STAT 410/SURV 410 (Section 0201)

TuTh.....12:30pm- 1:45pm (MTH 0409)

Introduction to Probability Theory

TEXTBOOK: A First Course in Probability – 8th Edition, by Sheldon Ross. Published by Prentice Hall.

PREREQUISITE: MATH 240 and MATH 241

INSTRUCTOR: Professor G. Yang,

OFFICE HOURS: Rm Math 2311, Tu-Th 2 - 3 PM

GRADING: Homework (15%), Test 1 (25%), Test 2 (25%), Final (35%)

(1) No make up exams. (2) Late homework is NOT accepted. The worst two scores will be dropped.

TOPICS FROM CHAPTERS 1 – 8 INCLUDING:

Axioms of Probability and basic properties; Combinatorial problems; Conditional probability; Random variables and distributions in one and several variables, including change-of-variable techniques; Expectation and conditional expectation; Moments; Moment generating functions; Law of Large Numbers and Central Limit Theorem.

OPTIONAL TOPICS FROM:

Characteristic functions; Fourier transforms; Borel-Cantelli Lemma; Meaning of convergence with probability 1; Filling in missing steps of the book's proof of the Central Limit Theorem.