

ECON 310 - Economic Statistics

Fall - 2021

Instructor: James Saunoris, Ph.D.
Office: 703F Pray-Harrold
E-mail: jsaunori@emich.edu
Office Phone: (734) 487-3068

Class: Mondays & Wednesdays from 9:30-10:45 a.m.
Class Website: <https://canvas.emich.edu/>
Office Hours: Mondays & Wednesdays from 11:00 a.m.- 1:00 p.m.
and by appointment

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, estimation, 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, and being able to understand modeling and the power of statistical techniques.

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

Recommended Textbook

Statistics for Management and Economics by Gerald Keller. Cengage Learning.

The textbook is currently in its 11th edition; however, previous editions will work. The purpose of the textbook is to provide more details to the lecture notes. If you decide not to purchase the book, a good alternative is the textbook *Introductory Statistics*, available for free at from OpenStax at the following address:

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

Required Software

In this course we will be using Microsoft Excel. The University's campus license allows students to install Microsoft Office (Windows, Mac and mobile device versions) at no cost. To obtain the software, login to <https://portal.office.com> using your EMU email address (username@emich.edu) and NetID password and then follow the instructions on the page to download and install the application.

You are responsible for knowing the basic functionality of Microsoft Excel. There are several resources online that will help you learn the basics of Excel. I suggest the tutorials provided by Microsoft, that are available for Windows users [HERE](#) and for Mac users [HERE](#). I encourage you to complete these tutorials by the end of the first week of class.

Evaluation Criteria

Your grade will be based on three exams each worth 25% of your final grade, problem sets worth a total of 10% of your final grade, and a regression project worth 15% of your final grade. The grading scale for the course is as follows:

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 a total of three exams, including the final exam. The final exam is not comprehensive and will cover the material succeeding the second exam. The exams will be based on lectures. Each exam will consist of short-answer questions and problems and may require the use of Microsoft Excel. Tentative dates for the exams will announced on Canvas and via email. Each exam is worth 25 percent of your final grade.

Make-up exams will only be given in certain circumstances. However, once you take an exam, you will not be allowed to re-take it. I reserve the right to judge what types of reasons are legitimate. You must secure from me permission to miss an exam **before** the exam (if possible). You will receive a grade of zero for any exam that you miss for which you do not have an excused absence.

Academic dishonesty is unacceptable and will not be tolerated. If you are caught cheating on an exam you will receive a grade of zero and the incident will be referred to the Office of Student Conduct and Community Standards for investigation.

Problem Sets

There will be approximately one problem set assigned for each lecture. This means there will be eleven problem sets throughout the semester. These will be posted on Canvas together with the data needed for the assignment. Problem sets usually consist of questions that require data analysis using Excel. The problem sets need to be turned in on Canvas, and you must turn in your own problem set (no copying!). Evidence that students copied assignments from other classmates will result in a zero for that assignment for all students involved. Answers to problem sets will be uploaded to Canvas after the due date. No late assignments will be accepted. Problem sets are graded on an all or nothing basis. This means that you must attempt EVERY question to receive credit, otherwise you receive a zero for the problem set. Collectively, the problem sets are worth 10 percent of your final grade.

Regression Analysis Project

This project requires you to conduct an empirical study using regression analysis. In essence, you will be able to use the tools learned in class to do statistical research. The project will consist of a formal report including a data analysis in Excel along with a write up of the results and answers to specific questions. A complete description for the project will be posted on Canvas later in the semester. The project is worth 15 percent of your final grade.

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. For the final exam, you must return your grievance the next day after receiving your exam back. 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 Handbook](#). 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. The instructor has primary responsibility for and control over classroom behavior and maintenance of academic integrity. If you are caught cheating I will give you a zero for that assignment/exam. If the problem persists I will take further action.

University Policies

In addition to the articulated course specific policies and expectations, students are responsible for understanding all applicable University guidelines, policies, and procedures. For COVID-19 related safety measures and updates ([Click Here](#)). The [EMU Student Handbook](#) is the primary resource provided to students to ensure that they have access to all University policies, support resources, and students' rights and responsibilities. Changes may be made to the EMU Student Handbook whenever necessary, and shall be effective immediately, and/or as of the date on which a policy is formally adopted, and/or on the date specified in the amendment. Please note: Electing not to access the link provided below does not absolve a student of responsibility.

For questions about any university policy, procedure, practice, or resource, please contact the Office of the Ombuds: 248 Student Center, (734) 487-0074, emu.ombuds@emich.edu, or visit the website: <http://www.emich.edu/ombuds>

University course policies link: <http://www.emich.edu/studenthandbook/policies/academic.phpuniv>

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.

University Writing Center

The University Writing Center Virtual (UWCV) offers writing support to all undergraduate and graduate students. In doing so, we value the diversity of our campus and honor all students and the languages they bring with them to the university.

Holman Success Center

The **Holman Success Center** provides Academic Support through a variety of virtual and in-person services.

University Library

Research support is available to all students, 24/7. This includes getting started with research, identifying sources to search, developing search strategies, evaluating resources, and more. See <https://www.emich.edu/library/help/ask.php> for all of the ways in which you can get help with research. Some University Library services have changed, and may continue to change, in response to the pandemic.

Please check for current information at <https://www.emich.edu/library/news/covid.php>.

The Academic Projects Center (116 Halle Library) also offers one-to-one writing consulting for students, in addition to consulting on research and technology-related issues. Additional information about the APC can be found at <https://www.emich.edu/apc>.

International Student Resource Center

International Student Resource Center (200 Alexander Building) 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.

Student and Exchange Visitor Statement (SEVIS)

The Student Exchange Visitor Information System (SEVIS) requires F and J students to report numerous items to the **Office of International Students & Scholars (OISS)**

Title IX

Title IX of the Education Amendments of 1972 prohibits discrimination on the basis of sex under any education program or activity receiving federal financial aid. Sexual assault and sexual harassment is a form of sex discrimination prohibited by Title IX. **What you need to know about Title IX**

Tentative Topics to be Covered

1. Introduction to Statistics
2. Descriptive Statistics (Graphical Techniques)
3. Descriptive Statistics (Numerical Techniques)
4. Probability
5. Random Variables & Discrete Probability Distributions
6. Continuous Probability Distributions

Exam 1

7. Sampling Distributions
8. Estimation (point & interval)
9. Hypothesis Testing
10. Population Proportions

Exam 2

11. Analysis of Variance (ANOVA)
12. Simple Linear Regression
13. Multiple Linear Regression

Exam 3

*This syllabus is subject to change. If I do make changes, I will email the revised syllabus and announce them in class.