

TEXARKANA COLLEGE

Syllabus: Elementary Statistics

Course Number: Math 1442

Semester & Year: Fall/Spring Semester

Instructor Information

Name: Samantha Durham

Room: PGHS Room 402

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Conference:

Textbook Information

The textbook for this course is *Elementary Statistics, A Step by Step Approach*, 9th edition, by Allan G. Bluman.

Student Learning Outcomes for the Course

Upon completion of this course students should be able to:

1. Explain the use of data collection and statistics as a tools to reach 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 interval.
7. Solve linear regression and correlation problems.
8. Perform hypothesis testing using statistical methods.

Student Requirements for Completion of the Course

Your grade in this course will be assessed through homework, daily quizzes, and major tests. Quizzes will be taken directly from assigned homework or problems similar to the assigned homework. There will be a minimum of six major tests, each worth 100 points. Your grade will be calculated as a percentage of the total points possible.

$$\text{Average} = (\text{Total Points Earned}/\text{Total Points Possible}) *100$$

Grading Scale: The following scale will be used to assign a letter grade for this course.

An average of 70 or better is required for credit.

Grade	
A	90-100
B	80-89
C	70-79
D	60-69
F	59-below

Class Assignments

	Title		
The Nature of Probability and Statistics			
	Descriptive and Inferential Statistics		
	Variables and Types of Data		
	Data Collection and Sampling Techniques		
Frequency Distributions and Graphs			
	Organizing Data		
	Histograms, Frequency Polygons, and Ogives		
	Other Types of Graphs		
Data Description			
	Measures of Central Tendency		
	Measures of Variation		
	Measures of Position		
	Exploratory Data Analysis		
Probability and Counting Rules			
	Sample Spaces and Probability		
	Counting Rules		
	The Addition Rules for Probability		
	The Multiplication Rules and Conditional Probability		
	Probability and Counting Rules		
Discrete Probability Distributions			
	Probability Distributions		
	Mean, Variance, Standard Deviation, and Expectation		
	The Binomial Distribution		
	Other Types of Distributions		
The Normal Distribution			
	Normal Distributions		
	Applications of the Normal Distribution		
	The Central Limit Theorem		
	The Normal Approximation to the Binomial Distribution		
Confidence Intervals and Sample Sizes			
	Confidence Intervals for the Mean When σ is Known		

	Confidence Intervals for the Mean When σ is Unknown		
	Confidence Intervals and Sample Size for Proportions		
	Confidence Intervals for Variances and Standard Deviations		
Hypothesis Testing			
	Steps in Hypothesis Testing--Traditional Method		
	z Test for a Mean		
	t Test for a Mean		
	z Test for a Proportion		
	Test for a Variance or Standard Deviation		
Correlation and Regression			
	Scatter Plots and Correlation		
	Regression		
	Coefficient of Determination and Standard Error of the Estimate		
Other Chi-Square Tests			
	Test for Goodness of Fit		
	Test for Independence (Optional-BONUS)		

Attendance Policy

Students are allowed **6** absences per course. More than **6** absences may result in being dropped from the course. Three tardies count as one absence. Arriving late or leaving early counts as a tardy. If you arrive after I have taken role you will be counted absent. It is your responsibility at the end of the class period to inform me that you arrived late so that I can change the absence to a tardy. After that class period, if you have not informed me that you came in tardy, the absence will stand.

Classroom Behavior

Each student must respect the learning environment of others. There will be a **zero-tolerance** policy for any behavior that is disruptive to classroom learning.

This includes the use of vulgar language or rude behavior toward the instructor or any other student in the class as well as **cell phone usage** during class time. Students who disrupt class will receive a warning and/or be asked to leave the class.

All phones are to be in **silent mode**, not on vibrate. **Any use** of the cell phone during scheduled class times must be cleared with the instructor prior to the class. Any unauthorized use will result in: a warning, either verbal or through email, for the first offense, an absence for the day on the second offense, and a drop from the course with an "F" on the third offense.

Any student observed sleeping will be marked absent for the day.

Academic Integrity Statement

Scholastic dishonesty, involving but not limited to cheating on a test, plagiarism, collusion, or falsification of records will make the student liable for disciplinary action after being investigated by the Dean of Students. Proven violations of this nature will result in the student being dropped from the class with an "F".

This policy applies campus wide, including TC Testing Center, as well as off-campus classroom or lab sites, including dual credit campuses. This information can be found in the Student Handbook at <https://texarkanacollege.edu>.

Disability Act Statement:

Texarkana College complies with all provisions of the Americans with Disabilities Act and makes reasonable accommodations upon request. Please contact Larry Andrews at 903.823.3283, or go by the Recruitment, Advisement, and Retention Department located in the Administration building for personal assistance.

If you have an accommodation letter from their office indicating that you have a disability which requires academic accommodations, please present it to me so we can discuss the accommodations that you might need for this class. *It is best to request these changes at the beginning if not before the start of class* so there is ample time to make the accommodations.

Financial Aid:

Attention! Dropping this class may affect your funding in a negative way! You could owe money to the college and/or federal government. Please check with the Financial Aid office before making a decision.

Course Correspondence:

Any course correspondence will be through TC student email. It is the student's responsibility to check his/her TC email regularly for any announcements relating to the course.

Warning

A student may be **dropped** from the course for the following reasons:

1. Missing 7 classes per semester.
2. Any breach of classroom conduct. The instructor reserves the right to remove any student from the class for any disruptive conduct which may result in the student being dropped with an **F** from this course (see Student Handbook).