

**MATH 1442 - Online
Elementary Statistics**

Western Texas College

- I. Basic Course Information:
 - A. Course Description: Techniques of analysis of numerical data, including measures of central tendency, dispersion, probability statistical inference, sampling theory, linear correlation, regression, probability distributions, tests of significance, and analysis of variance.
 - B. Any required prerequisites: The student should have successfully complete DMT 033, Math 1332 or have the appropriate placement scores, or consent of the instructor.
- II. Student Learning Outcomes
 - A. Explain the use of data collection and statistics as tools to reach reasonable conclusions.
 - B. Recognize, examine and interpret the basic principles of describing and presenting data.
 - C. Compute and interpret empirical and theoretical probabilities using the rules of probabilities and combinatorics.
 - D. Explain the role of probability in statistics.
 - E. Examine, analyze and compare various sampling distributions for both discrete and continuous random variables.
 - F. Describe and compute confidence intervals.
 - G. Solve linear regression and correlation problems.
 - H. Perform hypothesis testing using statistical methods.
- III. Testing Requirements
 - A. Students will be required to take the six major tests (including the final) during the semester. Students are required to take the final exam at a testing center. Students should find a testing center near their current location and give the details to their instructor.
 - B. Students are allowed to use their book, notes and calculator on all tests except the final.
 - C. Students are required to make a 60 or higher on the final exam or they automatically fail the course. (The final must be taken in a testing center.)
 - D. About 10-11 lab assignments will be assigned.
- IV. Major Course Requirements
 - A. Major Requirement – There will be six major chapter exams and comprehensive final.
 - B. Major Requirement - There will be numerous section quizzes in preparation for tests.
 - C. Major Tests 37% - Section Quizzes 19% - Comprehensive Exam 19% - Lab 25%
- V. Information on Books and Other Course Materials
 - A. Required Book: Elements of Statistics 9E by Canada - BVT Publishing ISBN 978-1-61882-125-6 or 978-1-62751-339-5

- B. Calculators: A standard calculator with square root and log function.
 - C. Online access: Students will access course and lab material via MOODLE (ecampus.wtc.edu). It is essential that students have reliable and frequent access to a computer.
- VI. Other Policies, Procedures and important dates: Please refer to the WTC Course [Catalog](#) for the following:
- A. Campus Calendar
 - B. Final exam schedule
 - C. How to drop a class
 - D. Withdrawal information
 - E. Student Conduct/Academic Integrity
 - F. Students with disabilities
- VII. Course Organization and Schedule
- A. Weekly Course Schedule

Schedule	Textbook	Topic	Test	Lab
Topic 1	Chapter 1	Introduction, basic concepts, overview of course and statistical process	Syllabus Quiz	
Topic 2	Chapter 2	Summarizing and graphing data		
Topic 3	Chapter 3	Measures of central tendency and variability		1
Topic 4	Chapter 4	Probability	Test over Chapters 1-4	2
Topic 5	Chapter 5	Probability distributions		3
Topic 6	Chapter 6	Normal Probability Distribution		4
Topic 7	Chapter 7	Estimates and sample sizes		5
Topic 8	Chapter 8	Hypothesis Testing	Test over Chapters 7-8	6
Topic 9	Midterm		Midterm	7
Topic 10	Chapter 9	Inferences from Two Samples		8
Topic 11	Chapter 10	Regression/Correlation	Test over Chapters 9-10	9
Topic 12	Chapter 11	Contingency Tables		10
Topic 13	Chapter 12	Analysis of Variance		11
Topic 14	Chapter 13	Nonparametric Statistics	Test over Chapters 11-13	
Topic 15	Final Exam	Review	Final Exam	

Disclaimer: Schedule and content is subject to change at the instructor's discretion.

Last Modified: August 19, 2015