

MAP 6218.0001 Stochastic Calculus (3 Credits)
(Fall 2017)

Instructor: Dr. Jiongmin Yong

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Office Hours: Tuesday 9:00—11:00am, Wednesday 10:30—11:30am
Thursday 9:00—11:00am

Classroom: MSB 204 **Class Times:** Tuesday, Thursday 3:00—4:20pm

Textbook: I. Karatzas and S. E. Shreve, Brownian Motion and Stochastic Calculus

Prerequisites: MAA 6245 or C.I.

Contents of the Course: Review of martingale, Brownian motion. Main contents include: definition and basic properties of stochastic integral, Ito's rule, Burkholder-Davis-Gundy's inequality, Girsanov transformation, local time, stochastic differential equation, strong solution, weak solution, martingale problem, and linear differential equations.

Attendance and Classroom Conduct: Attendance will be checked. You will earn 3% extra credit on your course score average if you have no more than 4 unexcused absences. Excuses absences, must be approved no later than 7 days after the absence. Common courtesy requires that students arrive in class on time, and stay the entire class period. Turn off your cell phones. Please treat your classmates and the instructor with respect.

Homework: Exercise problems will be assigned in the class. Some discussion sessions will be arranged on the selective problems.

Test and Exam: There will be ONE mid-term tests (100 points) and ONE final exam (100 points). **No makeups!** The final exam is mandatory for all students. No exceptions are permitted for early travel, etc.

Final Exam: Thursday, December 7, 2017, 1:00pm—3:50pm

Grading Policy: The test scores will totally count 40% . The final exam score will count 60%. The overall course grade will be scaled as follows:

A+: 98-100% A: 92-97% A-: 89-91% B+: 86-88% B: 82-85% B-: 79-81%
C+: 76-78% C: 72-75% C-: 69-71% D+: 66-68% D: 60-65% F: 0-59%

Academic Honesty: Cheating will not be tolerated. Students found to be cheating will be dealt with to the full extent of University policy.