IE 503 Stochastic Processes
Fall 2020 Syllabus

- **Lecture Times:**   M   11:40 – 12:30
                         T   14:40 – 16:30

- **Instructor:**   Semih Sezer
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  Office Hours: By appointment

- **Course description:** The course aims to discuss some important stochastic processes. After a brief review of probability theory, we will study Poisson processes, renewal theory and regenerative processes, discrete-time Markov chains, continuous-time countable-state Markov processes and their applications in Markovian queueing models.

- **Lecture Material**: We will follow the lecture notes. They will be posted on SUCourse+ Course Management System (at https://sucourse.sabanciuniv.edu/plus/).

  Recommended Reading:
  - *Introduction to Probability Models,* S.M. Ross, 11th Ed., Academic Press
  - *Introduction to Stochastic Processes*, E. Çınlar, Prentice Hall

- **Course Content (Tentative Plan):**

  - Probability Theory
  - Poisson Processes
  - Renewal theory and Regenerative Processes
  - Discrete-time Markov Chains
  - Continuous-time Countable-State Markov Chains
  - Markovian Queueing Models

- **Grading Policy:**

  There will be two exams: one midterm and one final. The weights of these exams will be 45% and 55% respectively.

  Both exams will be take-home exams. The midterm will be on November 27th, and the final will be on January 4th.

  Update note on the Exam II date: After one week of break is added before the final period in the academic calendar, the Exam II date is changed as January 6th.

- It is students' responsibility to follow all the announcements made in class and those made via SUCourse+ Course Management System.