Colby College
Department of Economics

EC225: Research Methods and Statistics for Economics
Fall 2025

Meeting Time:	Mondays and Wednesday from 11AM-12:15PM
Location:	Diamond 141
Instructor:	Mary Peshoff
Office:	Diamond 109
Office Hours:	Tuesdays 10AM-12PM, Wednesdays 2:30-4:30PM, or by appointment
Email:	mpeshoff@colby.edu
TA:	Carson Ahola
Help Hours:	Full schedule forthcoming. Sept. 9th: 6-7PM in Diamond 145 Sept. 15th: 6-8PM in Diamond 341

Course Description

This course provides students with the fundamental ability to understand and carry out research in economics. It covers the use of basic statistical methods, probability, and regression analysis in the description and interpretation of economic data. We will practice the application of these techniques working with powerful statistical software.

Prerequisites

Calculus and EC134, sophomore standing or higher.

Textbook, Software, and Other Course Materials

Textbook: Essentials of Statistics for Business and Economics by Camm, Cochran, Fry, Ohlman, Anderson, Sweeney, Williams. The 10th edition is the newest, but if you can find an older used edition like the 9th edition for cheap, that will be fine to use. All datasets and problems we will pull from the textbook will be available on Moodle.

Software: Stata installed on your personal computer. I will assume you have never used Stata and we will have an introduction to its use. Colby provides Stata licenses to you for free, so you do not have to worry about purchasing it. Stata installation instructions are available on the course Moodle.

Calculator: You will need a calculator for in-class exercises and exams. A non-graphing calculator such as a TI-30XIIS is sufficient. During exams, graphing calculators are prohibited.

Assignments and Grading

- Eight problem sets (20% of grade)
- Exam 1 (20%)
- Exam 2 (20%)
- Final exam (25%)
- Project (15%)

Assignment and Attendance Policies

Problem Sets: Problem sets will be available via Moodle. They often require the use of Stata. Typed and printed answers are preferred. Any handwriting must be extremely legible. Hand in a hard copy at class time. If you miss class, either drop off a hard copy at my office or, if you cannot go there, email it. No late problem sets will be accepted. In extraordinary circumstances (with accompanying dean's note) only seven problem sets will count towards the problem set average.

Collaboration: You are welcome to work with other students on problem sets. Working with and teaching other students is an excellent way to test and build on your knowledge of the material. However, you must write up and turn in your own work in your own words.

AI Use: You must turn in your own work in your own words. AI-generating problem sets will be treated the same way as copying another student's assignment or paying someone to do your assignment would be treated. If you choose to ask AI tools questions while working through an assignment the way you might use Google or other resources (ex: asking it to clarify or explain a concept to you), it is your responsibility to vet the information.

Attendance: Students are expected to attend all classes. If you cannot attend class for any reason, please notify/talk to me. Don't come to class if you feel ill. We will have classes where we work with Stata pretty extensively and classes where we cover concepts that may not be in the textbook. If you do miss class, feel free to come by my office with any questions.

Excused Absences: If you must miss an exam due to illness or other valid reason, please notify me and provide a dean's note. If you are going to miss a scheduled test because of an extracurricular event or observance of a religious holiday, please let me know within the first two weeks of class. If you are involved in co-curricular activities, please check the exam schedule and your athletic/music/academic schedule now and notify me of any potential conflicts. I will do my best to work with you to arrive at the best solution.

Academic Accommodations

I am available to discuss academic accommodations that any student with a documented disability may require. Please note that a letter from the Dean of Studies Office documenting your approved accommodations should be provided. Please talk to me within two weeks of the start of the semester to make a request for accommodations so that we can work together with the College to make the appropriate arrangements for you (i.e., exams at the Alternative Testing Center).

Information about applying for accommodations can be found here: https://life.colby.edu/get-support/access-disability-services/

Academic Integrity

Honesty, integrity, and personal responsibility are cornerstones of a Colby education and provide the foundation for scholarly inquiry, intellectual discourse, and an open and welcoming campus community. These values are articulated in the Colby Affirmation and are central to this course. You are expected to demonstrate academic honesty in all aspects of this course.

Academic dishonesty includes, but is not limited to: violating clearly stated rules for taking an exam or completing homework; plagiarism (including material from sources without a citation and quotation marks around any borrowed words); claiming another's work or a modification of another person's work as your own; buying or attempting to buy papers or projects for a course; fabricating information or citations; knowingly assisting others in acts of academic dishonesty; misrepresentations to faculty within the context of a course; and submitting the same work, including an essay that you wrote, in more than one course without the permission of the instructors.

Academic dishonesty is a serious offense against the college. Sanctions for academic dishonesty are assigned by an academic review board and may include failure on the assignment, failure in the course, or suspension or expulsion from the College.

Rough Course Outline

The course outline below is subject change. Often, the second lecture dedicated to a topic will be a lab-oriented day where we work with Stata extensively. A more detailed, periodically updated outline will be posted online.

While I will do my best to keep them the same, problem set deadlines are subject to change. They will generally be posted a week before they are due, with solutions posted shortly after the deadline.

Date	Day	PS Due	Topic and Reading
3-Sep	Wed		Introduction to the course; Ch 1 Data and Statistics
8-Sep	Mon		Ch. 2 Descriptive Statistics: Tabular and Graphical Displays
10-Sep	Wed		Ch. 2 Descriptive Statistics: Tabular and Graphical Displays; Introduction to Stata
15-Sep	Mon		Ch. 3 Descriptive Statistics: Numerical Measures
17-Sep	Wed	PS1	Ch. 3 Descriptive Statistics: Numerical Measures
22-Sep	Mon		Ch. 5 Discrete Probability Distributions
24-Sep	Wed	PS2	Ch. 5 Discrete Probability Distributions
29-Sep	Mon		Ch. 6 Continuous Probability Distributions
1-Oct	Wed	PS3	Ch. 6 Continuous Probability Distributions; Review
6-Oct	**Mon**		**Exam 1 (4-6PM) in Diamond 141**
8-Oct	Wed		Ch. 7 Sampling and Sampling Distributions
13-Oct	*Mon*		*Fall recess (no class)*
15-Oct	Wed		Ch. 7 Sampling and Sampling Distributions
20-Oct	Mon		Ch. 8 Interval Estimation
22-Oct	Wed	PS4	Ch. 8 Interval Estimation
27-Oct	Mon		Ch. 9 Hypothesis Testing
29-Oct	Wed	PS5	Ch. 9 Hypothesis Testing
3-Nov	Mon		Ch. 10 & 11 - Comparisons Involving Means and Proportions
5-Nov	Wed		Ch. 10 & 11 - Comparisons Involving Means and Proportions
10-Nov	Mon	PS6	Ch. 10 & 11 - Comparisons Involving Means and Proportions
12-Nov	**Wed**		**Exam 2 (4-6PM) in Diamond 141**
17-Nov	Mon		Ch 14. Simple Linear Regression
19-Nov	Wed	PS7	Ch 14. Simple Linear Regression
24-Nov	*Mon*		*Thanksgiving recess (no class)*
26-Nov	*Wed*		*Thanksgiving recess (no class)*
1-Dec	Mon		Ch. 15 Multiple Regression
3-Dec	Wed	PS8	Ch. 15 Multiple Regression
Finals Week (TBA)			**Short Project and Final Exam**