

Syllabus for ECON 424: Computer Methods in Economics, Spring 2016

Section 201, 0229-0231 LeFrak Hall (Computer Labs 3 and 4)

M/W 3:30 – 4:45 pm

Instructor: Stephanie Rennane (rennane@econ.umd.edu)

Office: 3115Q Tydings Hall

Office Hours: Mon / Wed 4:45 – 5:45, or by appointment.

Office hours will be held in LeFrak Computer Lab 2, unless otherwise announced

General Description and Overview

This course is an introduction to data collection, data management, research methods, data visualization, and statistical analysis for economic research using EXCEL and STATA.

Prerequisites:

- Minimum grade of C- in 1 intermediate micro or macro course (ECON325 or ECON326) AND 1 statistics course (ECON321 or STAT400)
- Restriction: Must be in a major within BSOS-Economics department.

Required Software: Microsoft Excel and Stata

You do not need to purchase any software, as Stata and Excel are available in the LeFrak computer labs. However, the labs are only open for certain hours, and many students find it useful to purchase a student Stata license to allow them to practice and work on class material outside of the lab. Information about purchasing a student license for Stata is available on the Canvas page. Contact me if you would like more information about these options.

LeFrak Computer Lab Hours

Monday-Thursday: 8:00am - 7:00pm

Friday: 8:00am - 5:00pm

Saturday-Sunday: 9:00am - 5:00pm (lab 5 only)

Useful texts

The following books are not required, but I will rely on them for some material. I will post excerpts on the course's ELMS/Canvas website as necessary for your reference.

Michael N. Mitchell (2010) *Data Management Using Stata: A Practical Handbook*, Stata Press.

Walkenbach, John (2010) *Microsoft Excel 2010 Bible*, Wiley.

Wayne L. Winston (2011) *Excel 2010: Data Analysis and Business Modeling*, Microsoft Press.

Alan Acock (2012) *A Gentle Introduction to Stata*, Stata Press, Revised 3rd edition.

Stock, James H. and Mark W. Watson (2008) *Introduction to Econometrics: Brief Edition*, Pearson/Addison Wesley.

Course Website: Copies of the course syllabus, your grades, and other relevant links and documents will be posted on the course's ELMS/Canvas website. You can access the site via www.elms.umd.edu. You will need to use your University of Maryland

“directory ID” and password.

Email: The University has adopted email as the primary means of communication outside the classroom, and I will use it to inform you of important announcements. Students are responsible for updating their current email address via <http://www.testudo.umd.edu/apps/saddr/> AND for paying attention to messages I send to the class. Failure to check email, errors in forwarding email, and returned email due to “mailbox full” or “user unknown” will not excuse a student from missing announcements or deadlines. I will do my best to respond to email within 36 hours. **Please include ECON424 in the subject line**, so that I can easily distinguish your message from spam or other less important matters.

Expectations of Students

Read this syllabus and all updates provided by email. Read and study the assigned reading PRIOR TO each lecture. Attend lectures and ask questions whenever you want more explanation. If you miss any lectures, you are still responsible for the material that was covered. The material we cover each time builds on the previous material. You should endeavor to catch up right away; if you don't, you will find yourself slipping farther and farther behind. Get the notes I post on ELMS/Canvas and thoroughly review the assigned reading. If you still have questions after going through these steps, talk with other students and/or me.

If you find that you will miss 3 or more lectures in a row due to illness or other valid excuses (see the section marked “Attendance” at <http://www.testudo.umd.edu/soc/atedasse.html> for definition of valid excuses) you must contact me by email to explain. You will not be allowed postpone an exam because of absences earlier in the semester unless you have informed me IN ADVANCE of your situation.

I look forward to receiving your feedback on the course, both during and at the end of the semester. In particular, your participation in the evaluation of courses through CourseEvalUM is a responsibility you hold as a student member of our academic community. Your feedback is confidential and important to the improvement of teaching and learning at the University. The dates that www.courseevalum.umd.edu will be available later in the semester, and will be announced to the class.

Please contribute to a positive learning environment. Students are expected to treat each other and the instructor with courtesy and respect. Cell phones should be off or set to silent. Under no circumstances should the lab computers or any personal devices be used during class for personal email, social networking, surfing the internet, gaming, listening to music, watching movies or other distracting activities. Disruptive behavior will be referred to the Office of Student Conduct or the Campus Police.

Schedule
Graded events listed in bold.

I. Some Stata Basics

- 1/25: Introduction
- 1/27: Getting Started with Stata (Acock, Ch. 1)
- 2/1: Do-files and Log Files (Acock, Ch. 4)
- 2/3: Stata Commands and Creating Variables (Mitchell, Ch. 5)
- 2/8: Creating Variables, continued (Mitchell, Ch. 5 - continued)
- 2/10: Cleaning Data (Mitchell, Ch. 3)
- 2/15: Cleaning Data (Mitchell, Ch. 3)
- 2/17: Practice Quiz I
- Quiz I – major scheduled grading event:**
Posted on Canvas at 9:00 a.m. on Friday 2/19
Must be uploaded to Canvas by 3:30 p.m. on Monday 2/22

II. Some Excel Basics

- 2/22: Formatting, Formulas and Functions (Walkenbach, Chs. 6 & 10)
- 2/24: Range Names (Winston, Ch. 2)
- 2/29: IF Statements (Winston, Ch. 12)
- 3/2: The Paste Special Command and Sorting Data in Excel (Winston Chs. 14 & 25)
Importing Data from Text Files into Excel (Winston, Chs. 38-39)
- 3/7: Creating Charts and Graphs in Excel (Walkenbach, Ch. 18, Schwabish JEL
2014 article)
- 3/9: **Quiz II** (in class) – **major scheduled grading event**

3/14-3/16: Spring Break

III. Importing and Summarizing Data Using Excel and Stata

- 3/21: Discussion of Course Project
Summarizing Data Using Histograms and Descriptive Statistics (Winston, Chs.
41-42; Walkenbach, Ch. 38)
- 3/23: Reading and Writing Datasets in Stata (Mitchell, Ch. 2)
- 3/28: Descriptive Statistics and Graphs in Stata (Acock, Ch. 5, Schwabish JEL 2014
article)

IV. Regression Analysis

- 3/30: Simple Bivariate Regression in Excel (Winston Ch. 49 & Walkenbach Ch. 38)
- 4/4: Simple Bivariate Regression in Stata (Acock Ch. 8)
- 4/6: Multiple Regression in Stata (Acock Ch. 10)
Topic Proposal must be uploaded to Canvas by 4/8 at 5:00 p.m.
- 4/11: Appending Datasets (Mitchell, Ch. 6)
- 4/13: Merging Datasets (Mitchell, Ch. 6)

Practice Quiz III posted at 5:00 on 4/13. Practice quiz solution will be posted at 5:00 on 4/14.

FRIDAY 4/15: Quiz III– major scheduled grading event:

Posted on Canvas at 9:00 a.m. on Friday 4/15

Must be uploaded to Canvas by 3:30 p.m. on Monday 4/18

4/18: Discuss Quiz III

V. Wrap-up and Course Project

4/20: Wrap up and Review

4/25: The meetings on 4/25, 4/27 and 5/9 will be open labs, during which students can work with their partners on the first and final drafts of their course project, and talk with me about their progress. You can think of our conversations on these days like little oral quizzes. Based on these conversations, I will give each student a grade between zero and 5 over the course of the three open labs.

4/27: Open lab. See description at 4/25.

5/2: Practice Exam

First draft of course project's descriptive analysis must be uploaded to Canvas by 3:30 p.m. on 5/2.

5/4: Exam – major scheduled grading event

5/9: Open lab. See description at 4/25.

FRIDAY 5/13: Final draft of completed course project must be uploaded to Canvas by 11:59 pm.

Grading

Grades will be based on three quizzes, an exam, and a course project. The relative weights of the three graded course components are:

30% (Quizzes)
30% (Exam)
<u>40% (Course Project)</u>
100%

There will be no opportunities for extra credit. Numerical course grades will be translated into letter grades as follows:

93-100	A
90-92	A-
88-89	B+
83-87	B
80-82	B-
78-79	C+
73-77	C
70-72	C-
68-69	D+
63-67	D
60-62	D-
0-59	F

Course Project

Students are required to apply the skills they learn in the course to a small independent project. Students are required to work in pairs on the project. To complete the project students must collect some data, import and/or enter the data into Excel and Stata, organize and summarize the data appropriately, and perform some initial analysis of the data. The final draft of the course project will include a thorough descriptive analysis and a small multiple regression analysis. The final output will be 4 types of files, all uploaded to Canvas:

1. Data files used as input for your analysis,
2. MS-Word document summarizing all the data files with complete references to the sources of all data, and complete definitions of each variable,
3. Stata do-file that performs all the analysis, and
4. MS-Word document containing the complete output of the Stata-do file with annotations that explain and interpret the output.

Students will submit the course project work in 4 installments:

1. Topic Proposal (5 points)
2. First draft of course project, including descriptive analysis (15 points)
3. In-class computer labs to work on project and talk with me about progress (5 points)
4. Final draft of completed course project (20 points)

Additional details about all 4 components of the course project will be provided in class and on the course's ELMS/Canvas site.

Quizzes

There will be 3 quizzes – one corresponding to each of the first 3 parts of the course. See the course schedule above. Each will be worth 10%. Some quizzes will be in-class, while others will be take-home quizzes. Practice quizzes and additional details will be posted on the course's ELMS/Canvas site.

Exam

The exam will be an exercise or a series of exercises similar to the quizzes and will cover both Excel and Stata topics covered in the course. The exam will be administered during an entire class period on the date indicated in the course schedule above.

Make-up Quizzes and Exams

The exam and quizzes are designated a “major scheduled grading events”. Make-ups will be granted **only** to those students whose excuse complies with university policy. The four valid excuses according to university policy are: illness (of student or a student's dependent), religious observance, participation in university events at the request of university authorities, and compelling circumstances beyond your control. See <http://www.testudo.umd.edu/soc/atedasse.html> for more detail on the University's policy regarding attendance and assessments.

If you believe you need a make-up exam or an extension on any deadline, please inform me as far in advance as possible by email and at a minimum the day of the exam or deadline. Do not wait until afterwards to tell me unless circumstances make it impossible to tell me sooner. University policy requires that you provide appropriate documentation before you can be considered eligible for a make-up exam or deadline extension. **If you miss an exam or deadline and cannot document a valid excuse, your grade will be recorded as a zero.**

Academic Integrity

The University of Maryland has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards applicable to all undergraduate students, and you are responsible for upholding these standards as you complete assignments and take exams in this course. Please make yourself aware of the consequences of cheating, fabrication, facilitation, and plagiarism. For more information see www.studenthonorcouncil.umd.edu. If I observe what I believe is a violation of the Code of Academic Integrity, I will refer any and all students involved to the Student Honor Council.

In terms of the academic integrity, the in-class quiz and exam are “open book,” “open note” and “open internet”. You are allowed to use books and notes. You are also allowed to look things up on the internet – including material on our course website. **But you are not allowed to communicate with other students in the room or with anyone else except an exam proctor.** Use of email, cell phones, or any other type of communication with anyone during the quiz/exam will result in a grade of zero. The take-home quizzes are also “open book,” “open note” and “open internet”. **Students are allowed to talk with each other while they work on the take-home quizzes, but each student must submit his or her own work, and if students work together on the quiz they must list their partners when turning in the quiz. Students whose quiz answers are obviously just**

copied and pasted from each other will receive grades of zero. I will be available to answer questions during the take-home period and will do so promptly.

DSS Accommodations

Students who are registered with the University's Disability Support Services (DSS) office and who provide me with an updated DSS form one week in advance, will be accommodated. I am not able to accommodate students who are not registered with DSS or who do not provide me with the documentation in advance.

Tutoring and Learning Assistance Service

If you are experiencing difficulties in keeping up with the academic demands of this course you may be able to find a tutor via the tutor list posted on the Department of Economics website: <http://www.econ.umd.edu/resources/tutoring>. You can also contact the Learning Assistance Service, 2202 Shoemaker Building, 301-314-7693. Their educational counselors can help with time management, reading, math learning skills, note-taking and exam preparation skills.