E2 204 Jan 3:0

Stochastic Processes and Queueing Theory

Instructor

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Teaching Assistant

Email:

Department: ECE

Course Time:

Lecture venue:

Detailed Course Page: http://ece.iisc.ernet.in/~parimal/spqt.html

Announcements

Brief description of the course

Basic mathematical modeling is at the heart of engineering. In both electrical and computer engineering, many complex systems are modeled using stochastic processes. This course will introduce students to basic stochastic processes tools that can be utilized for performance analysis and stochastic modeling.

Prerequisites

First graduate engineering course in probability theory and random variables.

Syllabus

Poisson process, Renewal theory, Markov chains, Reversibility, Queueing networks, Martingales, Random walk.

Course outcomes

Students would be able to model complex systems with uncertainty using random processes, and analyze the system performance.

Grading policy

20% Assignments

20% Mid-term

20% Project

40% Final

Assignments

Resources