

# ESI 6546 Stochastic Modeling and Analysis

## Spring 2018

W 2-4 (8:30AM – 11:30AM)  
FLG 0275

### Catalog Description

This course introduces fundamental concepts in Stochastic Process. Several main topics include Applied Probability Review, Poisson Process, Renewal Processes, Markov Chains, and Continuous-Time Markov Chains. (3 Credits)

### Course Objectives

- To review the basic knowledge of probability theory
- To develop a familiarity with stochastic process models
- To improve the ability to formulate stochastic models of systems and to analyze results obtained with such models

### Reference Books

- Ross, S. M., *Stochastic Process (2nd Edition)*, Wiley, 1996
- Ross, S. M., *Introduction to Probability Models*, 9th edition, Elsevier, 2007
- Kulkarni, V. G., *Modeling and Analysis of Stochastic Systems*, Chapman & Hall, 2009

**Instructor** Dr. Yongpei Guan  
**Office:** 413 Weil Hall  
**Email:** guan@ise.ufl.edu

**Office Hours** W 11:30AM-1:30PM.

### Course Website: UF Canvas

On the website you can find all the announcements and course materials, which include syllabus, lecture notes, homework assignments, and grades. Please check the website frequently.

### Grading Policy

Midterm	40%
Final Exam	40%
Homework	20%

The midterm and final exams will be closed books and closed notes (except the three reference books) in-class exam.

### Homework Assignments

There are six-eight homework assignments in total. Discussion is allowed and individual submission is required. To be fair to everyone, please submit your homework on time. Requests

for a re-grade of exam/homework will be considered only within one week from the time the graded exam/homework is returned.

### **Attendance**

Students are strongly suggested to attend the classes, even though this is not required.

### **Grading Scale**

Your grade will be the better one of the following two schemes

1. 90-100 A, 85-89 A-, 80-84 B+, 75-79 B, 70-74 B-, 65-69 C+, 60-65 C, <60 F
2. Top 30% A, 30%-40% A-, 40%-60% B+, others B or below

In order to graduate, graduate students must have an overall GPA and an upper-division GPA of 3.0 or better (B or better). Note: a B- average is equivalent to a GPA of 2.67, and therefore, it does not satisfy this graduation requirement. For more information on grades and grading policies, please visit: <http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html>

### **Honor Code**

Kindly note and adhere to the following policy: “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.”

### **Accommodation for Students with Disabilities**

Students Requesting classroom accommodation must first register with the Dean of Students Office. That office will provide the student with documentation that he/she must provide to the course instructor when requesting accommodation.

UF Counseling Services –Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include:

- UF Counseling & Wellness Center, 3190 Radio Rd, 392-1575, psychological and psychiatric services.
- Career Resource Center, Reitz Union, 392-1601, career and job search services.

### **Software Use**

All faculty, staff and student of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.