



M W F Period 7 (1.55-2.45 pm), LIT 239

MAP 6487 is a 3 credit hours graduate-level course in infectious disease modeling and economic development that explores classical examples of infectious disease models, including, but not limited to deterministic, stochastic, metapopulation and network models (with examples drawn from a variety of diseases), the basic reproduction number and disease control, associating disease models with data (alternative model fitting approaches), local and global sensitivity analyses, infectious disease model selection and identifiability. The last part of the course involves dynamical coupling of infectious disease and economic growth models in a meaningful way and using the coupled systems to explore feedbacks between infectious diseases and economic growth. The course ends with an in-class group exercise on formulating meaningful research questions on infectious diseases. The course will be broken into class lectures, presentations by students, and computer laboratory or tutorial sessions. The course also has a project component.

The goal of the course is to introduce students to infectious diseases and infectious disease models, relate infectious disease models to real-world disease data and integrate infectious disease and economic growth models in a meaningful way to address real-world questions in the ecological and social sciences. Students will use differential equation and stochastic models, as well as numerical techniques to investigate disease outbreak and control, interactions between infectious diseases and economic growth and infer possible intervention measures from the analyses of the models.

Student responsibilities: Students are expected to attend and play an active role in all class meetings. Please, do not hesitate to ask questions or seek additional assistance to ensure that you are staying on pace with the class.

Assessment: Students will be evaluated through in-class examinations, homework, and a project. Students are welcome to suggest their own projects or on projects proposed by the course instructor.

Exams	100 points	A	360-400 points
Presentations	100 points	B	320-359 points
Homework	100 points	C	280-319 points
Project	100 points	D	240-279 points
Total	400 points	E	000-239 points

In a bit to understand the material, it will be essential that students keep pace with the material as it is being presented. Consequently, students will be expected to attend all class meetings and participate actively.

Students should familiarize themselves with the University's Code of Conduct (<https://www.dso.ufl.edu/sccr/process/studentconduct-honor-code/>) and the university's policy on academic honesty, which may be found in the University of Florida Rules, 6C1-4.

I look forward to reading your constructive and objective comments. These comments will be helpful in my subsequent teaching of this course. I encourage students to furnish me with feedback, either in person, by voice mail, by email, through a note left under my office door, etc., throughout the semester.

Students requesting classroom accommodations or special arrangements during examinations must first register with the Dean of Students Office. The Dean of Students Office will provide documentation. The student must then make arrangements with the instructor to meet the requesting accommodation.

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 911.

