

MA331 Introduction to Probability & Statistics

Spring 2002

MWF 1:00 – 1:50pm HH37

INSTRUCTOR: DR. CHOCK WONG

Office: Henry Hall 018 (Phone: 739-4682)

Office Hours: MW 11:40am–12:50pm, TH 1:00–2:00pm, T~~F~~ 2:00–3:30pm, or by appointments.

Course Description: Sample space, random variables, classical distributions, the central limit theorem, estimation, testing of hypotheses for parameters, the first and second kinds of errors, correlations, regressions, and analysis of variance.

Prerequisites: MA210.

Text Book: Mathematical Statistics with Applications (5th edition). By Wackerly, Mendenhall, Scheaffer. *PWS-KENT Publishing Company*.

Objectives: This course will introduce to students the basic statistics both in theory and applications, and teach necessary mathematical tools in order to ensure a firm understanding of statistical theorems.

Topics to Cover: The following chapters/sections will be taught —

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| (1) CH 1. What is Statistics? | (1 week) |
| (2) CH 2. Probability | (3 weeks) |
| (3) CH 3. Discrete random variables [3.1–3.4, 3.11] | (1 week) |
| (4) CH 4. Continuous random variables [4.1–4.5, 4.10, 4.11] | (2 weeks) |
| (5) CH 7. Sampling distributions and Central Limit Theorem | (1 week) |
| (6) CH 8. Estimation | (3 weeks) |
| (7) CH 10. Hypothesis testing [10.1–10.8, 10.11] | (3 weeks) |
| (8) Selected topics from CH 13 (Analysis of variance), CH 14 (Chi-square test, contingency table), and CH 11 (Regression analysis). | |

Homework: A certain number of problems will be assigned from each section being covered. It is important for the student to complete and submit the assignments on time. Late homework may receive grading penalty or even no credit if it is too late (more than a week).

Quizzes and Exams: Seven Quizzes will be given (basically one quiz for each chapter). There will be one Mid-term Exam to cover Chapter 1 to 4 in Week 9. And an accumulated Final Exam that covers most chapters will be at the end of the semester.

Grading:

HOMEWORK:	25% of the total
QUIZZES:	25% of the total
Mid-term EXAM:	20% of the total
FINAL EXAM:	30% of the total