ECON 2563 INTRODUCTION TO STATISTICS AND ECONOMICS (3 credit hours)

Elmira College

SPRING 2025

Required Text:
Statistics for Business and Economics by McClave, Benson, and Sinsich. 14th Edition.
Pearson-Prentice Hall.

Pre-requisites: None.

Course Description

This course introduces students to the statistical approaches required for data analysis in business and economics settings. Students will learn descriptive statistics, probability theory, hypothesis testing, and regression analysis. Students will learn data gathering, organization, analysis, and presentation skills via a combination of lectures and hands-on exercises. The emphasis will be on providing students with the skills required to make informed decisions, solve real-world issues, and critically assess data-driven arguments in business and economic contexts.

Course Objectives and Goals

➢ Understand methodology, evaluate trustworthiness, and make educated conclusions from study findings in economics and social sciences.
➢ Analyze tabular data to uncover patterns and correlations that will influence decision-making in empirical research in economics and social sciences
➢ Master basic and multivariate regression analysis to better understand and interpret variable connections in empirical research.
➢ In empirical research analysis, use sophisticated concepts like interaction effects and control variables to navigate complicated variable connections.

Evaluation of Performance

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

4 Assignments	20%
2 Quizzes	20%
Midterm Exam	15%
Final Project	20%
Final Exam	25%
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, Data, and Statistical Thinking	Chapter 1	
Methods for Describing Sets of Data	Chapter 2	Assignment #1
Probability	Chapter 3	
Random Variables and Probability Distributions	Chapter 4	Quiz #1
Sampling Distributions	Chapter 5	
Inferences Based on a Single Sample: Estimation with Confidence Intervals	Chapter 6	Assignment #2
Inferences Based on a Single Sample: Tests of Hypotheses	Chapter 7	Midterm Exam
Inferences Based on Two Samples: Confidence Intervals and Tests of Hypotheses	Chapter 8	
Design of Experiments and Analysis of Variance	Chapter 9	Assignment #3
Categorical Data Analysis	Chapter 10	Quiz #2
Simple Linear Regression	Chapter 11	
Multiple Regression and Model Building	Chapter 12	Assignment #4
Methods for Quality Improvement: Statistical Process	Chapter 13	
Time Series: Descriptive Analyses, Models, and Forecasting	Chapter 14	Final Project
Nonparametric Statistics	Chapter 15	Final Exam