

Math 170A-170B: Probability Theory

Math 171: Stochastic Processes

- [Math 170A: General Course Outline & Catalog Description](#)
- [Math 170B: General Course Outline & Catalog Description](#)

Math 171 - Stochastic Processes, Catalog Description . (Formerly numbered 151.)Lecture, three hours; discussion, one hour. Prerequisites: course 170A or Statistics 152A/100A. Discrete Markov chains, continuous-time Markov chains, renewal theory.

Additional Information

Probability and stochastic processes are used to create and analyze models in a broad range of fields, including statistics, economics, finance, engineering, biology and physics. Mathematics 170AB and 171 are designed to give a firm foundation in this area for students who will work and/or do graduate work in one of these fields. They also provide an excellent background for graduate work in probability and related areas of mathematics.

These courses are particularly well suited to students who plan to take the exams in actuarial science. The second exam in this series (number 110) is on probability and statistics. Mathematics 170AB covers roughly 2/3 of the material on that exam.

Course 170A is multiply listed with Statistics. Usually, two sections are offered each Fall Quarter, one by Mathematics and one by Statistics. Total enrollment in the two sections tends to be about 50.

The three courses are intended as a year-long sequence. However, it is possible, and not unusual, to take 171 without 170B. In fact, the enrollments in 171 are sometimes larger than in 170B (both are in the 10-20 range). Mathematics 170B is offered each Winter Quarter, and Mathematics 171 is offered each Spring.