STAT 1100 INTRODUCTION TO STATISTICS (3 credit hours)

Elmira College

SPRING 2025

Required Text:

1. Robert R. Johnson, Patricia J. Kuby (2011). ***Elementary Statistics*** (11th ed.). Cengage Learning.
2. Mario F. Triola(2021). ***Elementary Statistics***(14th ed.).Pearson.

Supplemental readings might be included to illustrate or expand on textbook readings.

Pre-requisites: MATH 1520 College Algebra

Course Description

This course is an introduction to statistics, focusing on fundamental concepts and techniques for analyzing and interpreting data. Topics covered include descriptive statistics, probability, probability distributions, statistical inferences, and various statistical analyses. Emphasis will be placed on applying statistical concepts to real-world problems and developing critical thinking skills.

Course Objectives and Goals

- Understand and apply basic concepts of descriptive statistics.
- Develop a foundation in probability theory and its applications.
- Learn the principles of inferential statistics and hypothesis testing.
- Gain proficiency in statistical analysis using appropriate software.
- Interpret and communicate statistical results effectively.
- Explore the application of statistics in various fields and real-world scenarios.

Evaluation of Performance

Your grade will be based upon your performance on exams, assignments, and participation.

5 Assignments	30%
3 Quizzes	30%
Midterm Exam	20%
Final Exam	20%
Total	100%

Grades will be assigned as follows:

A	93% and above	B-	80 - 82%	D+	67 - 69%
A-	90 - 92%	C+	77 - 79%	D	63 - 66%
B+	87 - 89%	C	73 - 76%	D-	60 - 62%
B	83 - 86%	C-	70 - 72%	F	59% or below

Withdrawal Policy: Please see Elmira College Bulletin for information on this policy.

Academic Honesty: Please read the section on Academic Honesty in the **Code of Conduct**. Briefly, academic dishonesty includes: cheating, fabrication, facilitating academic dishonesty, and plagiarism. Ask if you have any questions on whether something constitutes as academic dishonesty. All work must be original and new. Past assignments from current or other courses will not be accepted. Academic dishonesty will not be tolerated. It will result in zero on the assignment, and a report will be filed with the school. Continued practice will result in failure of the class. Institutional penalties may also apply with repeated acts of academic honesty.

Student Responsibility:

- It is your responsibility to keep track of assignments and due dates.
- You should ask questions concerning assignments and lectures, if you need any clarifications.
- If you are struggling in class, have concerns, and/or unsure about expectations, please stop by during office hours or make an appointment for another time.

Tentative Schedule of Topics

Topic	Materials	Tasks & Evaluations
Statistics	Chapter 1	
Descriptive Analysis and Presentation of Single-Variable Data	Chapter 2	Assignment #1
Descriptive Analysis and Presentation of Bivariate Data	Chapter 3	
Probability	Chapter 4	Assignment #2
Probability Distributions (Discrete Variables)	Chapter 5	
Normal Probability Distributions	Chapter 6	
Discrete Probability Distributions	Chapter 7	Quiz #1
Confidence Intervals	Chapter 8	
Estimating Parameters and Determining Sample Sizes	Chapter 9	Assignment #3
Hypothesis Testing	Chapter 10	
Simulations for Hypothesis Tests	Chapter 11	
Sample Variability	Chapter 12	Midterm Exam
Introduction to Statistical Inferences	Chapter 13	
Inferences Involving One Population	Chapter 14	
Inferences Involving Two Populations	Chapter 15	Quiz #2
Goodness-of-Fit and Contingency Tables	Chapter 16	
Applications of Chi-Square	Chapter 17	Assignment #4
Inferences Concerning Multinomial Exper	Chapter 18	
Inferences Concerning Conting	Chapter 19	
Analysis of Variance	Chapter 20	Quiz #3
Linear Correlation and Regression Analysis	Chapter 21	
Elements of Nonparametric Statistics	Chapter 22	Assignment #5
Nonparametric Tests	Chapter 23	
Statistics Process Control	Chapter 24	Final Exam