

STATISTICS: MATH 1342-002

ACR 205: 2:00-2:50 MWF

Fall, 2014

Instructor: Dr. Sherill Easterling

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Office Hours: 8:45-9:45 and 11:45-1:45 MWF or by appointment

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Prerequisites: MATH 0301 or proper score on a placement exam.

Course Description: An introductory statistics course designed to give the student the critical thinking skills necessary to interpret statistical information. This course will prepare the student for further statistical work in his/her field. Topics include: measures of central tendency, measure of variation, discrete distributions, continuous distributions, hypothesis testing, and graphical representation.

Learning Objectives: Upon successful completion of the course, students will be able to: (1) gather, organize, calculate, and present data; (2) be familiar with the probability distributions, both discrete and continuous, and be able to discern the proper distribution for application; (3) be able to estimate population proportions, means, variances, and standard deviations; (4) be able to write hypotheses and perform the proper statistical test, determining the conclusion for means, proportions, variances, analysis of variance, and linear regression; and (5) use regression and correlation to depict the nature of a set of data.

Grading Procedure: The final grade in the course will be the mean of the four major tests and one quiz and/or homework average. Quizzes will be often given at the beginning of the class period and may not be made up unless prior arrangements have been made. You may drop the three lowest quiz grades. No major test grade will be dropped. The final exam will be Test #4. The grading scale is: 90-100 A, 80-89 B, 70-79 C, 60-69 D, below 60 F.

Class Attendance: Class attendance is expected and necessary to pass this course. After six absences, two points for each absence will be deducted from your final grade, with the exception of school sponsored activities. You need to email me regarding any absence. Tardiness will result in a student not having sufficient time to complete quizzes.

Textbook & Calculator: "Introductory Statistics"; Prem S. Mann, Eighth Edition, Wiley. ISBN 978-0-470-90410-7 The TI-83 or TI-84 is strongly recommended for this course.

Conduct – Rudeness in any form will not be tolerated.

Cellphones & Headphones – Both of these **must** be turned off and put away during class.

Exams: Exam questions will be very similar to homework and quizzes. They will be closed book and closed notes.

Disabilities Accommodation: It is Sul Ross State University policy to provide reasonable accommodation to students with disabilities. If you would like to request such accommodation because of a physical, mental or learning disability, please contact the ADA Coordinator, Grace Petty, in the Counseling & Accessibility Services, Ferguson Hall 112, 432-837-8203.

Class Schedule and Topics :

<u>Date</u>	<u>Sections</u>
8/25	Chapter 1: Introduction; Basic Terms Definitions
8/27	2.1 Organizing and Graphing Qualitative Raw Data
8/29	2.2 Organizing and Graphing Quantitative Data; Histograms
9/1	Labor Day: School Holiday
9/3	2.3-2.5 Cumulative Frequency Distributions, Stem-and-leaf , Dotplots
9/5	3.1-3.2 Measures of Central Tendency and Dispersion for Ungrouped Data
9/8	3.3 Mean, Variance, Standard Deviation for Grouped Data
9/10	3.4 Uses of Standard Deviation
9/12	3.5-3.6 Measures of Position, Box-and-Whisker Plot
9/15	Review for TEST #1
9/17	TEST #1
9/19	5.1-5.2 Probability Distribution of Discrete Random Variable
9/22	5.3 Mean and Standard Deviation of Discrete Random Variable
9/24	5.4 Binomial Probability Distribution
9/26	5.5 Hypergeometric Probability Distribution
9/29	5.6 Poisson Probability Distribution
10/1	6.1-6.2 Continuous Probability, Normal, and Standard Normal Distributions
10/3	6.3 Applications of the Normal Distribution
10/6	6.4 Determining the z and x Values When Area Under Curve is Known
10/8	Review for TEST #2
10/10	TEST #2
10/13	Lab on Population and Sampling Distributions, Errors Mean, and Shape
10/15	7.1-7.3 Population and Sampling Distributions, Errors Mean, and Shape
10/17	7.4 Applications of Sampling Distributions of Sample Mean
10/20	7.5-7.6 Population and Sample Proportions and Applications
10/22	8.1-8.2 Estimation, Point and Interval for Population Mean σ known
10/24	8.3 Estimation, Point and Interval for Population Mean, σ unknown; t-distribution
10/27	8.4 Estimation of Population Proportion
10/29	Review for TEST #3
10/31	TEST #3
11/3	9.1 Hypothesis Tests Introduction
11/5	9.2-9.3 Hypothesis Tests about Population Mean
11/7	9.4 Hypotheses Tests about Population Proportion
11/10	10.4 Hypothesis Tests about Paired Samples
11/12	12.1 Analysis of Variance
11/14	12.2 Analysis of Variance
11/17	11.1-11.2 Chi-Square Distribution; Goodness of Fit
11/19	11.3 Contingency Tables; Tests of Independence or Homogeneity
11/21	13.1-13.5 Simple Linear Regression Model and Analysis
11/24	13.6 Correlation Coefficient and Coefficient of Determination
11/26	Thanksgiving Holiday
11/28	Thanksgiving Holiday
12/1	Extra Day for "catch up"
12/3	Review for TEST #4
12/10	FINAL (Test #4) 3:00 p.m.