Syllabus ASU – Math 1342 Elementary Statistics

Dual Credit Full Year Fall 2021

Meeting Times

Class meeting times: A days 8:45 - 10:15 or B days 10:20 - 11:50, 2:30 - 4:00

Contact Information

Instructor: Mrs. Belinda Garcia
Email: belinda.garcia@boerne-isd.net; bgarcia562@alamo.edu
Office: CHS B248
Phone: (830) 357-2814 Website: boerneisd.net

Office Hours
Entire School Year
Monday, Tuesday, Wednesday, Thursday, Friday, 8:00 AM to 8:30 AM, B248 Tutoring at any
other time can be scheduled by appointment only.

Materials

The Practice of Statistics
Author: Starnes and Tabor
Publisher: Bedford, Freeman & Worth
Edition: Sixth
ISBN: 978-1--319-26929-6

Description

Collection, analysis, presentation and interpretation of data, and probability. Analysis includes descriptive statistics, correlation and regression, confidence intervals and hypothesis testing. Use of appropriate technology is recommended. Prerequisite(s)
Objectives

**Core Objectives:** This course will promote the following core objectives:

- Critical Thinking – to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.
- Communication Skills – to include effective written, oral and visual communication.
- Empirical and Quantitative Skills - to include applications of scientific and mathematical concepts.

Outcomes

1. Explain the use of data collection and statistics as tools to teach reasonable conclusions.
2. Recognize, examine, and interpret the basic principles of describing and presenting data.
3. Compute and interpret empirical and theoretical probabilities using the rules of probabilities and combinatorics.
4. Explain the role of probability in statistics.
5. Examine, analyze, and compare various sampling distributions for both discrete and continuous random variables.
6. Describe and compute confidence intervals.
7. Solve linear regression and correlation problems.
8. Perform hypothesis testing using statistical methods.

Evaluation

Grades will be assigned in accordance with the following grading scale.

- 90 – 100% A
- 80 – 89% B
- 70 – 79% C
- 60 – 69% D
- < 60% F

**Mathematics**

This course fulfills the Mathematics foundational component area of the core and addresses the following required objectives: Critical Thinking, Communication, and Empirical Quantitative Skills.

These objectives will be assessed as either a quiz or exam question(s).

**Retesting Policy**

Students are allowed to retest for one test per nine weeks for a maximum grade of a 70. Students must come in for tutoring over the testing material before a retest will be given and it must be done within one week of receiving the original test back.
Breakdown

First and second semester courses will be weighted equally for one grade submitted to NWVista CC.

For each semester grade:

Each nine weeks:

Major (Tests): 50%

Minor (Quizzes, Homework, Daily) 50%

Semester grade calculation:

Each nine weeks: 42.5%

Semester Exam: 15%

Criteria

9 Weeks Grade Calculation:

Major 50%

Minor 50%

Semester Grade Calculation:

1st 9 weeks 42.5%

2nd 9 weeks 42.5%

Semester Exam 15%

Course Policies

Tutoring

Classroom: Available everyday 8:00 - 8:30 a.m.

Attendance Policy

Regular and punctual attendance is required for this course. Your absences and tardies will be recorded starting the first day of class. If you are absent for any reason, you must contact me within 24 to 48 hours, and you will be responsible for completing all course requirements covered on the day(s) you missed. You may be withdrawn from the course for excessive absences. If you stop attending class for any reason, you must contact me or the registrar to officially withdraw from the course. It is your responsibility to withdraw from the course. Failure to officially withdraw before the final withdrawal date may result in you earning a failing grade for the course.

University Policies

○ Academic honesty: Academic misconduct includes cheating, plagiarism, collusion, falsifying academic records, misrepresenting facts, violations of published professional ethics/standards, and any act or attempted act designed to give unfair academic advantage to oneself or another student. See the Angelo State University Student Handbook, Part II B: Academic Integrity for more information.
○ Reasonable accommodations for students with disabilities (ASU OP 10.15): Please contact the Office of Student Affairs to initiate a request for accommodation.

○ Student absence for observance of a religious holy day (ASU OP 10.19): A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. A student who is absent from classes for the observance of a religious holy day shall be allowed to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence.

---

Schedule

Topics to be covered include but are not limited to the following.

Week 1: 1-2 Statistical & Critical Thinking
Week 2: 1-3 Types of Data
Week 3: 1-4 Collecting Sample Data
Week 4: 2-2 Frequency Distributions
Week 5: 2-3 Histograms
Week 6: 2-4 Graphs That Enlighten and Graphs That Deceive
Week 7: 3-2 Measures of Center
Week 8: 3-3 Measures of Variation
Week 9: 3-4 Measures of Relative Standing and Box Plots
Week 10: 4-2 Basic Concepts of Probability
Week 11: 4-3 Addition Rule
Week 12: 4-4 Multiplication Rule: Basics
Week 13: 4-5 Multiplication Rule: Complements and Conditional Probability
Week 14: 4-6 Counting
Week 15: 5-2 Probability Distributions
Week 16: 5-3 Binomial Probability Distributions
Week 17: 5-4 Parameters for Binomial Distribution
Week 18: 6-2 The Standard Normal Distribution
Week 19: 6-3 Applications of Normal Distributions
Week 20: 6-4 Sampling Distributions and Estimators
Week 21: 6-5 The Central Limit Theorem
Week 22: 6-6 Assessing Normality
Week 23: 6-7 Normal as Approximation to Binomial
Week 24: 7-2 Estimating a Population Proportion
Week 25: 7-3 Estimating a Population Mean
Week 26: 8-2 Basics of Hypothesis Testing
Week 27:  8-3         Testing a Claim about a Proportion
Week 28:  8-4         Testing a Claim about a Mean
Week 29:  9-2         Two Proportions
Week 30:  9-3         Two Means: Independent Samples
Week 31:  10-2        Correlation
Week 32:  10-3        Regression
Week 33:  11-2        Goodness-of-Fit
Week 34:  11-4        Analysis of Variance

If time permits, the instructor may include additional topics such as:
Week 35:  7-4         Estimating a Population Standard Deviation or Variance
Week 36:  8-5         Testing a Claim about a Standard Deviation or Variance
Week 37:  9-4         Two Dependent Samples
Week 38:  11-3        Contingency Tables

Some topics on this list are at the discretion of the instructor and may be covered as time permits.