Syllabus for Economics 3339-002  
Applied Statistical Analysis  
(Fall, 2021)

Associate Professor Ryan Phelps  
Department of Economics and Finance  
Nelson Rusche College of Business  
Lectures: T/R from 11:00 – 12:15 p.m.  
Location: BU 324

Email: phelpsrt@sfasu.edu  
Phone: (936) 468-1501  
web: http://faculty.sfasu.edu/phelpsrt/

In-Person Office Hours:  
• Monday and Wednesday: (9:30-11:15 a.m.)  
• Friday (8:30-11:00 a.m.)

Online Office Hours:  
• Monday through Thursday: (2:00-3:00 p.m.)

I encourage you to take full advantage of office hours this term. For more available times and to ensure your slot please book via https://calendly.com/phelpsrt/availability.

Catalog Description:  
The application of statistical and quantitative methods. Prerequisites: MATH 1342 and (MGMT 2372 or 6 hours of Computer Science).

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

Teaching Philosophy & Methods  
I love teaching and look forward to interacting with you throughout the semester. I am available to discuss your concerns (class-related or other). We are partners in an effort that can make us all better people. The course is designed to be a transformative learning experience. In the lectures, we will work together on the more challenging content. Class will be a mixture of guided discovery and active learning. They will motivate, clarify, extend, and synthesize the material. Active learning will consist of opportunities to work through problems in the note-packet prior to the correct answers being revealed.

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 in the Curriculum Management Handbook at http://www.sfasu.edu/academics/colleges/business/welcome/faculty-resources.
Course Materials:
The Course Note Packet (around $20.00) is only available at the SFA Barnes & Noble and at Jack Backers.

You will need access to Excel using a Windows operating system. SFA students have FREE access to Microsoft Office through Office 365. Be sure to install Excel on your computer: [http://www.sfasu.edu/mysfa/o365/installing-office/](http://www.sfasu.edu/mysfa/o365/installing-office/). You will need a web-cam and a microphone. You will also need access to a reliable internet connection. Spotty internet access may result in you losing credit for timed assignments and exams. Use Chrome as your browser and do not use a VPN or other types of IP address cloaking software.

I do not recommend using a Mac or a Google computer for this course. An exception to this rule is if you are willing to use Boot Camp to run Windows on your Mac. I do not support this process, but it may be a better option for some. [https://support.apple.com/en-us/HT201468](https://support.apple.com/en-us/HT201468)


Our textbook comes with MyStatLab. You will need access to MyStatLab to pass the course. As a result, I can only recommend buying the book through the Pearson website or at the University bookstores. Purchasing from Pearson through the D2L link is the safest and cheapest option. A loose-leaf hard copy is available directly from the publisher. 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: In our D2L course, click on the Pearson link on the lower right of the home page.
Grading System: See Pass/Fail Conditions Below.
Your final grade will be based on points: A: 900, B: 800, C: 700, D: 600, F: 599 and below.

To prevent testing dishonestly, you will receive an “F” if one 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.
The Cumulative final is consistently the exam with the highest class-average score.

I do not accept late work. Every possible point in this course is detailed here.

<table>
<thead>
<tr>
<th>Task</th>
<th>Points</th>
<th>% of Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class Participation</td>
<td>90</td>
<td>9.0%</td>
</tr>
<tr>
<td>Homework</td>
<td>160</td>
<td>16.0%</td>
</tr>
<tr>
<td>Dropbox Projects</td>
<td>105</td>
<td>10.5%</td>
</tr>
<tr>
<td>Exam 1</td>
<td>120</td>
<td>12.0%</td>
</tr>
<tr>
<td>Exam 2</td>
<td>120</td>
<td>12.0%</td>
</tr>
<tr>
<td>Exam 3</td>
<td>120</td>
<td>12.0%</td>
</tr>
<tr>
<td>Final Exam Prep</td>
<td>35</td>
<td>3.5%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>250</td>
<td>25.0%</td>
</tr>
<tr>
<td>Total</td>
<td>1000</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Class Participation:**
We will have several in-class quizzes in the **first five minutes of class.** You must be present to participate. Additionally, we will save our excel work during class. The average of these two scores will be your participation score.

**Homework (MyStatLab)**
1. See the attached schedule for deadlines.
2. You have **four final attempts** on each assignment.
3. **You should earn a perfect grade on all homework.**
4. See the FAQ module to save time and post questions.

**Dropbox Projects (D2L > Content > Course Projects):**
Completing the projects is vital to learning the material. These assignments provide feedback to you about your personal level of understanding and feedback to me about the overall level of understanding in the class. **Make sure that you are doing and turning in your own personal work.**
- **Do not work with others.** Everything you need is in the course note packet.
- Reach out to me if you need additional help.
- **Do not share your work with others.**
- Cite any sources external to the course.
- Dropbox **checklists must be complete to submit your work.**
**Exams:**

No two exams are alike. **Exams are algorithmic.** Each exam has a different set of problems and each problem has multiple sets of data and answers.

To do well in this course take full advantage of exam preps. You have two attempts on each. Those who take advantage of them score an average of 20% higher on the actual exams.

**Any use of resources or software not listed as permitted below is cheating and will result in no credit for the exam.**

- The internet can be used only to access the exam.
- You must complete exams alone.
- Neither headphones nor hoods are permitted.
- You must not pause or exit the exam once you have begun.
- You are encouraged to use the Excel templates (purple and green files) that we build in class on all exams.
- Note-Sheets: You are permitted a note-sheet during the Exams/Exam Preps.
  - It must be hand written.
    - Building these note-sheets is a great study exercise.
    - It must be the size of a standard sheet of paper or smaller.
    - It can only be one-sided for exams 1-3.
    - For the final, you are allowed a two-sided note-sheet (standard paper size).
    - I recommend that you laminate your final exam note-sheet for future use.
- Calculators are not allowed. We are testing your ability in Excel.
- Blank scratch paper is allowed.
- Any indication of a cellphone in the room is cheating.

The final exam is cumulative. **The final exam will be proctored in class according to the official final exam 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 and laminated. The Graphics Shop on campus will laminate for less than $1.00.

**Course Expectations:**

- Consistently attending class is essential for acceptable performance in this course.
- If you are having trouble keeping up with the Excel work, then practice with the intro to Excel YouTube videos until you are able to keep up using only the audio cues.
- If you have a question, never let it go unanswered.
- Read the note-packet frequently after filling it out in class. If you look at new material at least once within forty-eight hours of first seeing it, you will learn the material more thoroughly and studying for the exam will be easier.
- Improve the Course: If you know of a way to make the course better, please share your ideas with me.
**Tentative Outline**

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Content</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Foundational Knowledge</td>
<td>5% of Course</td>
</tr>
<tr>
<td>2</td>
<td>Organizing and Visualizing Variables</td>
<td>10% of Course</td>
</tr>
<tr>
<td>3</td>
<td>Numerical Descriptive Measures</td>
<td>Short In-Class Recap 7%</td>
</tr>
<tr>
<td>6</td>
<td>The Normal Distribution</td>
<td>Short In-Class Recap 8%</td>
</tr>
<tr>
<td>7</td>
<td>Sampling Distributions</td>
<td>15% of Course</td>
</tr>
<tr>
<td>9</td>
<td>Hypothesis Tests</td>
<td>15% of Course</td>
</tr>
<tr>
<td>13</td>
<td>Simple Linear Regression</td>
<td>20% of Course</td>
</tr>
<tr>
<td>14</td>
<td>Multiple Regression</td>
<td>20% of Course</td>
</tr>
<tr>
<td>17</td>
<td>Getting Ready to Analyze Data in the Future</td>
<td>Read and Review Above</td>
</tr>
</tbody>
</table>

If you have a question while I am not available, you should review the Frequently Asked Questions Module (Content > Frequently Asked Questions). The FAQ module is broken down into subject areas and contains correspondence from previous semesters. If you cannot find your answer in the FAQ page related to your question, then post your question to the discussion board linked to the FAQ topic. Often, a peer will answer your question right away. Each time a student posts a quality answer (to a question not addressed elsewhere) before I do, they will receive **two extra credit points** (up to 25 points). I have subscribed to all of the discussion boards and will be instantly notified of your question. For more complex issues schedule a meeting with me or see me in class.

**Course Expectations:**
- **Consistently and actively attending class** essential for acceptable performance in this course.
- If you are **having trouble keeping up with the Excel work**, then practice with the Intro to Excel **YouTube** videos until you are able to keep up using only the audio cues.
- If you have a question, **never let it go unanswered**.
- **Read the note-packet** frequently after filling it in. If you look at new material at least once within forty-eight hours of first seeing it, you will learn the material more thoroughly and studying for the exam will be easier.
- **Improve the Course:** If you know of a way to make the course better, please share your ideas with me.
Schedule

Please keep an eye on the MyStatLab schedule and watch out for D2L and in-class announcements. I may need to make adjustments throughout the semester.

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Open 8:00 a.m.</th>
<th>Close 11:00 p.m.</th>
<th>Delivery</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation</td>
<td>8/24/2021</td>
<td>12/2/2021</td>
<td>In Class</td>
<td>90</td>
</tr>
<tr>
<td>Orientation</td>
<td>8/24/2021</td>
<td>8/27/2021</td>
<td>MyStatLab</td>
<td>16</td>
</tr>
<tr>
<td>Ch 1</td>
<td>8/24/2021</td>
<td>8/31/2021</td>
<td>MyStatLab</td>
<td>16</td>
</tr>
<tr>
<td>Ch 2</td>
<td>8/31/2021</td>
<td>9/7/2021</td>
<td>MyStatLab</td>
<td>16</td>
</tr>
<tr>
<td>Ch 3</td>
<td>9/2/2021</td>
<td>9/9/2021</td>
<td>MyStatLab</td>
<td>16</td>
</tr>
<tr>
<td>Ch 6</td>
<td>9/4/2021</td>
<td>9/11/2021</td>
<td>MyStatLab</td>
<td>16</td>
</tr>
<tr>
<td>Exam 1 Prep</td>
<td>9/10/2021</td>
<td>9/13/2021</td>
<td>MyStatLab</td>
<td>0</td>
</tr>
<tr>
<td>Exam 1</td>
<td>9/11/2021</td>
<td>9/14/2021</td>
<td>MyStatLab</td>
<td>120</td>
</tr>
<tr>
<td>Ch 7 (Means)</td>
<td>9/21/2021</td>
<td>9/28/2021</td>
<td>MyStatLab</td>
<td>16</td>
</tr>
<tr>
<td>Ch 7 (Proportions)</td>
<td>9/23/2021</td>
<td>9/30/2021</td>
<td>MyStatLab</td>
<td>16</td>
</tr>
<tr>
<td>Build. Samp. Dist.</td>
<td>9/30/2021</td>
<td>10/3/2021</td>
<td>D2L Dropbox</td>
<td>35</td>
</tr>
<tr>
<td>Ch 9</td>
<td>10/1/2021</td>
<td>10/8/2021</td>
<td>MyStatLab</td>
<td>16</td>
</tr>
<tr>
<td>Concept Map</td>
<td>10/7/2021</td>
<td>10/10/2021</td>
<td>D2L Dropbox</td>
<td>35</td>
</tr>
<tr>
<td>Exam 2 Prep</td>
<td>10/8/2021</td>
<td>10/11/2021</td>
<td>MyStatLab</td>
<td>0</td>
</tr>
<tr>
<td>Exam 2</td>
<td>10/9/2021</td>
<td>10/12/2021</td>
<td>MyStatLab</td>
<td>120</td>
</tr>
<tr>
<td>Ch 13</td>
<td>10/26/2021</td>
<td>11/2/2021</td>
<td>MyStatLab</td>
<td>16</td>
</tr>
<tr>
<td>Ch 14</td>
<td>11/6/2021</td>
<td>11/13/2021</td>
<td>MyStatLab</td>
<td>16</td>
</tr>
<tr>
<td>Regression Interp.</td>
<td>11/11/2021</td>
<td>11/14/2021</td>
<td>D2L Dropbox</td>
<td>35</td>
</tr>
<tr>
<td>Exam 3 Prep</td>
<td>11/12/2021</td>
<td>11/15/2021</td>
<td>MyStatLab</td>
<td>0</td>
</tr>
<tr>
<td>Exam 3</td>
<td>11/13/2021</td>
<td>11/16/2021</td>
<td>MyStatLab</td>
<td>120</td>
</tr>
<tr>
<td>Final Exam Prep</td>
<td>12/2/2021</td>
<td>12/5/2021</td>
<td>MyStatLab</td>
<td>35</td>
</tr>
<tr>
<td>Cumulative Final</td>
<td>10:30-12:30</td>
<td>12/7/2021</td>
<td>In Class</td>
<td>250</td>
</tr>
</tbody>
</table>

Disclaimer:
I reserve the right to make changes and amendments to this syllabus through D2L announcements during the semester.
**General Student Policies:**

**Academic Integrity (A-9.1)**
Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism.

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 to aid in achieving a better grade on a component of a class; (2) the falsification or invention 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 your own. Examples of plagiarism are (1) submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one's paper without giving the author due credit.


**Withheld Grades Semester Grades Policy (5.5)**
Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, 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. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.

**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), Human Services Building, and Room 325, 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/](http://www.sfasu.edu/disabilityservices/).

**Mental Health and Wellness**
SFA values students’ mental health and the role it plays in academic and overall student success. SFA provides a variety of resources to support students' mental health and wellness. Many of these resources are free, and all of them are confidential.

**On-campus Resource:**
SFA Counseling Services
[www.sfasu.edu/counselingservices](http://www.sfasu.edu/counselingservices)
Rusk Building, 3rd Floor
936.468.2401

**On-campus Resource:**
SFA Human Services Counseling Clinic
[www.sfasu.edu/humanservices/139.asp](http://www.sfasu.edu/humanservices/139.asp)
Human Services, Room 202
936.468.1041

**Crisis Resources:**
Burke 24-hour crisis line:
1.800.392.8343
Suicide Prevention Lifeline:
1.800.273.TALK (8255)
Crisis Text Line:
Text HELLO to 741-741