

**Math 6680/5680: PROBABILITY AND STOCHASTIC PROCESS II**  
**Spring Semester, 2009**

<b>Time:</b>	M W F 8:00–8:50am
<b>Place:</b>	246 Parker Hall
<b>Instructor:</b>	Dr. Erkan Nane
<b>Office:</b>	340 Parker Hall
<b>Telephone:</b>	844-6595
<b>E-Mail:</b>	nane@auburn.edu
<b>Office Hours:</b>	M W F 10:00–11:00am, and by appointment
<b>Text:</b>	<i>Introduction to Stochastic processes</i> , Second Edition, by Gregory F. Lawler
<b>Prerequisite:</b>	Statistics/Mathematics 5/6670, or an equivalent course
<b>Other references:</b>	<i>A First course in Probability</i> , Seventh Edition, By Sheldon Ross. <i>Introduction to Stochastic Process</i> , by Hoel, Port and Stone.

**Coverage:** Math 5/6680 is a continuation of Math 5/6670. Topics covered will be Multivariate distributions, Central Limit Theorem, Laplace transforms, convolutions, Simulation of random variables, Finite Markov Chains, countable Markov chains, continuous-time Markov chains, Martingales, Renewal process and Brownian motion. We will start with the selected sections in chapters 6,7,8,and 10 in *A first Course in Probability* by Sheldon Ross and take up chapters 1, 2, 3, 5, and 8 from *Introduction to Stochastic processes*, Second Edition, by Gregory F. Lawler

**Homework:** Homework will be regularly assigned. It is expected that students will do all the homework assigned. The due date will be announced in class.

**Exams:** There will be seven exams (30 points each) the lowest exam grade will be dropped. The exams will be given on the following Fridays:  
January 23; February 6; February 20; March 6; March 27; April 9; April 23

Make-up exams will only be allowed in extreme circumstances.

**Final exam:** A **comprehensive** final(120pts) will be given on Thursday, May 7, 8:00–10:30 am.

**Grading:** Hws=100pts, Exams=180pts, Final=120pts, Total=400pts. The grading scale will be as follows:

80–100%	A
65–79%	B
55–64%	C
40–54%	D
39% or below	F

The instructor reserves the right to make any changes he deems academically advisable.

### **Important Dates for Spring Semester 2009**

Jan. 6 Pre-term Preparation  
Jan. 7 Classes Begin  
Jan. 19 M. L. King Day (Holiday)  
Jan. 28 15th Class Day\*  
Feb. 27 Mid Semester (37th Class Day)\*\*  
Mar. 16-21 Spring Break  
Apr. 29 Classes End  
Apr. 30 Study/Reading Day  
May 1, 4-7 Final Exam Period  
May 9 Commencement

\* Last day to withdraw from a course with no grade assignment

\*\* Last day to withdraw from a course with no grade penalty

**Tips:** This course is demanding and requires a great deal of work. Students are responsible for all material covered in class. Students are expected to attend each class period and to bring text. Read the textbook as assigned. Study the examples solved in class and in the textbook. Then do the homework problems. Try to study every day even if it has to be a few minutes only. It takes time and frequent practice to become comfortable with the material. Do not fall behind!

**Policies:** Academic Honesty (DISHONESTY): Suspicion of academic dishonesty and/or cheating will result in action by the University Honesty Committee. Refer to the Tiger Cub for more specific details. Student who plagiarize will receive a grade 0.0 on the assignment.

**Special needs:** To arrange for accommodation a student should contact the office of the Program with Disabilities, located in 1244 Haley center