COURSE SYLLABUS
FOR
STATISTICAL METHODS IN PRACTICS
(STA/MTH 169-01) – SUMMER 1 -- 2008
CLASS LOCATION: LDB 401 – MEETING TIME 12-2 M-F

TITLE: Introductory Probability and Statistics

INSTRUCTOR: Dr. Cecil Hallum

OFFICE: LDB 420C   **OFFICE HOURS:**   9:00-10:00 M-F
                                                                                        2-2:30 M-F
                                                                                        & by Appointment
PHONE: 294-3706

TEXT: *Elementary Statistics: A Step by Step Approach: A Brief Version,* (4th Edition) by
     Allan G. Bluman, McGraw-Hill, 2008.

DESCRIPTION: This course covers the fundamentals of statistical concepts and will guide the student through basic statistical procedures to permit critical insight into the science of collecting, classifying, presenting, and interpreting information from data. The topics covered include descriptive statistics (graphic presentation of data, histograms, plots, charts, etc.), measures of central tendency, dispersion, and position, probability concepts and rules for calculating probabilities of compound event. This coverage includes the more commonly occurring probability distributions such as the binomial and normal distributions. Inferential statistics is emphasized in the latter part of the semester; this coverage includes confidence intervals and hypothesis testing (including tests on single population parameters as well as tests in the two population case).

OBJECTIVE: To develop an understanding of and a facility for the concepts and applications of introductory probability and also descriptive and inferential statistics.

APPROACH:

   1. Lectures on new concepts and applications.

   2. Assigned problems for experience and familiarity with techniques.

   3. Classroom discussions on applications --- appropriate usage and value.

   4. Examinations to demonstrate understanding and ability to utilize
        methodology.

APPRAISAL:

Exam I...................................	30%
Exam II.................................	30%
Final Exam.......................…	25%
Homework...........................	15%

TOTAL	100%

SPECIAL NOTE: Performance on exams is directly related to success on homework --- all homework is to be kept current, neatly together, in sequence, and ready to be handed in upon request.

POLICIES:

1. **Make-up Exams --- DO NOT MISS AN EXAM!!** Make-up exams are to be avoided. If you miss an exam because of illness and have a doctor's release, all makeup exams will be given at an arranged time in the last couple Days of the semester.

2. **Withdrawal ---** University policy will be followed: the last day for drop/withdrawal is June 30, 2008. It is your personal responsibility to initiate and complete the drop/withdrawal process.

3. **Homework ---** Since topics in the course sequence build upon preceding topics, it is expected that you will remain current in all assignments; also you should have your homework neatly assembled together at all times and be ready to hand it in upon request.

4. **Incomplete ---** A grade of "X" or "Incomplete" is not appropriate for this course.

5. **Attendance ---** Since lectures and in-class discussions are for your benefit, you are expected to be in attendance at all classes.

6. **Class Behavior ---** Students will refrain from behavior in the classroom that intentionally or unintentionally disrupts the learning process and, thus, impedes the mission of the university. Cellular telephones and pagers must be turned off before class begins. Students are prohibited from eating in class, using tobacco products, making offensive remarks, reading newspapers, sleeping, talking at inappropriate times, wearing inappropriate clothing, or engaging in any other form of distraction. Inappropriate behavior in the classroom shall result in a directive to leave class. Students who are especially disruptive also may be reported to the Dean of Students for disciplinary action in accordance with university policy.

7. **Academic Honesty ---** All work that is handed in for evaluation is to reflect solely your individual performance. All students are expected to engage in all academic pursuits in a manner that is above reproach. Students are expected to maintain complete honesty and integrity in the academic experiences both in and out of the classroom. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action. The University and its official representatives may initiate disciplinary proceedings against a student accused of any form of academic dishonesty including, but not limited to, cheating on an examination or other academic work which is to be submitted, plagiarism, collusion and the abuse of resource materials.

**COURSE
SEQUENCE**

Day 1: **Introduction to Statistics and Beginning of Data Description**

Day 2: **Data Descriptions (continued)**

Day 3: **Frequency Distributions and Graphs**

Day 4: **Probability and Counting Rules.**

Day 5: **Discrete Probability Distributions (Random Variables and the
Binomial Distribution)**

Day 6: **Review**

Day 7: **Exam 1**

Day 8: **The Normal Probability Distribution (the Standard Normal
and Nonstandard Normal)**

Day 9: **The Normal Probability Distribution (the Central Limit
Theorem)**

Estimates and Sample Sizes

Day 10: **Hypothesis Testing (Fundamentals)**

Day 11: **Hypothesis Testing (Single Population)**

Day 12: **Review**
Day 13: **Exam 2**

Day 14: **Inferences on Two Samples (Tests on Means)**

Day 15: **Inferences on Two Samples (Tests on Means – Continued)**

Day 16: **Inferences on Two Samples (Tests on Proportions)**

Day 17: **Regression and Correlation Analysis**

Day 18: **Regression and Correlation Analysis (Continued)**

Day 19: **Course Wrap-up**

Day 20: **Review for Final Exam**

Day 21: **Final Exam**