Instructor: Harsh Jain (hjain@fsu.edu)

Office: 219 LOV

Office Hours: T 2:00pm - 3:30pm and W 10:00am - 11:30am, or by appointment

Prerequisites: A course in Calculus 2 (e.g. MAC2311), with a grade of C- or better. Linear Algebra and Differential Equations are highly recommended.


Course Content: Biological models based on finite difference and ordinary differential equations. Basic Linear Algebra topics, including eigenvalues and eigenvectors. Phase plane analysis of dynamical systems. 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 (roughly Chapters 1-7 of the text, time permitting we may cover topics from Chapter 9 and 10).

Expectations: 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.

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 midterm exam on Thursday, 18 April, 2019, administered in class.

Final Project: The class will be divided into groups. Each group will work on a problem/paper in mathematical biology, and will give an oral presentation in the last week of classes. Details of these projects will be announced in class in the week prior to Spring Break.

Grading: Each homework set counts for 25% of the grade, the midterm counts for 30% and the project counts for 20%.

Letter grades will be determined from numerical grades as follows: A: 90-100; B: 80-90; C: 75-80; D: 65-75; F: 0-65. Plus or minus grades may be assigned at the discretion of the instructor. A grade of I will not be given to avoid a grade of F or to give additional study time. Failure to process a course drop will result in a course grade of F.

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 student's academic department or college. Registered Student Organizations (RSOs) and Greek Life activities are not considered official university activities.

**Exam Policy:** No makeup 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.