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ECON 424: Computer Methods in Economics, Fall 2015
University of Maryland, College Park Department of Economics
August 28th, 2015

Lecture: Mon, Wed 3:30pm - 4:45pm in Lefrak Hall 0231
Instructor: Shen Hui
Contact: hui@econ.umd.edu
Office Hours: Mon, Wed 2:15pm - 3:15pm and by appointment, Tydings Hall 3115P
Lab Hours: Monday-Thursday 8:00am-7:00pm
Friday 8:00am-5:00pm
Saturday-Sunday: 9:00am-5:00pm

Prerequisite
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.

Textbooks
Required Textbook
Recommended texts

Software
Microsoft Excel and Stata
You do not need to purchase any software. Stata and Excel are available in the Lefrak computer labs. You may purchase Stata if you like, even though it is not necessary. Refer to section “Purchasing Stata”

General Course Description
This course is an introduction to database development from Internet and other sources, research methods, and statistical analysis in economics using EXCEL and STATA. The goal of the class is three-fold: students should feel comfortable collecting, locating and analyzing real data; students should be able to read and interpret statistics generated by other people; given a real data set, students should be able to generate basic statistics and interpret them in a way that makes statistical and economic sense.

Grading
Course grade will be based on two quizzes, one exam and one course project. The relative weights and dates are:

<table>
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<th>Quiz I</th>
<th>15%</th>
<th>In class, 9/21</th>
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<td>Quiz II</td>
<td>15%</td>
<td>Take home, due 10/30 1:30 pm</td>
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<tr>
<td>Exam</td>
<td>30%</td>
<td>In class, 11/25</td>
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<tr>
<td>Course Project</td>
<td>40%</td>
<td>Proposal 2%, Open labs 3%, 1st Draft 15%, Final Draft 20%</td>
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Late submission of the take home quiz or each of the three installment of the course project will receive zero.

Practice quizzes and exam will be provided.


I might give an A+ to students with the very best grades in the class.

Quizzes and Exam

There will be 2 quizzes and 1 exam – one corresponding to each of the first 3 parts of the course. See the course schedule above. Each quiz will be worth 15 points; the exam will be worth 30 points. The first quiz and the exam will be administered in class. The second quiz will be a take-home assignment. Practice quizzes, exam and additional details will be posted on the course’s ELMS/Canvas site.

Make-up Quizzes and Exam

The exam and quizzes are designated “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.

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 submitted as email attachments:

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

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

**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](http://www.elms.umd.edu). You will need to use your University of Maryland directory ID and password.

**Email Policy**

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. I will usually send messages and announcements in ELMS, which I view as being essentially the same as email. Students are responsible for updating their current email address via http://www.testudo.umd.edu/apps/saddr/ and in ELMS AND for paying attention to messages I send to the class. Failure to check email and ELMS, 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 and usually more quickly. 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. 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. Get the materials I post on ELMS/Canvas and thoroughly review the assigned readings. If you still have questions after going through these steps, please visit me during office hours or make an appointment.

Attending class and getting your hands dirty are important for this course. If you have a conflict with the course schedule, there is no problem as long as these events have an occasional nature and are beyond your control. If you find that you will miss 3 or more classes in a row due to illness or other valid excuses (see the section marked “Attendance” at [http://www.umd.edu/catalog/index.cfm/show/content.section/c/27/ss/1584/s/1540](http://www.umd.edu/catalog/index.cfm/show/content.section/c/27/ss/1584/s/1540) for definition of valid excuses) you MUST contact me by email to explain. If you have a persistent scheduling conflict that prevents you from attending classes on a regular and normal basis, then you should reconsider your enrollment in this course. You will not be allowed to postpone an exam because of absences earlier in the semester unless you have informed me IN ADVANCE of your situation.

Your feedbacks on the course are welcomed and valued, 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 course schedule list the dates that [www.courseevalum.umd.edu](http://www.courseevalum.umd.edu) will be available.

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.

**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 http://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 exams are “open book,” “open note” and “open Internet”. You are allowed to use books and notes and to look things up on the Internet. But you are not allowed to communicate with other students in the room or with anyone else except the exam proctor. Use of email, cell phones, or any other type of communication with anyone during the exam will result in a grade of zero. Homework is also “open book,” “open note” and “open Internet”. Students are allowed to talk with each other while they work on homework, but each student must submit his or her own work, and if students work together on the homework they must list their partners when turning in the work. Students whose homework answers are obviously just copied and pasted from each other will receive grades of zero.

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.

Learning Assistance Service
If you are experiencing difficulties in keeping up with the academic demands of this course, you can 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. All their services are free to UMD students.

Purchasing Stata
As noted above, you do not need to purchase Stata. Stata is installed on the Lefrak computer lab machines. Lefrak lab hours are listed above. But you may purchase Stata if you like. There are a few options. Essentially, Stata has different "flavors" and different lengths of license. Price varies according to these two factors. A description of the flavors is given here: http://www.stata.com/products/which-stata-is-right-for-me/
There are cheaper options, via the Stata "Gradplan". Here's a link for Stata’s Gradplan: http://www.stata.com/order/new/edu/gradplans/. The least expensive appropriate option is $75 for a 6-month license for Stata IC. A one-year license is $125, and a perpetual license (it never expires) is $198. I do not recommend Small Stata - it's likely to be too limited even for this course (especially the course project). Under the Gradplan, you can eventually upgrade your version of Stata and your license, at a discount, if you wish.

Course Outline (Revisions, if any, will be announced in class and via email)

I. Some Excel Basics
   8/31: Introduction to Course and Introduction to Excel
   9/2: Formatting, Formulas and Functions
   9/7: Labor Day holiday
   9/9: Range Names
   9/14: IF Statements
   9/16: The Paste Special Command and Sorting Data in Excel
Practice Quiz I
9/21: Quiz I (in class) – **major scheduled grading event (15% of course grade)**

II. Importing and Summarizing Data Using Excel and Stata

II.A. Importing and Summarizing Data Using Excel
9/23: Importing Data from Text Files and the Internet
9/28: Creating Charts and Graphs in Excel
9/30: Summarizing Data Using Histograms and Descriptive Statistics

II.B. Importing and Summarizing Data Using Stata
10/5: Getting Started with Stata
10/7: Stata Commands and Do-files
10/12: Reading and Writing Datasets
10/14: Cleaning Data
10/19: Creating Variables
10/21: Creating Variables
10/26: Descriptive Statistics and Graphs in Stata
10/28: Practice Quiz II
Quiz II: Posted on Elms at 5:00 p.m. on Wednesday 10/28
Due via email by 1:30 p.m. on Friday 10/30 – **major scheduled grading event (15% of course grade)**

III. Regression Analysis
11/2: Simple Bivariate Regression in Excel
11/4: Simple Bivariate Regression in Stata
11/9: Multiple Regression in Stata

IV. Envoi and Course Project
11/11: Appending Datasets
11/16: Merging Datasets
11/18: Envoi and discussion of Course Project
11/23: Practice Exams
11/25: Exam - **major scheduled grading event (30% of course grade)**
11/30: Q&A session

**Tuesday 12/1:** Topic Proposal due via email by 1:30 p.m. (2% of course grade)

12/2 & 12/7: The meetings on 12/2, 12/7 and 12/9 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 1-point oral quizzes. Based on these conversations, I will give each student a grade between zero and 1.

The grade will be a 1 for students who are working conscientiously on their project. The grade will be less than 1 for students who are unprepared to discuss their work with me, or otherwise fail to make productive use of the time.

**Tuesday 12/8:** First draft of course project’s descriptive analysis due via email by 1:30 p.m. (15% of course grade)

12/9: Open lab. See description at 12/2 and 12/7.
Tuesday, 12/15: Final draft of completed course project due via email by 1:30 p.m. (20% of course grade)
There is no final exam.