

Moravian College
Department of Economics and Business
Economics 156: Economic and Business Statistics
Spring 2013 (TRF 10:20-11:30)

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Office Hours: T&R 4:00-5:00, F 1:00-3:00, and by appointment

Prerequisites: sophomore standing and college-level algebra

Text: Gerald Keller, *Statistics for Management and Economics*, South Western Cengage Learning, 9th edition, 2012

Course Description:

This course is an introduction to descriptive statistics, probability theory, probability distributions, estimation, and hypothesis testing. We will cover these concepts using economic and business applications, and we will use Excel and Minitab. I post my notes on **Blackboard**.

Learning Objectives:

- Master statistical notation and concepts like another language
- Understand the importance of proper sample selection
- Learn how to gather data for a project
- Perform estimation
- Conduct hypothesis tests
- Master regression analysis to be able to apply it in future courses and work

Requirements:

Homework is due every time we finish a chapter. Doing homework is the best way to learn the material—and some homework problems are on the exams! Every typed homework (calculations can be done by hand) counts for 0.5% of your grade, up to 6%; it is not graded. I distribute or post answers to all HW, and I review selected HW problems in class. Please turn in all HW before class time on the day it is due. I do **not** accept late HW.

- If you are doing HW with someone else, you must **acknowledge** any help received – or provided – by writing the other student's or a tutor's name on your HW.
- If you fail to do the HW, your final grade will be two fractions of a grade lower. Moreover, you will struggle with the exams, which will endanger your grade.

Statistics uses many Greek letters and other symbols, which you must memorize. Three **quizzes**, each counting for 2% of your grade, test the Greek alphabet and statistical notation.

There are three **exams**, each covering three to seven chapters. I provide all necessary formulas on the board or on a handout, but you must memorize the simplest ones. I offer an optional final exam, which you may use to replace your lowest exam grade. There are **no make-up exams**. If you miss one of the three exams, you must take the final exam. Using a **phone** or **leaving** the classroom during any exam forfeits the exam. No **food** in the lab, please!

Exam dates: Exam 1: February 12 (Tuesday)
 Exam 2: March 14 (Thursday)
 Exam 3: April 25 (Thursday)
 Final Exam: April 29 at 8:30 AM (Monday)

A simple regression **project** using a time series (and Excel) and a multiple regression project using a cross section (and Minitab) will help you master regression analysis. Due dates are April 5 and April 18. The data for these projects are due a week earlier. Tentative instructions are posted on Blackboard.

Grading:

Homework	6%
Quizzes	6%
Simple regression project	10%
Multiple regression project	15%
Three Exams	63%

Grading Scale (with a curve):

	93 - 100: A	90 - 92.99: A-	
87 - 89.99: B+	83 - 86.99: B	80 - 82.99: B-	
77 - 79.99: C+	73 - 76.99: C	70 - 72.99: C-	
67 - 69.99: D+	63 - 66.99: D	60 - 62.99: D-	00 - 59.99: F

Attendance Policy:

I urge you to come to class regularly! Attendance does not enter your grade directly, but it has a large impact indirectly. It allows you to participate, learn from your classmates, and get a better sense of what is important. Moreover, the lectures and the text reinforce one another.

Academic Honesty Policy:

I encourage you to study in groups and to discuss all homework, but you must write your own answers and the name of all students in the study group on your homework. If you work in groups, acknowledge it, and provide the same answers, the whole group shares one credit.

The following simple rule holds for both homework and exams: If you copy an answer from another student or if you let another student copy from you, you will receive **zero** for the whole assignment or exam. The punishment is the same for both parties.

Beware of **plagiarism!** If you are lifting phrases (of more than three words) or definitions from the textbook, the web, or any other source, use quotation marks and provide the page number for the textbook, the URL, or a full citation, respectively. If you fail to use quotes, you will get **zero** for the HW or for the assignment. Read the college academic honesty policy at <http://www.moravian.edu/studentLife/handbook/academic/academic2.html>

Special Accommodations:

Students who wish to request accommodations in this class for a disability should contact Elaine Mara, assistant director of learning services for academic and disability support at 1307 Main Street, or by calling 610-861-1510. Accommodations cannot be provided until authorization is received from the Academic Support Center.

Schedule:

Week of	Topics	Text
Jan. 14	What Is Statistics?	Chapter 1
Jan. 21	Graphical and Tabular Descriptive Techniques I Graphical and Tabular Descriptive Techniques II Numerical Descriptive Techniques	Chapter 2 Chapter 3 Chapter 4
Jan. 28	Data Collection and Sampling Probability Quiz 1 (2-01-13)	Chapter 5 Chapter 6
Feb. 4	Random Variables and Discrete Probability Distributions Review 1	Chapter 7 Chapters 1-7
Feb. 11	Exam 1 (2-12-13) Continuous Probability Distributions	Chapters 1-7 Chapter 8
Feb. 5	Sampling Distributions	Chapter 9
Feb. 19	Introduction to Estimation <u>The crowd within</u>	Chapter 10 <u>Economist (6/28/08)</u>
Feb. 25	Introduction to Hypothesis Testing Quiz 2 (3-01-13)	Chapter 11
March 11	Review 2 Exam 2 (3-14-13) Inference about a Population	Chapters 8-11 Chapters 8-11 Chapter 12
March 18	Simple Linear Regression and Correlation	Chapter 16
March 25 (2 classes)	Simple Linear Regression and Correlation Data for Simple Regression Project (3-26-13)	Chapter 16
April 1	Simple Regression Project (4-05-13) Multiple Regression	Chapter 17
April 8	Multiple Regression Data for Multiple Regression Project (4-11-13)	Chapter 17
April 15	Chi-Squared Tests Multiple Regression Project (4-18-13) Quiz 3 (4-19-13)	Chapter 15
April 22	Review Exam 3 (4-25-13)	Chapters 12, 15-17 Chapters 12, 15-17
April 29	Final Exam (8:30 AM)	Chapters 5, 6, 9, 12, and 15

The syllabus is subject to change.