. Deterministic models
3. Stochastics models
4. Meta-population models
5. Agent-based models
6. Controls of infectious diseases: vaccination strategies
7. Algorithms for simulating epidemics
8. Introduction to molecular epidemiology

Topics may change as the semester progresses. Every two sessions will roughly cover one topic.

COURSE OUTLINE

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