## **SOCI 3443 Social Statistics**

Sections 7 and 8 (lab) Online 4 Credit Hours Fall 2017

**Basic Information** 

Instructor: J. Bart Stykes, Ph.D. Email: jstykes@shsu.edu Office: CHSS Sociology Department 270B1 Campus Phone: (936) 294-4122

Required Text: Agresti, Alan and Christine Franklin. 2012. Statistics: The Art and Science of Learning from Data, 3<sup>rd</sup> Edition, Upper Saddle River, NJ: Pearson Education, Inc.

SPSS: Students must have access to the statistical programs SPSS for this course. Computer labs on campus already have SPSS installed on them. Students may also purchase a 6-month SPSS student license through the university by going to shsu.onthehub.com and selecting Students ->IBM SPSS Statistics 23 Grad Pack -> Indicate operating system (Mac or Windows) -> IBM SPSS Statistics Base GradPack 23. Note that you should check the platform and computer requirements for the program prior to download.

A calculator is also required for this course. There are many calculators on the market that will suffice for material in the course. However, it is suggested that students use a TI-83. The professor is most familiar with this model and its functions and will be able to address students' questions as they arise. Though other calculator brands and models may work well for students, the professor cannot guarantee their functionality related to course material.

Course Description: This course covers three broad types of statistical analyses: descriptive statistics, measures of association, and statistical inference. Through a combination of assigned readings, lecture, homework, and lab exercises, students will learn about the logic and assumptions behind statistical techniques as well as how to interpret results from analyses. In addition to more traditional learning approaches, students will also learn how to us Statistical Package for Social Sciences (SPSS) to analyze data "hands on" via carefully designed lab exercises.

Course Goals: Broadly speaking, I hope this course provides you a solid understanding of how statistical analyses are used to inform the social sciences – and more specifically, sociology. By taking an applied approach to teaching statistics, I hope you leave this class with a firm understanding of the assumptions underlying various statistical techniques and how to interpret results from analyses.

Course Objectives: Upon completion of this course students will:

- 1. Gain factual knowledge pertaining to Social Statistics,
- 2. Develop a unique skillset that will make you a marketable applicant for entry-level data analyst positions or graduate school in the Social Sciences, and
- 3. Learn appropriate methods for analyzing and interpreting numerical information.

Course Readings: Since this is an online course, it is imperative that you stay current on course readings. I have selected this textbook as it has useful formulas and examples. In reading for this class, try not to get bogged down in minor details. Rather, focus primarily on key terms, formulas, and applications. Like most math courses, content in this course is cumulative in that each chapter builds off of the previous one. That being said, if you fall behind early on, it will be quite challenging to get caught up again.

*Prof's Notes:* In addition to course readings, I will upload my own set of notes that supplement and streamline some of the most pertinent information from your text as the semester progresses. **Please note**, **the posted Prof's Notes are NOT exhaustive – meaning that these notes will not cover every important aspect of the textbook.** Rather, they are intended to provide a supplemental resource to students in addition to the textbook. That being said, relying solely on the Prof's Notes is not a sound strategy for success in this course.

Grading Criteria: Your performance in this class is evaluated primarily on two distinct components: 1) factual knowledge and 2) application of course content. Your proficiency is assessed using a combination of graded homework, lab exercises, and exams.

- 1. Exams comprise **65%** of your final grade.
  - Exam 1 covers Introductory Content in Chapters 1-3 (15%) Exam 2 covers Probability and Sampling in Chapters 5-7 (15%) Exam 3 covers Inferential Statistics in Chapters 8-10 (15%) Exam 4 is **cumulative** but primarily focuses on Chapters 11-12 (20%)

Students will have a 36 hour window to access each exam. Once the exam has been started, students will have 2 hours to complete it.

2. 10 Homework exercises comprise **15%** of your final grade. Each homework assignment is 1.5% of your final grade. The required end-of-chapter questions will be posted on Blackboard as the semester progresses.

Homework assignments should be scanned into either a docx or pdf document to the appropriate Assignment in each Weekly Module. If you have any questions about submitting assignments online, please consult the SHSU Online <u>technical support webpage</u>. Late homework assignments will not be accepted. If you do not have access to a scanner, please email me to set up another method for submitting completed homework assignments.

3. Lab exercises comprise **15%** of your final grade. 3 lab exercises will be administered over the course of the semester comprising 5% of your final grade (each).

All media content pertaining to labs as well as lab exercises, will be posted on the Blackboard page corresponding to the lab section of this class (i.e., Section 6). All materials needed to complete the lab exercise are already available to students.

- 4. Lastly, **5%** of your grade is based on participation in the survey and the "Meet and Greet" Discussion board forum administered the first week of classes.
  - 2% from posting your post in the "Meet and Greet" discussion board
  - 1% for each reply to another student's post (maximum of 2% points)
  - 1% for completing the survey

If you are unwilling to complete the survey, you can also receive participation credit by sending me an email where you 1) introduce yourself, 2) tell me about your expectations for this class, and 3) raise any specific questions or concerns regarding our class by 5pm on Friday 8-26.

| <b>A</b> : | 90-100      |
|------------|-------------|
| В:         | 80-89       |
| C:         | 70-79       |
| D:         | 60-69       |
| F:         | 59 or lower |
|            |             |

Make-up Exams: I do not allow students to reschedule exams. However, if you have a situation you feel is reasonable, you must email me at least 36 hours prior to the **start** of the exam window. I will evaluate these circumstances on an individual basis and reserve the right to determine if the student should be granted a make-up exam on a case-by-case basis. Below I have included the University's policy on religious holidays. If a student is allowed to reschedule an exam, they will be administered a new exam.

Extra Credit in the Virtual Office: I create a discussion board forum for each chapter in my virtual office. Students who post questions or respond to their classmates queries in the forum will earn 5 points of extra credit on that homework assignment. I guarantee to respond to every query that is posted by 5pm on the Friday of that week. I will not respond to posts until Saturday morning to allow students an opportunity to answer their fellow classmates' questions.

Academic Dishonesty: All students are expected to engage in all academic pursuits in a manner that is above reproach. Students are expected to maintain complete honesty and integrity in the academic experiences both in and out of the classroom. Any student found guilty of dishonesty is any phase of academic work will be subject to disciplinary action. The University and its official representatives may initiate disciplinary proceedings against a student accused of any form of academic dishonesty including, but not limited to, cheating on an examination or other academic work which is to be submitted, plagiarism, collusion and the abuse of resource materials. Academic dishonesty will not be tolerated. Students caught cheating will receive an F for that assignment with more severe sanctions as appropriate. http://www.shsu.edu/dotAsset/728eec25-f780-4dcf-932c-03d68cade002.pdf

Americans with Disabilities Act: It is the policy of Sam Houston State University that individuals otherwise qualified shall not be excluded, solely by reason of their disability, from participation in any academic program of the university. Further, they shall not be denied the benefits of these programs nor shall they be subjected to discrimination. Students with disabilities must register with the Office of Services for Students with Disabilities located in the Counseling Center and then arrange a conference with the instructor in order that accommodations can be made to assure that participation and achievement opportunities are not impaired. <a href="http://www.shsu.edu/dotAsset/9edd8433-cad5-40d1-b4bf-6a91b08f90e4.pdf">http://www.shsu.edu/dotAsset/9edd8433-cad5-40d1-b4bf-6a91b08f90e4.pdf</a>. SSD Office Location: Lee Drain Annex (next to the Farrington Building); Ph. 936-294-3512; TDD: 936-294-3786; E-mail: <a href="http://disability@shsu.edu">disability@shsu.edu</a>; Web Address: <a href="http://www.shsu.edu/dotAsset/9edd8433-cad5-40d1-b4bf-6a91b08f90e4.pdf">www.shsu.edu/dotAsset/9edd8433-cad5-40d1-b4bf-6a91b08f90e4.pdf</a>. SSD Office Location: Lee Drain Annex (next to the Farrington Building); Ph. 936-294-3512; TDD: 936-294-3786; E-mail: <a href="http://disability@shsu.edu">disability@shsu.edu</a>; Web Address: <a href="http://www.shsu.edu/dotAsset/9edd8433-cad5-40d1-b4bf-6a91b08f90e4.pdf">www.shsu.edu/dotAsset/9edd8433-cad5-40d1-b4bf-6a91b08f90e4.pdf</a>.

**Religious Holidays**: The Texas Education Code requires that an institution of higher education excuse a student from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. A student whose absence is excused under this subsection may not be penalized for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused within a reasonable time after the absence. Religious Holy Day means a holy day observed by a religion whose places of worship are exempt from property taxation. Students should contact the instructor as soon as possible regarding any missed classes or exams due to Religious Holy Days. <a href="http://www.shsu.edu/dotAsset/0953c7d0-7c04-4b29-a3fc-3bf0738e87d8.pdf">http://www.shsu.edu/dotAsset/0953c7d0-7c04-4b29-a3fc-3bf0738e87d8.pdf</a>

**University Code of Conduct:** Students are expected to assist in maintaining a classroom environment that is conducive to learning. Students shall arrive to class on time and be respectful to their other students. If a student needs to arrive to class late or leave class early the student will make the professor aware of these needs prior to class time. All cell phones and beepers must be turned off and stowed away while in the classroom. If a cell phone is out during an exam, the student will receive an F for that exam. Students who disrupt the class will be contacted by the professor to adjust their behaviors. In extreme cases students

who cannot comply with these requirements can be removed and resigned from the class. https://netreg.shsu.edu/mirror/codeofconduct.html

**Evaluation:** Students will have the opportunity to evaluate the professor during the semester.

**Classroom Rules of Conduct:** Students are expected to assist in maintaining a classroom environment that is conducive to learning. Students shall arrive to class on time and be respectful to their other students. If a student needs to arrive to class late or leave class early the student will make the professor aware of these needs prior to class time. All cell phones and beepers must be turned off and stowed away while in the classroom. If a cell phone is out during an exam, the student will receive an F for that exam. Students who disrupt the class will be contacted by the professor to adjust their behaviors. In extreme cases students who cannot comply with these requirements can be removed and resigned from the class.

**Visitors in the Classroom:** Only registered students may attend class. Exceptions can be made on a case-by-case basis by the professor. In all cases, visitors must not present a disruption to the class by their attendance. Students wishing to audit a class must apply to do so through the Registrar's Office.

## TENTATIVE SCHEDULE, IMPORTANT TASKS AND DEADLINES Important Tasks

Week and Topic

| Week 1 (August 23-25): Introductions and Getting Acquainted with Blackboard | <ol> <li>Read Welcome, Syllabus, and Prof's Notes for<br/>Chapter 1</li> </ol>               |
|---|--|
|   | <ol> <li>Complete Anonymous Survey by Friday August 25 at<br/>5pm.</li> </ol>                |
|   | 3. Post to the "Meet and Greet" discussion forum and respond to at least two student's posts |
|   | 4. Purchase and install SPSS if you will not have access campus computer labs.               |
| Week 2 (August 28-September 1): Learning from Data and Graphs/Summaries     | 1. Read Chapter 2 and Prof's Notes for Chapter 2   |
|   | 2. Access learning application with NCFMR Family<br>Profiles                                 |
|   | 3. Complete HW #1 by 11:59pm on September 3 <sup>rd</sup>                                    |
| Week 3 (September 4-8): Contingency, Correlation, and Regression            | 1. Read Chapter 3 and Prof's Notes for Chapter 3   |
|   | 2. Complete HW #2 by 11:59pm on September 10 <sup>th</sup>                                   |
| Week 4 (September 11-15): Lab Exercise Number 1 and Exam                    | 1. Complete Practice Problems for Exam 1 (optional)  |
|   | 2. Take Exam # 1 (available 8am on $9/14$ to 8pm on $9/16$ )                                 |
|   | 3. Complete Lab Exercise 1 by 11:59pm on 9/17  |
| Week 5 (September 18-22): Probability in Our Daily Lives                    | 1. Read Chapter 5 and Prof's Notes for Chapter 5   |
|   | 2. Complete HW # 3 by 11:59pm on September 24 <sup>th</sup>                                  |
| Week 6 (September 25-29): Probability Distributions                         | 1. Read Chapter 6 and Prof's Notes for Chapter 6   |
|   | 2. Complete HW #4 by 11:59pm on October 1 <sup>st</sup>                                      |
| Week 7 (October 2-6): Sampling Distributions                                | 1. Read Chapter 7 and Prof's Notes for Chapter 7   |
|   | 2. Complete HW #5 by 11:59pm on October 8 <sup>th</sup>                                      |

| Week and Topic   | Important Tasks  |  |
|--|--|--|
| Week 8 (October 9-13): Review Probability/Sampling and Exam        | <ol> <li>Complete practice problems for Exam 2 (optional)</li> <li>Complete Exam 2 (available 8am on 10/12 to 8pm on 10/14)</li> </ol>   |  |
| Week 9 (October 16-20): Confidence Intervals                       | <ol> <li>Read Chapter 8 and Prof's Notes for Chapter 8</li> <li>Complete HW #6 by 11:59pm on October 22<sup>nd</sup></li> </ol>  |  |
| Week 10 (October 23-27): Significance Tests about Hypotheses       | <ol> <li>Read Chapter 9 and Prof's Notes for Chapter 9</li> <li>Complete HW #7 by 11:59pm on October 29<sup>th</sup></li> </ol>  |  |
| Week 11 (October 30 – November 3): Comparing Two Groups            | <ol> <li>Reach Chapter 10 and Prof's Notes for Chapter 10</li> <li>Complete HW #8 by 11:59pm on November 5<sup>th</sup></li> </ol>   |  |
| Week 12 (November 6-10): Lab Exercise Number 2 and Exam            | <ol> <li>Complete Practice Problems for Exam 3 (optional)</li> <li>Take Exam # 3 (available 8am on 11/09 to 8pm on 11/11)</li> <li>Complete Lab Exercise 2 by 11:59pm on 11/12</li> </ol>        |  |
| Week 13 (November 13-17): Association btw Categorical Variables    | <ol> <li>Read Chapter 11 and Prof's Notes for Chapter 11</li> <li>Complete HW #9 by 11:59pm on November 19<sup>th</sup></li> </ol>   |  |
| Week 14 (November 20-24): Lab Exercise Number 3                    | 1. Complete Lab Assignment 3 by 11:59pm on 11/26   |  |
| Week 15 (November 27 – December 1): Regression Analyses and Review | <ol> <li>Read Chapter 12 and Prof's Notes for Chapter 12</li> <li>Complete HW #10 by 11:59pm on December 3<sup>rd</sup></li> <li>Complete Practice Problems for Final Exam (optional)</li> </ol> |  |
| Final Exam Available 8am December 4th through 8pm December 6th     |  |  |

Please note this schedule is tentative and subject to change.