Economics 105
Statistics and Basic Econometrics

Dr. David Martin
Fall 2016

Class Meetings: Sections A & B: 1:30-2:20 MWF in Chambers 2164
Sections C & D: 3:30-4:20 MWF in Chambers 2164

Lab Meetings: Section A (T) & B (Th): 1:40-2:55 in C3130 (TA: Courtney Bowles)
Section C (T) & D (Th): 3:05-4:20 in C3130 (TA: Rachel Lee)

Office Hours: T-F 2:30-3:30 in Chambers 2253 and by appointment (use Outlook Calendar¹)
Office (Phone): Chambers 2253 (x2264)
Email: DaMartin@davidson.edu

The universe – including human communities – evolves in accordance with a divine plan. It is man’s business to endeavor to understand this plan and guide his actions in sympathy with it. But to understand God’s thoughts and purposes, we must study statistics for these are the measure of his purpose.² [S]tatistics concerns itself with how we can gain from limited information an understanding of the seemingly random world around us.³ Statistical thinking concerns the relation of quantitative data to a real-world problem, often in the presence of variability and uncertainty. It attempts to make precise what the data has to offer.⁴ Although not as lofty as Florence Nightingale’s, we do have the following learning outcomes that flow from Iverson’s and Mallows’ thoughts:

1. Students become proficient in using statistical tools to overcome limited information, variability, and uncertainty so as to better understand and to predict economic behavior.
2. Students become proficient in using spreadsheet software (Excel) to perform statistical analyses.
3. Students become proficient in communicating statistical analyses orally and in writing.
4. Students demonstrate those proficiencies through an independent research project.

Course Materials


- Required use of Aplia. You will use this software for your graded homework.

- Required use of Excel. You will use the Data Analysis Toolpak.

- Required Use of Moodle: I will maintain a Moodle page for this course that will include a rolling timetable with the specific reading, homework assignments and deadlines as well as various materials for you to download.

- Required Use of DropBox: I will maintain a DropBox folder to aid with the flow of materials back and forth for this class.

1 Outlook Calendar:
1. Click on the calendar option
2. Click on the “New Meeting” icon or the arrow next to the “New Items” icon and then select “Meeting”.
3. There are two key tabs, "Appointment" and “Scheduling Assistant” – begin with “Scheduling Assistant”.
4. You can either click on the “Add Attendees” button to get the list of users or type my username (damartin) in the list of attendees.
5. Look at the resulting calendar to see when I am busy and when I am free!
6. Select a meeting time and date when I am free (usually 30 minutes will be sufficient).
7. Select the “Appointment” tab.
8. Fill out the subject and place (my office is Chambers 2253) as well as any other notes you want to add in the notes field.
9. Select the “Scheduling Assistant” tab.
10. Click on “Send”.
11. It is not official until I “accept” the appointment, which happens via email.


**Tentative Course Outline:** (Check the rolling timetable on Moodle for specific assignments and due dates.)

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<th>Unit 1 (Basic Tools)</th>
<th>Unit 3 (Regression Analyses)</th>
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<td>· Review of Unit 1 (F 9-16)</td>
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<th>Unit 2 (An Introduction to Hypothesis Testing)</th>
<th>Unit 4 (Other Useful Tools)</th>
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<td>· ASW Chapters 6-10, 12, 13</td>
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<td>· Labs 5-8</td>
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<td>· Project: 2-minute presentation (W 10-5)</td>
<td>· Project: 5-minute oral presentation (T 11-15), Draft (T 11-22), Final paper (W 11-30), Peer Evaluation (12-7)</td>
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<tr>
<td>· Review of Unit 2 (F 10-21)</td>
<td>· Review of Units 3 and 4 (Self scheduled)</td>
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**Grading:**

- 7½% ..... Weekly Lab Assignments
- 12½% ..... Daily Homework
- 12½% ..... Review of Unit 1
- 17½% ..... Review of Unit 2
- 20% ..... Review of Units 3 and 4

**Data Analysis Project:**

- Required ..... Project Approval
- 25% ..... Final Paper
- 5% ..... Work as a peer evaluator

**Weekly Labs:**
The goal for the labs is for the students to learn how to do basic statistical analyses with Excel. Most labs will involve material from Anderson, Sweeney, and Williams so bring your textbook to the labs. The labs will be conducted and graded by the TA. Missing a lab will earn you a 50-point penalty on that lab’s assignment, although Dr. Martin might waive that penalty if you discuss your absence with him ahead of time. Also, you are not permitted to attend a lab section other than the one for which you are registered.

**Homework:**
Daily homework will be split into two components, an ungraded component and a graded component. The ungraded homework will be based upon problems in Anderson, Sweeney, and Williams and practice problems with the Aplia software; these can be worked with others and are not pledged. As a note, the answers to the even-numbered questions are given in Appendix D of Anderson, Sweeney, and Williams. The graded homework problems must be done individually with the Aplia software.

- Your textbook (ISBN 9781305246386) is bundled with an Aplia printed access card. If don’t purchase this version of the book then you will have to purchase access online as part of the Aplia registration process.

**Aplia Registration:**
2. Follow the prompts to register for your Aplia course.
3. Aplia course key: XPFA-UZJ7-CA6A.
4. Aplia Technical Support: [web site](http://www.technicalsupport.cengage.com) or 1-800-990-8211.

- You may download all of the Excel data sets available for the textbook from the Aplia page under the “Contents” tab. You will use these for the ungraded homework component.
Reviews:
Each of the first two reviews will be a take-home 50-minute test focusing upon the material from the relevant unit. The third review will also be a 50-minute test although you will be allowed to use a full final exam period. The reviews will not involve Aplia or Excel, and students will be allowed to bring formula sheets into the review.

Data Analysis Project (see the separate assignment sheet):
This is my favorite part of the course! Your goal will be to describe the economic relationship between a dependent variable and at least two independent variables in the format of a professional study. While most students will conduct a regression analysis, some students may utilize an ANOVA analysis.

As with learning a foreign language, statistical skills build sequentially and you need “hands-on” experience working with the material. While you can memorize vocabulary and grammar rules, those lessons don’t replace the experience of interacting with people while sitting in a café. For those of you who’ve gone to that café, you know that the secret is to have the confidence that whatever mistakes you make will not be very important and that you will learn from them. The goal of all of the assignments in this course is to give you plenty of opportunities to gain a similar type of confidence in your statistical skills.

Every student will have (at least) one point during the course when you are working problems correctly although you don’t realize that you don’t understand why the answer is correct. I believe that the best way for you to recognize that you’re stuck in this rut is (a) to work some of the problems independently to make certain you understand the mechanics and (b) then to work the remaining problems with another student. You should explain one problem step-by-step to that student and the other student should explain the next problem to you step by step. If one person can’t explain a solution to another, then at least one of has a question and you’ve narrowed down about where and what it is. Come ask me about it; don’t waste hours banging your head on a desk … you’ve already done the hard work in identifying the question.

Various Policies
- The Honor Code is a critical component of life at Davidson. Let’s keep it that way!
- If you believe that you require adjustments to the timetable or to the delivery of academic material, please discuss such adjustments with me as early as is possible.
- My “work turned in late” policy is based upon balancing fairness to the other students, to you, and to me. I will always accept late work in the case of an emergency, and I am always willing to consider accepting late work (with or without a penalty) if you talk with me in advance.
- Following academic regulations, a student who is absent from more than one-fourth of the scheduled course meetings shall be assigned a grade of “F” for the course regardless of other work done for it. Please let me know in advance about absences caused by official Davidson College activities.
- My “electronic communication during class” policy is based upon mutual respect and politeness. I assume that you, like me, will have your cell phone set in a silent mode. I also assume that some of you will use electronic devices for note taking or for reviewing class materials. However, in the same way that you expect me to respect the College’s academic mission and you as students by paying attention to class, I expect you to respect me, your peers, and the College’s mission by not using those devices for communication or other purposes during class. If you need to respond to an emergency phone call or text message, simply excuse yourself and leave the room for that time (yes, even to send a text message as in emergencies there are usually follow-ups). Violators of this policy will be told to leave the room immediately, and I will count them as being absent. I deliberately used the passive voice in the previous sentence as you students have the right to take action if one of your peers is distracting you and I don’t notice it quickly enough.