

# Syllabus For Math Seminar 50:640:491/Special Topics in Applied Math 56:645:580

Spring 2022, Rutgers University-Camden

**COURSE TITLE:** 50:640:491 Math Seminar/56:645:580 Special Topics in Applied Math

**COURSE DESCRIPTION:** The main aim of this course is to guide students reading mathematical research papers, preparing presentations, and writing essays. This course will cover the following special topics: (1) Mathematics behind music theory. (2) Isoperimetric inequality and fundamental tone of a polygon. (3) Central limit theorem and its applications in statistics. (4) Numerical methods for differential equations.

Prerequisites of the course is Mathematical Reasoning (640:300).

**INSTRUCTION PLAN:** This class is conducted through remote instruction for the first two weeks and returns to in-person mode on January 31, 2022. Canvas, Zoom, emails and other digital tools will be used to aid the instruction and communication. Students are expected to have access to: (1) high speed internet; (2) a laptop/desktop computer or a tablet/iPad together with built-in or separate microphone; (3) a scanner, or a phone camera with an app for producing pdf documents; (4) LaTeX package.

**LEARNING GOALS:** Through reading research papers, giving presentations, and writing articles on selected topics, students learn skills that prepare them for a successful professional careers. Specifically, students will learn (1) how to read a mathematical paper; (2) how to give a mathematical presentation; (3) how to write a research article using LaTeX.

## **COURSE INFORMATION:**

- Instructor: Siqu Fu
- Office: BSB 426
- Office hours: MW 10:00 am-11:00 am (in-person or through Zoom) or by appointments
- Phone: (856) 225-2349.
- E-mail: [sfu@camden.rutgers.edu](mailto:sfu@camden.rutgers.edu)
- Web page: <http://people.camden.rutgers.edu/sfu>.
- Lectures: BSB 107, MW 2:05 pm-3:35 pm

**ASSESSMENT:** There will 4 homework assignments. Students are asked to submit their work through Canvas Assignments. Each student will be asked to give a presentation on one of the four topics listed on the course description above and write an article on the subject.

Grades will be assigned based on students' performance according to the following weights:

- Attendance and participation: 10%
- Homework assignments: 40%
- Presentation: 20%
- Final paper: 30%

**ATTENDANCE POLICY:** Attendance will be checked and is expected for every class period with exception for illness, court appearance, and other legitimate emergency. See the Rutgers University Attendance Policy.

**CODE OF CONDUCT AND ACADEMIC INTEGRITY:** Rutgers University-Camden seeks a community that is free from violence, threats, and intimidation; is respectful of the rights, opportunities, and welfare of students, faculty, staff, and guests of the University; and does not threaten the physical or mental health or safety of members of the University community, including in classroom space, and a community in which students respect academic integrity and the integrity of your own and others' work.

As a student at the University you are expected adhere to the Student Code of Conduct and Academic Integrity Policy. Please review the Academic Integrity Policy and Code of Conduct.

**STUDENTS WITH DISABILITIES:** If you are in need of academic support for this course, accommodations can be provided once you share your accommodations indicated in a Letter of Accommodation issued by the Office of Disability Services (ODS). If you have already registered with ODS and have your letter of accommodations, please share the letter with this instructor early in the course. If you have not registered with ODS and you have or think you have a disability (learning, sensory, physical, chronic health, mental health or attentional), please contact ODS by first visiting their website. The website will further direct you who to contact and how to contact them depending on the free, confidential services you are in need of. Please Note: Accommodations will be provided only for students with a Letter of Accommodation from ODS. Accommodation letters only provide information about the accommodation, not about the disability or diagnosis.

**FACE COVERINGS:** In consistent with university policy, face coverings are required in classrooms (unless there is a change of university policy). Please refer to documents Guide to Returning to Rutgers and Navigating Our Classrooms and Student spaces for details.