

THE UNIVERSITY OF AKRON
DEPARTMENT OF ECONOMICS
3250:226-001 (74348)

Fall 2017 **COMPUTER SKILLS FOR ECONOMIC ANALYSIS**
Course times: 11:00 AM -12:15 PM Location: CBA 101
myers@uakron.edu

Dr. Steven Myers
Office: CBA 323
(330) 972-7421

Prerequisite: 3250:100 or 3250:200 or 3250:244
Instructional Days: August 28, 2017 to December 6, 2017
Last day to withdraw: October 15, 2017 (talk to your advisor)
Scheduled Final Examination time: Mon. December 11, 2017, 12:15-2:15 PM (We will use this time block, however there is no final exam)
Grades Posted: Tuesday December 19, 2017

Most course material and all grades will be reported in <http://brightspace.uakron.edu> (used to be Springboard).

This is a course designed to establish a baseline of competency in computer usage among all economic majors and minors and other interested students and to increase your ability to understand and apply economics. This course will establish a number of minimum competencies that students must have before entering the world of work as an economic analyst. You will complete modules on (1) Thinking like an economist, (2) Data handling, (3) Survey Research, (4) Team based research, and (5) Other topics

Plan of the course:

This course will direct the student to learn a variety of computer skills, but will not teach those skills primarily. Rather, the application of those tools to economic analysis is the overarching goal of the class. Evaluation of student competency for each module will be the ability to communicate economic analysis, not just the demonstration of the computer methods. In fact, students are expected to use economic concepts and tools from the prerequisite principles classes to conduct economic analysis.

Each competency or module will require the student to:

- Learn and communicate knowledge via computer skills.
- Explore a topic in economics or economic analysis particularly addressable by the computing skill in question.
- Present formally the economic analysis using the newly-qualified computing tool.

There are five modules to the course. The content within the modules and the referenced assignments and points are subject to change during the course and are currently suggestive.

1. Thinking Like an Economist
 - a. Correlation versus Causation (using FRED) – 20 points
 - b. Economics in one lesson (analytical essay) – 20 points
 - c. Setting up a social presence (Feedly, LinkedIn, Evernote) – 20 points
 - d. Writing an Economic Essay on something that makes you curious – 60 points
2. Data Handling (SAS intensive)
 - a. Using SAS (programming exercises) – 20 and 30 points
 - b. Using Excel for data handling (in 2e)
 - c. Converting PDF to text
 - d. Using SAS to read multiple Excel inputs and manipulate the SAS dataset (in 2e)
 - e. Writing an Essay on the US Economic Health – 60 points
3. Survey research (SAS intensive)
 - a. Evaluate previous survey data and documentation – 20 points
 - b. Using SAS to analyze past survey data collected by this class from 2009-2015 – 50 points
 - c. Revise the survey instrument and then conduct survey interviews – 40 points
 - d. Using the 2009-2016 merged data, form a research question and write an analysis of that question – 70 points for the paper
4. Team based research (SAS intensive)
 - a. Collecting economic data and merging them for analysis
 - b. Developing a research question and analyzing it – 20 points for proposal (includes 4a)

- c. Writing a research paper – 100 points (including 4a and 4b)
 - d. Using PowerPoint for presentations
 - e. Oral presentation of your findings – 50 points (includes 4d)
5. Special Topics – To be determined.
- a. Likely to cover visualization of data
 - b. Excel modeling
 - c. Topics as time allows.

SAS Certificate

Every student, graduate and undergraduate, in the Department of Economics has the likelihood to receive a Certificate of Completion offered jointly by the Department of Economics and SAS Institute.

This is the first of three courses that you will take that will require your proficiency in SAS. Other courses include Econometrics and Your Senior Project course. You must also write your empirical paper in the Senior Project course using SAS to qualify. Other requirements are on the SAS Certificate page in the department of economics (<http://www.uakron.edu/economics/academics/undergraduate/economics-department-sas-certificates>). Normal presentation of this certificate is at the conclusion of your Final Project.

Course learning objectives:

1. Students will apply principles learned in prerequisite economic courses and learn new approaches to explain and evaluate policy propositions (module 1).
2. Students learn about economic data sources and how to validate their value for analysis. Students also learn about the differences between descriptive and explanatory process. (Module 1 and 2)
3. Students learn to apply economic reasoning to problems and to match those problems with data analysis. (modules 3 and 4)
4. Students will learn to survey the popular and economic literature to develop their economic literacy reasoning. (modules 3 and 4)
5. Students will learn to conduct an economic research analysis which will require the weighing and evaluation of alternative approaches to solve economic problems. (Module 4)
6. Students will learn about sources of data and how to evaluate them for analysis.
7. Students will manipulate data variables including the creation of new variables in Excel and SAS to prepare data for research and analysis.
8. Students will create economic graphic to show concepts visually and offer their interpretation to them.
9. Students will learn to access multiple economic Excel data bases and learn to read them in SAS, merging them to prepare a single dataset for analysis.
10. Students will learn to use social media to advance their economic career.
11. Students will become proficient with SAS and prepared for their econometric course to follow this one.
12. Student will learn to use Excel for data management in conjunction with SAS.

Evaluation:

Most of the assignments will require you to submit to the appropriate assignment folder in Brightspace. Some alternative turn-in arrangements will be different and explained in class.

Grading:

Grades will be assigned for each module based on points. The grading scale is

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|----|-------|
| A | 92+ |
| A- | 90-91 |
| B+ | 87-89 |
| B | 82-86 |
| B- | 80-81 |
| C+ | 77-70 |
| C | 72-76 |
| C- | 70-71 |
| D+ | 67-69 |
| D | 62-66 |
| D- | 60-61 |
| F | < 60 |

Attendance Policy: Attendance will be essential to have access to the projects and instructions for each week. Absences will be recorded and will represent a detriment to the course grade.

Academic dishonesty in any form is not tolerated. If you have any doubt whether it is academically dishonest then don't do it. In particular, no reference to the work of any student, past or present, is considered academically dishonest and grounds for dismissal from the course and the University.

Required Books & Materials:

1. USB drive: Every Student must have a USB data storage device that they have with them at every class. It must only have information from this class in case I or my assistant will ever need to use it. Keep it backed up to your home computer in case you lose it and have to replace your work.
2. Delwiche, Lora and Susan Slaughter. The Little SAS Book: A Primer, 5th edition, SAS Publishing, November 7, 2012, 350 pages. (ISBN 1612903436) Amazon <http://amzn.to/2giqDSw> price: \$43.75 (Used from \$37, Kindle \$24.99)
 - i. Chapter 1 is free here: http://www.sas.com/storefront/aux/en/splsb/65423_excerpt.pdf
3. SAS Support Site <http://support.sas.com/index.html>
4. SAS Documentation for version 9.4 (look for Base SAS / SAS/Stat and SAS/ETS primarily) <http://support.sas.com/documentation/>
5. **Economics in One Lesson by Henry Hazlitt. Free for download at** <https://mises.org/library/economics-one-lesson>

Recommended Books:

Clayton, Gary E. and Martin Gerhard Giesbrecht. A Guide to Everyday Economic Statistics, 7th edition, McGraw-Hill/Irwin, 2009. (ISBN 0-073-52319-4) Amazon <http://amzn.to/2wgC3dE> Price \$31 (used from \$22).

Companion Web Site <http://www.econsources.com>

Computer Requirements

In order to fully participate in the course, you need to have the following:

1. Each student will need to be familiar with Internet Explorer or another comparable browser. You may use mobile devices for some of your work, but access to a laptop or desktop computer running Windows 7 or better will be expected.
2. The course outline, grades and other course materials will be posted at <http://brightspace.uakron.edu>.
3. Students must use their UAnetID@zips.uakron.edu email in this class. The Google Apps Student E-Mail System (zips.uakron.edu) is supported at http://support.uakron.edu/wiki/index.php/Google_Apps_E-Mail
4. Interested students can seek help for off-campus use in the basement of the library. Their phone number is (330) 972-6888, or email them at supportdesk@uakron.edu. Hours are on the page listed in the next link under "contact us." The best URL for help is <http://support.uakron.edu>.
5. Help in using the university library including full text access from home is here <http://www.uakron.edu/libraries/>.

Communication Requirements

1. All emails from you must have “E226 Fall 2017” in every subject line and you must always include your first and last name, and your UAnetID in your message. A good place would be in your signature.
2. If I communicate to your UAnet email account I will assume you have read it within a day. There is no exception to this.
3. Use your UAnet email as your primary email address. I can respond to any email address you use, but when I am mailing to you I will send to your UAnet address only.

Some Important Links to bookmark:

<http://www.ats.ucla.edu/stat/sas/library/default.htm>

SAS Library from UCLA. Includes a good getting started section.

<http://www.ats.ucla.edu/stat/sas/webbooks/reg/default.htm>

SAS Web Books. Regressions with SAS.

<http://www.aeaweb.org/RFE/>
Resources for Economists

<http://Scholar.google.com>
Google Scholar