



## MAP6468—Stochastic Differential Equations

### Stochastic Differential Equations Instructor and Office Hours

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*Office Hours:* MWF 4, or by appointment.

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### Homework, Problems and Exams

Homework : Presentation of some class material

### Prerequisites

MAP 6467

### Grading:

Grading will be based on class presentations

### Objective of the Course:

Continuation.

Stochastic integrals differ from ordinary integrals in a fundamental fashion. Our goal in this part is to introduce this concept using martingales instead of Brownian motion.

### Tentative Weekly Schedule:

01/04-01/06: Review from Fall 2016.

01/09-01/20 : Semimartingales and Stochastic Integrals as in pages 51-59 of P.E. Protter.

01/23-01/27 : Properties of Stochastic Integrals.

01/30-02/10 : Quadratic Variation of a Semimartingale.

02/13-02/24 : Itos Formula.

02/27-03/03 : Some applications of Itos Formula

03/13- 03/17 : Counting Processes and Compensators.

03/20-03/24 : Girsanov's Theorem.

03/27-03/31 : Applications to Finance.

04/03-04/19 : Partial Differential Equations and Martingales.

**Teaching Evaluation:** Students are expected to provide feedback on the quality of instruction in this course based on 10 criteria. These evaluations are conducted online at <https://evaluations.ufl.edu>.

**Academic Honesty:** The course will be conducted in accordance with the University honor code and academic honesty policy, which can be found in the [student guide](#)

**Accommodation for Student with Disabilities:** Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.