Syllabus
ECO 339-002: Applied Statistical Analysis
Stephen F. Austin State University
Spring 2020

Dr. Rebecca Davis
Department of Economics and Finance
Nelson Rusche College of Business
Lectures: T-Tr 11:00-12:15
Office Hours: T/Tr 3:30-5:30, W 9:30-12:30
T/Tr 12:30-2:00 (online only)

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Phone: (936)-468-1828
Office: McGee Bus. Bldg. 303-F
Location: McGee Bus. Bldg. 324

Catalog Description:
The application of statistical and quantitative methods. Prerequisite: MTH 220 and MGT 272/or
6 hours of Computer Science.

Course Description:
This course will focus on the fundamental and most important concepts of probability and
statistics that can be applied to solve real-world problems. The main aim of this course is to
provide students with the essential foundation in these topics and the tools necessary to apply
them outside of the classroom. We will be using MS Excel to develop these tools.

Learning Objectives:
Students successfully completing this course should be able to:
1. Use quantitative, abstract, and logical reasoning
2. Obtain basic knowledge in mathematics and statistics
3. Acquire skills in the use of contemporary information resources and technology
4. Utilize analytical thinking, critical analysis, logic, creativity, and integrative problem
   solving
5. Work with descriptive statistics in a sampling situation
6. Perform a variety of statistical tests and make inferences
7. Compute and interpret regression equations using raw data
8. Use standard tables for the normal distribution, F-distribution, and chi-square distribution

Course Materials:
The course Note Packet (around $20) is required and is only available at the SFA Barnes &
Noble and at Jack Backers.

You will need access to Excel 2016 on a PC. There are machines available in the Business
Building. You will also need access to a reliable internet connection. Spotty internet access
may result in you losing credit for timed assignments and exams. SFA students have FREE
access to Microsoft Office 2016 through Office 365: http://www.sfasu.edu/mysfa/o365/.

Use Chrome as your browser and do not use a VPN or other type of IP address cloaking
software.
I do not recommend using a Mac for this course.

The primary text is *Statistics for Managers Using Microsoft Excel (8th Edition)* by Levine, Stephan, and Szabat. It is published by Pearson (ISBN-13:9780134466033). We will use Excel in conjunction with the text. Students are expected to have some basic level of working knowledge in Excel.

Our textbook comes with MyStatLab. **You will need access to MyStatLab to pass the course.** I recommend buying the book through the Pearson website or at the University bookstore. Purchasing from Pearson through the D2L link is the safest and cheapest option. A loose-leaf hard copy is an $80.00 upgrade. Buying the loose-leaf bundle at the university bookstore will cost more.

**To register for the MyStatLab Course/E-Book Access:**
1. There is no course ID.
2. In our D2L course, click on the Pearson link on the lower right of the home page.
3. Make sure that you allow pop-ups from Pearson. You will see a button on the right hand side of the URL address bar.
4. Follow the prompts to register.
5. Enter your existing Pearson account **username** and **password** to **sign in**.
   - You have an account if you have ever used a Pearson MyLab & Mastering product, such as MyMathLab, MyITLab, MySpanishLab, MasteringBiology or MasteringPhysics.
   - If you do not have an account, select “Create” and complete the required fields.
6. Select an access option.
   - Buy access through Pearson using a credit card or PayPal account (**recommended**).
   - Temporary access is available by selecting the link near the bottom of the page.
     - To update before the deadline select “Upgrade Access”.
     - Enter an access code or buy access with a credit card or PayPal account.
   - Enter the access code that came with your textbook or was purchased separately from the bookstore.

**To sign in later:**
1. In our D2L course, click on the Pearson link on the lower right of the home page.

**General Student Policies:**

**Program Learning Outcomes**
Program learning outcomes define the knowledge, skills, and abilities students are expected to demonstrate upon completion of an academic program. These learning outcomes are regularly assessed to determine student learning and to evaluate overall program effectiveness. You may access the program learning outcomes for your major and particular courses at [http://www.sfasu.edu/cob/ug-plo.asp](http://www.sfasu.edu/cob/ug-plo.asp)
**Academic Integrity (A-9.1)**
Abiding by university policy on academic integrity is a responsibility of all university faculty and students.

**Definition of Academic Dishonesty**
Academic dishonesty includes both cheating and plagiarism. Cheating includes, but is not limited to (1) using or attempting to use unauthorized materials on any assignment or exam; (2) falsifying or inventing of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were one's own. Examples of plagiarism include, but are not limited to (1) submitting an assignment as if it were one's own work when is at least partly the work of another person; (2) submitting a work that has been purchased or otherwise obtained from the Internet or another source; and/or (3) incorporating the words or ideas of an author into one's paper without giving the author credit. Penalties may include, but are not limited to reprimand, no credit for the assignment or exam, re-submission of the work, make-up exam, failure of the course, or expulsion from the university. Please read the complete policy at http://www.sfasu.edu/policies/student_academic_dishonesty.pdf.

**Course Grades (University Policy 5.5)**
At the discretion of the instructor of record and with the approval of the academic unit head, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F, except as allowed through policy related to active military service. If students register for the same course in future semesters, the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average. Please refer to the complete policy at http://www.sfasu.edu/policies/course-grades.pdf.

**Students with Disabilities**
To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Room 325 in the Human Services Building, 468-3004/468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to http://www.sfasu.edu/disabilityservices/.

**Student Conduct (University Policy 10.4)**
Classroom behavior should not interfere with the instructor’s ability to conduct the class or the ability of other students to learn from the instructional program (see the full Student Conduct Code at http://www.sfasu.edu/policies/student-code-of-conduct_10.4.pdf). Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment may be asked to leave class and may be subject to judicial, academic, or other penalties. This prohibition applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom. Students who do not attend class regularly or who perform poorly on class projects/exams may be referred to the iCare Early Alert Program. This program provides
students with recommendations for resources or other assistance that is available to help SFA students succeed.

**Grading System:**
Your final grade for the course is based on the scale below.

- **A:** 90% and above,
- **B:** 80% - 89%,
- **C:** 70% - 79%,
- **D:** 60% - 69%,
- **F:** Less than 60%

<table>
<thead>
<tr>
<th>Task</th>
<th>% of Class Grade</th>
<th>Points</th>
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</thead>
<tbody>
<tr>
<td>Class Participation</td>
<td>9.5%</td>
<td>95</td>
</tr>
<tr>
<td>Homework</td>
<td>17%</td>
<td>170</td>
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<tr>
<td>Dropbox Projects</td>
<td>11%</td>
<td>110</td>
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<tr>
<td>Exam 1</td>
<td>12.5%</td>
<td>125</td>
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<tr>
<td>Exam 2</td>
<td>12.5%</td>
<td>125</td>
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<tr>
<td>Exam 3</td>
<td>12.5%</td>
<td>125</td>
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<tr>
<td>Final Exam (Cumulative)</td>
<td>25%</td>
<td>250</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td><strong>1000</strong></td>
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To prevent testing dishonestly, you will receive an ‘F’ if one of the following conditions is met:
1. The average of the first three exams is 20% higher than the proctored final.
2. You do not pass the proctored final.

**Class Participation:**
We will have several in-class quizzes in the first five minutes of class. Your average on these quizzes will determine your class participation grade.

**Homework and Dropbox Projects:**
Completing homework and dropbox assignments is vital to learning the material. These assignments provide feedback to you about your personal level of understanding as well as feedback to me about the overall level of understanding in the class. Students may work together on homework assignments, and I encourage you to do so. **However, make sure you are doing your own work. It will matter come test time.** No late homework assignments will be accepted. Dropbox **checklists must be complete to submit your work. Make sure to cite any sources external to the course.**

**Exams:**
If you miss an exam with an unexcused absence, you will receive a zero for the exam. If you miss an exam for an unforeseen reason, you should contact me as soon as physically possible. Any use of the resources **not listed below** is cheating.
- The internet can **only be used to access the exam.**
- **You must complete the exam alone.**
- You must not pause or exit the exam once you have begun.
- You are encouraged to **use the Excel templates** that we build in class **on all exams.**
- Note-Sheets: You are permitted a note-sheet during the exam.
  - It must be the size of a standard sheet of paper or smaller.
  - It can only be one-sided.
It must be hand written.

Building these note-sheets is a great study exercise.

Calculators and blank scratch paper are allowed.

The final exam is cumulative. The final exam will be held according to the official schedule.
You are permitted to use your templates from class and a two-sided note-sheet (standard paper size) for the final. The note-sheet must be hand written.

Course Expectations:

- **Be Prepared:** Students are expected to read assigned material prior to class and to participate in class discussions and activities. If you have a question, never let it go unanswered.
- **Be in Class:** Consistent attendance is essential for acceptable performance in this course.
- **Be Courteous:** If you attend class, be on time and attend both physically and mentally. Spending class time on anything other than class material is harmful to the collective learning environment and will not be permitted. If you need to leave during class, please do so quietly.
- If you send me an economics meme via e-mail before the first exam, you will receive 5 extra credit points on that exam.

Keys to Success/Points of Emphasis:
In my experience, there are three keys to success in this course: (1) Come to class every day and take notes in addition to those provided, (2) do problems and then do more problems like the ones you struggled with, and (3) seek help/use additional resources when needed. You will have significant weekly reading assignments from a mandatory textbook, and are also expected to complete regular homework assignments throughout the term, generally one for each chapter that is covered in the textbook. Additionally, small quizzes may be assigned during the term. Exam preparation, readings, assignments, and quiz activities average at a minimum 6 hours of work done outside of class each week.

**Tentative Outline**

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Content</th>
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</thead>
<tbody>
<tr>
<td>FTF: Introduction to the book and course</td>
<td>Read: All</td>
</tr>
<tr>
<td>Chapter 1: Foundational Knowledge</td>
<td>Read: All</td>
</tr>
<tr>
<td>Chapter 2: Organizing and Visualizing Variables</td>
<td>Read: All</td>
</tr>
<tr>
<td>Chapter 3: Numerical Descriptive Measures</td>
<td>Read: 3.1, 3.2, 3.4, 3.5, 3.6</td>
</tr>
<tr>
<td>Chapter 6: The Normal Distribution</td>
<td>Read: 6.1, 6.2, 6.6</td>
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<tr>
<td>Chapter 7: Sampling Distributions</td>
<td>Read: All</td>
</tr>
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</table>
Chapter 13: Simple Linear Regression  

Chapter 14: Multiple Regression  
Read: 14.1, 14.2, 14.3, 14.4, 14.5, 14.6

Chapter 10: Two Sample Tests  
Read: All

Chapter 17*: Getting Ready to Analyze Data in the Future  
Read: All

Chapters marked * will be covered as time allows. More detailed information in this regard will be provided as we progress through the semester.

Schedule:
Please keep an eye on the MyStatLab schedule. I may need to make adjustments throughout the semester.

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Open</th>
<th>Close</th>
<th>Delivery</th>
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<tbody>
<tr>
<td>Class Participation</td>
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<td>5/1/20</td>
<td>In Class</td>
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<tr>
<td>Orientation</td>
<td>1/22/20</td>
<td>MyStatLab</td>
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<td>1/29/20</td>
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<td>Build Samp. Dist.</td>
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<td>Ch. 14</td>
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<td>Exam 3</td>
<td>4/23/20</td>
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<td>Regression Interp.</td>
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Disclaimer:  
I reserve the right to make changes and amendments to this syllabus through D2L announcements during the semester.