STAT 401 – 13617, 20466 **Fall 2008**

Introduction to Probability – Syllabus

- **Instructor:** Jing Wang

  Office: SEO 523
  Phone: (312) 996-4835
  E-Mail: wangjing@math.uic.edu
  Web Page: www.math.uic.edu/∼wangjing

- **Lectures:** M W F at 12:00 - 12:50 a.m., SEO 636

- **Office Hours:** M at 3 - 5 p.m. and F at 3-4 p.m. (or by appointment)

- **Textbook:** R. V. Hogg, J. W. McKean, A. T. Craig, *Introduction to Mathematical Statistics*, 6th edition, 2005

- **Dates of Homework and Midterm Exams:**

Homework	Wednesdays
Midterm I	12 - 12:50 p.m., Oct. 1
Midterm II	12 - 12:50 p.m., Nov. 12

- **Make-up Exam:** No makeup exam will be given without a valid excuse.

- **Grading:** Homework 20%, midterms 20% each, final 40%

- **Credits Scale:** 93% A , 80% B , 70% C , 60% D

- **Note:** The"closed book and notes" exams will contain questions concerning lecture material, homework problems, and class discussions.

- **Important Dates:**

August 25	Monday. Instruction begins.
September 1	Monday. Labor Day holiday. *No classes.*
September 5	Friday. Last day to late register, last day to add a course.
October 3	Friday. Deadline for dropping courses (All colleges)
November 27-28	Thurs-Friday. Thanksgiving holiday. *No classes.*
December 5	Friday. Instruction ends.
December 8-12	**Final Examinations**

Lecture Schedule

WEEK	SECTIONS	BRIEF DESCRIPTION
08/25 - 08/29	1.1; 1.3; 1.3	Introduction; Probability Set Function
09/01 - 09/05	Labor Day; 1.3; 1.4	Probability Set Function; Conditional Probability and Independence
09/08 - 09/12	1.4; 1.5; 1.5	Conditional Probability and Independence; Random Variables
09/15 - 09/19	1.6; 1.7; 1.8	Discrete Random Variables; Continuous Random Variables; Expectation of a Random Variable
09/22 - 09/26	1.9; 1.10; 2.1	Special Expectations; Important Inequalities; Distributions of Two Random Variables
09/29 - 10/03	Review; **Midterm-1**; 2.1	Distributions of Two Random Variables
10/06 - 10/10	2.2; 2.2; 2.3	Transformation: Bivariate Random Variables; Conditional Distributions and Expectations
10/13 - 10/17	2.3; 2.4; 2.5	Conditional Distributions and Expectations; Correlation Coefficient; Independent Random Variables
10/20 - 10/24	2.6; 2.7; 2.7	Extension to Several Random Variables; Transformations: Random Vectors
10/27 - 10/31	3.1; 3.2; 3.3	Binomial and Related Distributions; Poisson Distribution; Gamma, Chi-Squared and Beta Distributions
11/03 - 11/07	3.4; 3.5; 3.6	Normal Distribution; Multivariate Normal Distribution; t and F-Distributions
11/10 - 11/14	Review; **Midterm-2**; 3.7	Mixture Distributions
11/17 - 11/21	4.1; 4.2;	Expectations of Functions; Convergence in Probability
11/24 - 11/28	Thanksgiving ; 4.3; 4.3	Convergence in Probability; Convergence in Distribution
12/01 - 12/05	4.4; 4.4; Review	Central Limit Theorem
12/08 - 12/12	**Final Exam**	Final Exam

The instructor reserves the right to make any changes in the course she determines academically advisable. Changes will be announced in class. It is your responsibility to keep up with any changed policies.