Instructor: Dr. Harsh Jain (hjain@fsu.edu)

Office: 219 LOV

Office Hours: Tu 3:30pm – 5:00pm, Th 3:30pm – 5:00pm, or by appointment

Prerequisites: A course in Ordinary Differential Equations (e.g. MAP2302) and Linear Algebra (e.g. MAS3105). Familiarity with Partial Differential Equations and Computer Algebra Systems (like Matlab) is recommended.


Course Website: http://www.math.fsu.edu/~jain/MAP5932/

Course Content: This course will provide an introduction to classical models in biomathematics. These include models based on ordinary, partial and delay differential equations. Applications to Biology may include: population models of growth, competition, and predator-prey interactions; models of the spread of infectious diseases; chemical kinetics; physiology models; and cancer models. Additional topics covered may include: SIR models, continuous age-structured models, parameter estimation, parameter sensitivity, parameter identifiability.

Attendance Policy: You are expected to attend class and participate in discussions. A student absent from class bears the full responsibility for all subject matter and procedural information discussed in class. More than three missed lectures will automatically result in the student’s grade being lowered by a third of a letter. (See also University Attendance Policy below).

Assignments: There will be two graded homework sets. Students are allowed to discuss these assignments with each other; however, each student must submit their own work. If I feel that the assignment is copied from someone else, both will receive a grade of 0. Assignments turned in within two days of the due date will be considered late, and credit will be reduced by 25%. Additionally, practice problems may be assigned in class, which will not be graded.

Exams: There will be one take-home exam that will be handed out on Thursday, 24 October, 2019 due on Tuesday, 29 October, 2019 in class.

Final Project: Students will work on a project on a topic to be determined in class, and will give an oral presentation in the last week of classes, in addition to submitting a written report on their projects. Details of these projects will be announced in class in at the end of September. The written reports will be due on Monday, December 09, 2019 by 10:00 am.

Grading: Each homework set counts for 20% of the grade, the exam and project count for 30% each.
**University Attendance Policy:** Excused absences include documented illness, deaths in the family and other documented crises, call to active military duty or jury duty, religious holy days, and official University activities. These absences will be accommodated in a way that does not arbitrarily penalize students who have a valid excuse. Consideration will also be given to students whose dependent children experience serious illness.

A medical excuse must state explicitly that the holder should be excused from class. Note that students will not be given excused absences to attend family functions or other non-academic events. Official University activities include official events at which the student is representing the University, such as athletic competitions and academic activities sponsored by a students academic department or college. Registered Student Organizations (RSOs) and Greek Life activities are not considered official university activities.

**Exam Policy:** No make-up exam will be given. Work turned in 2 days after the due date will receive a grade of 0. Students must bring FSU ID cards to all tests.

**Academic Honor Policy:** The Florida State University Academic Honor Policy outlines the University’s expectations for the integrity of students’ academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process. Students are responsible for reading the Academic Honor Policy and for living up to their pledge to "... be honest and truthful and ... [to] strive for personal and institutional integrity at Florida State University.” (Florida State University Academic Honor Policy, found at [http://fda.fsu.edu/Academics/Academic-Honor-Policy](http://fda.fsu.edu/Academics/Academic-Honor-Policy)).

**Americans With Disabilities Act:** Students with disabilities needing academic accommodation should: (1) register with and provide documentation to the Student Disability Resource Center; and (2) bring a letter to the instructor indicating the need for accommodation and what type.

Please note that instructors are not allowed to provide classroom accommodation to a student until appropriate verification from the Student Disability Resource Center has been provided.

This syllabus and other class materials are available in alternative format upon request.

For more information about services available to FSU students with disabilities, contact the Student Disability Resource Center:
108 Student Services Building Florida State University Tallahassee, FL 32306-4167
(850) 644-9566 (voice) (850) 644-8504 (TDD)
sdrc@admin.fsu.edu
[http://www.disabilitycenter.fsu.edu/](http://www.disabilitycenter.fsu.edu/)

**Syllabus Change Policy:** Except for changes that substantially affect implementation of the evaluation (grading) statement, this syllabus is a guide for the course and is subject to change with advance notice.