

ECON 310 - Economic Statistics

Fall - 2016

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Class Website: <https://canvas.emich.edu/>
Office Hours: MTWR 8:00-9:30 a.m. &
and by appointment

“He uses statistics like a drunken man uses a lamp post, more for support than illumination.”

-Andrew Lang

Description

Many of the upper division courses in Accounting, Decision Science and Information Systems, Economics, Finance, Management, and Marketing use and build upon the statistical techniques and analysis learned in ECON 310. To master the tools of ECON 310, you need a solid foundation in descriptive statistics, basic probability distributions, hypothesis testing, and regression analysis. Upon completing ECON 310, you will be able to use statistical techniques such as regression analysis to understand and solve real-world business and economic problems. Furthermore, you will be able to use Excel to analyze data by employing a variety of statistical techniques. At a general level, the goal of ECON 310 is for you to develop a maturity in solving quantitative problems, being able to understand modeling and the power of statistical techniques.

Prerequisites: MATH 105, MATH 118, MATH 119 or MATH 120

Required Textbook

Keller, Gerald, *Statistics for Management and Economics, 10th Edition*. Thompson.

Although the 10th edition is listed on the syllabus, previous editions will also work.

Supplemental Materials

A good supplemental textbook is *Introductory Statistics* available for free at

<https://openstax.org/details/introductory-statistics>.

I will post statistical tables, optional readings, and other relevant material on Canvas.

Evaluation Criteria

Your grade will be determined by the total number of points you earn on the **three exams (300 points total), problem sets (50 points total), and Regression Project (50 points), for a grand total of 400 points.** Although, I do not take attendance you are required to attend every class. The grading scale used for this course is detailed below. Any student falling within the border of two letter grades will be assigned respective letter grades based on their participation, attendance and overall contribution to the course. There is no curve for any of the assignments or exams unless I state otherwise.

A.....93-100%	B+.....86-89%	C+.....76-79%	D+.....66-69%	F.....0-59%
A-.....90-92%	B.....83-85%	C.....73-75%	D.....63-65%	
	B-.....80-82%	C-.....70-72%	D-.....60-62%	

Exams

There will be two midterm exams and one final exam, each worth 100 points. The final exam is not comprehensive and will cover the material succeeding the second midterm. The exams will be based on lectures and class notes. Each exam will consists of short answer questions and problems. Tentative dates for the exams will be given in class.

You must have a VERY good excuse to make-up an exam. Your professor reserves the right to judge what types of excuses are legitimate. Permission to miss an exam must be secured before the scheduled exam time unless the cause of the absence is unanticipated. If you miss an exam for an unforeseen reason you should contact me as soon as you are physically able to pick up the phone and call me. If you miss an exam and do not receive an excused absence, you receive a zero for that exam. Make-up exams will be given before or after the missed exam at a time/place convenient for both parties.

Problem Sets

There will be a number of problem sets assigned during the the semester. Problem sets will be assigned for each topic covered and will provide good preparation for exams. I will provide detailed answer keys for each problem set. You are allowed to work together; however, you must turn in your own work (NO copies!!). You are required to turn in a hard copy of the problem set on the date it is due, I will not accept email copies.

Regression Project

This project allows you the opportunity to use the tools learned in class to do statistical research. A complete description for the project will be handed out as we progress through the semester. The final project will consist of a formal report including, research question, importance, data, methodology, results, and conclusion. The group project is worth 50 points.

Grievance Policy

Anyone feeling that a dispute exists after the grading of an exam or problem set may submit a written grievance. The grievance should identify the item in dispute and provide arguments supporting the student's position. Grievances must be submitted within two class periods following the return of the exam or problem set. Attach your entire exam or problem set to the grievance.

Classroom Conduct

Any successful learning experience requires mutual respect. Neither instructor nor student should be subject to behavior that is rude, disruptive, intimidating, or demeaning. Views may differ on what counts as rudeness or courtesy. If you are not sure what constitutes good conduct in this classroom, ask the instructor. The instructor has primary responsibility for and control over classroom behavior and maintenance of academic integrity.

Students are expected to adhere to the standards and expectations detailed in the **Student Code of Conduct**. In addition, cell phones, side conversations, tardiness, foul language, and the use of open laptops and ipads/tablets for purposes other than for class will not be tolerated. These are very disruptive to students and if the problem persists I will ask you to leave. If you are caught cheating I will give you a zero for that assignment/exam and if the problem persists I will take further action.

Disability Concerns

It is my goal that this class be an accessible and welcoming experience for all students, including those with disabilities that may affect their learning in this class. If you believe you may have trouble participating or effectively demonstrating learning in this course, please meet with me (with or without an accommodation letter from the Disability Resource Center) to discuss reasonable options or adjustments. During our discussion, I may suggest the possibility/necessity of your contacting the DRC (240 Student Center; (734) 487-2470; swd_office@emich.edu) to talk about academic accommodations. You are welcome to talk to me at any point in the semester about such issues, but it is best if we can talk at least one week prior to the need for any modifications.

Enhancing Student Skills

The University Writing Center (115 Halle Library; 487-0694) offers one-to-one writing consulting for students. The UWC also has several satellite locations across campus (in Owen, Marshall, Pray-Harrold, and Mark Jefferson). For more information see the UWC web site: <https://www.emich.edu/uwc/>

International Student Resource Center (200 Alexander Building) <http://www.emich.edu/esl/isrc/> is a service of the World Languages Department for EMU students who need help with their non-native English language for academic assignments. Help is provided for reading and comprehension, listening and note-taking, improvement of grammatical accuracy, compositions, study skills, and conversation. Note, this is not the Office of International Students.

Students seeking writing support at any location of the University Writing Center should bring with them a draft of what they are working on and their assignment sheet.

Tentative Topics to be Covered

I. Introduction to Statistics

1. Ch. 1: “Key Statistical Concepts”
2. Ch. 2 & 3: “Graphical Descriptive Techniques”
3. Ch. 4: “Numerical Descriptive Techniques”

II. Introduction to Probability

1. Ch. 6.1: “Assigning Probability to Events”
2. Ch. 6.2: “Joint, Marginal, and Conditional Probability”
3. Ch. 6.3: “Probability Rules” (skip probability trees)

Exam 1

III. Probability Distributions

1. Ch. 7: “Random Variables and Probability Distributions” (skip Poisson distribution)
2. Ch. 8: “Continuous Probability Distributions” (skip exponential distribution)

IV. Sampling Distributions

1. Ch. 9: “Sampling Distributions”

V. Introduction to Estimation

1. Ch. 10: “Introduction to Estimation”

Exam 2

VI. Hypothesis Testing

1. Ch. 11: “Introduction to Hypothesis Testing”

VII. Inference about a Population

1. Ch. 12: “Inference about a Population”

VIII. Regression Analysis

1. Ch. 16: “Simple Linear Regression and Correlation”
2. Ch. 17: “Multiple Regression”

IX. Analysis of Variance (ANOVA)

1. Ch. 15, “Analysis of Variance”

Final Exam: December 19, 2016 (9:00-10:30 a.m.)

This syllabus is subject to change. If I do make changes, I will announce them in class and/or email class members through <https://canvas.emich.edu/>.
