

COURSE SYLLABUS - MAT 300
Applied Probability and Statistical Methods
Monday, Wednesday, Friday 10:00-10:50am in Walters 256

COURSE DESIGNATION

MAT 300. APPLIED PROBABILITY AND STATISTICAL METHODS. Organization and analysis of data; counting techniques, elementary probability, and probability distributions (normal, standard normal, student t, chi-square); random sampling, hypothesis testing; regression and correlation analysis; introduction to computer assisted data analysis. May not be applied toward a B.S. major or minor in mathematics.

Prerequisite: MAT 103 or 104. 3 hours credit

TEXT

Mario F. Triola. Elementary Statistics, Ninth Edition. Boston: Pearson Education, Inc., 2004.

Johanna Halsey and Ellena Reda. EXCEL Student Laboratory Manual and Workbook. Boston: Pearson Education, Inc., 2004.

INSTRUCTOR

Dr. Lee Virden

Walters 270C

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COURSE OBJECTIVES

Upon completing this course, the student will be able to:

1. Interpret data presented in graphs and frequency tables
2. Present raw data in graphs and frequency tables
3. Compute and interpret certain descriptive statistics
4. Compute probability values and use these in constructing and analyzing probability distributions
5. Formulate and test confidence intervals and statistical hypotheses
6. Use prepared programs for the computer to solve problems presented throughout the semester
7. Communicate effectively using the terminology of the course

Content to be considered:

1. Statistics
2. Descriptive statistics
3. Probability
4. Probability distributions
5. Normal probability distributions
6. Estimates and Sample Sizes
7. Testing Hypotheses
8. Inferences from two Samples
9. Correlation and Regression
10. Multinomial Experiments and Contingency Tables
11. Analysis of Variance

GRADING AND EVALUATION

Grades will be assigned using the scale: A(90 - 100) B(80 - 89) C(70 - 79) D(60 - 69) F(below 60)

1. Homework will be assigned on a regular basis and may be collected to be graded. Announced and unannounced daily quizzes will also be given throughout the semester. In addition, computer laboratory activities will be graded. No credit will be given for *answers only* unless we have agreed on this prior to the individual assignment. You may use your calculator on all in-class work, homework, and tests.
2. Four scheduled tests will be given during the semester. The average of homework, daily quizzes, labs and in-class work will count as an additional test. These scores will comprise 75% of your final grade. A **comprehensive final examination** will comprise the other 25%. There will be at least one question on each test that requires a written explanation of a concept. Evaluation of the answer to this question will be based on mathematical content, spelling, grammar, and sentence construction.
3. Cheating and plagiarism will not be tolerated. If it is established that a violation has occurred, the instructor may determine the penalty, or he/she may report the offense to the department chair and dean of the school. The usual penalty involves a grade of zero on the test, examination, or paper in question.

CLASS ATTENDANCE

1. Prompt and regular attendance is necessary for success in this course. In order to receive credit in this course, a student must attend a minimum of 75% of the class meetings. Classes meeting three times a week will be allowed a total of **11** absences, **excused and unexcused combined**. If you exceed the allowable number of absences, a grade of "F" will be assigned as the final grade in this course.
2. If a student is tardy for class, it is the student's responsibility to request that the faculty member change the recorded absence to a tardy. This must be done on the day the tardy occurs. A maximum of 3 tardies will be allowed. Any additional tardies will be recorded as unexcused absences.

AMERICANS WITH DISABILITIES ACT

Delta State University adheres to the requirements of the Americans with Disabilities Act. If you need an accommodation under this Act due to a disability, contact Dr. Richard Houston in the Office of Disability Services at 846-4690.

CLASSROOM POLICIES AND MAKEUP TESTS

1. Do not use tobacco or eat in the classroom, and **NO CELL PHONES OR BEEPERS**.
2. Do come to class on time and be prepared to begin class at the scheduled time. Do not ask to leave class early. Schedule all appointments at times that do not conflict with class time.
3. Come to my office for help during scheduled office hours. No appointment is necessary. It is extremely important that you understand the material from each class prior to the next class. If your class and/or work schedule conflicts with the office hours that I offer, feel free to make an appointment for a time not listed. Scheduled office hours are:

| Monday | Tuesday | Wednesday | Thursday | Friday |
|---------------|--------------|---------------|--------------|---------------|
| 10:00 – 11:00 | 9:15 – 10:45 | 8:00 – 9:00 | 9:15 – 10:45 | 10:00 – 11:00 |
| 1:30 – 2:30 | 1:30 – 2:30 | 10:00 – 11:00 | 12:15 – 1:45 | |

4. Quizzes will be given and homework may be collected periodically, announced or unannounced, throughout the semester. Even if you miss a class, you are expected to have all of your assignments up-to-date when you return to class. If you need the assignment, you may call my office. **If you are tardy or absent on the day that a quiz is given or homework is collected, you must present a written excuse acceptable by the university (along with the missed work, if homework) as soon as you return to class.** Failure to do so will result in a zero on the missed day's homework or quiz.
5. Scheduled tests will be announced at least one week prior to the actual test date. Make-up tests will only be given to those students presenting a written excuse, acceptable by the university. If you know ahead of time that you are going to miss a test, notify me as soon as possible before the test date. If possible, your test will be administered before the absence. If you are not able to provide advance notice, due to an emergency or illness on the day of the test, you **MUST** contact me on the day the test is given to make arrangements for a make-up test. This absence will still require a written excuse. All make-up work must be completed within three class days of the originally scheduled work or test. Any absence from scheduled work must be covered by a written excuse from the Vice President for Academic Affairs, the Student Health Center, or a doctor before the student is allowed to make up that work. Any exception to this rule must be approved before the missed work!
6. A statistical calculator is required for this course. Do not expect me to know how to operate your calculator without the manual. Please don't ask to borrow a calculator from me or one of your classmates on test day, since rarely do two calculators operate exactly the same.

IMPORTANT DATES

1. Students who remain in the course after **February 8, 2006**, and who then elect to drop the course will receive a grade of W if passing or F if failing the course at the time of the drop. The withdrawal process is not complete until the drop slip has been signed by all designated parties and the completed form has been turned in to the Registrar's office.
2. No course on campus may be dropped after **April 17, 2006**.
3. The comprehensive final exam for this course is scheduled for **Wednesday, May 10, 2006 at 8:00 am**. That is when it must be taken. ***Please do not make travel arrangements that conflict with this date!***