SYA 4400: Social Statistics: August 24th 2020 – December 11th 2020

COURSE INSTRUCTOR

Katherine Tindell
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BEL 510

Online Mentor:
Taylor Darks
tbd19a@my.fsu.edu

COURSE INFORMATION

- **Course Hours:** Online
- **Credit Hours:** 3 hours
- **Prerequisites:** None

COURSE DESCRIPTION

This course provides an introduction to statistics and their use in the social sciences. Students will learn how social scientists represent aspects of the empirical world (e.g., wealth and health) as distributions, characterize those distributions in terms of typicality and diversity, and use sampling and statistical theory to make informed assessments about what society looks like and how social relationships operate based on sample data.

LEARNING OBJECTIVES

At the completion of this course, students will be able to:

1. Calculate and interpret the mean, median, mode, range, IQR, variance, and standard deviation.
2. Describe the shape of distributions (symmetry vs. asymmetry, uni- vs. multi-modal, etc.).
3. Translate z-scores on the standard normal curve into ranges of areas under that curve.
4. Calculate and interpret the standard error of the sample mean.
5. Conduct hypothesis testing related to the differences between two or more groups.
6. Conduct hypothesis testing related to the relationship between two variables.
7. Use statistical software to analyze social science data and meaningfully interpret the results.
8. Accurately interpret quantitative analyses that are published in peer-reviewed journals.

**COURSE MATERIALS**

Your required online textbook is:


Additional required materials for this course include:

- The statistical software program Stata, available online for free at FSU's Virtual Computer Lab at [https://myfsuvlab.its.fsu.edu](https://myfsuvlab.its.fsu.edu).
- A basic hand calculator from the bookstore, Amazon, Target, or Walgreens/CVS. You need one that can calculate square roots; I recommend the Texas Instruments TI30XA (around $10).
- It would be helpful if you have access to a probability distribution calculator app or applet. I recommend the Probability Distributions app for Apple and Android by Matt Bognar; his webpage has applet versions you can run on your computer if you don't have a smartphone.

**STUDENT RESPONSIBILITIES**

- Students should log on to Canvas at least every other day to check for course updates.
- Students are expected to keep up with the class, engage with the course material, and submit assignments by due dates.
- Assignments, quizzes, and exams are expected to be products of individual students as per the [FSU Academic Honor Policy](http://www.fsu.edu/). Students should not discuss any of the questions with each other before or during the actual assignments, activities, quizzes, or exams without instructor approval.
- To receive maximum points for questions, students need to follow the instructions carefully, write complete sentences, and use spell and grammar checking.
- To be successful in this course, students need to complete all required assignments and tests.

**GRADING POLICY**

Course Requirements
1. Read the assigned chapter(s) each week.

2. Conduct the practice data analysis problems using Stata and upload completed PDF files to Canvas by the due date.

3. Complete the assigned chapter exercises at the end of the week’s assigned chapter and upload answers to Canvas.

4. Participate regularly. You must have an excused absence to make up a quiz or exam.

5. Take (3) unit quizzes.


7. Complete the comprehensive final exam.

Chapter Exercises and Stata Analyses (44 points total)

All students are expected to read the assigned chapter and completed the data analysis problems and the chapter exercises. Students must complete both assignments each week. There is a total of 11 data analysis problems and 11 chapter problems assignments. Data analysis worksheets and weekly chapter problems will be graded as Satisfactory (2 points), Incomplete/Partial Effort (1 point) or Unsatisfactory (0 points). It is up to you to make sure that your chapter problems are correct by checking the answers at the back of the book.

Unit Exams (20 points each, 60 points total)

The course material is divided into three units. At the end of each unit, students will take a quiz using calculators and, on some quizzes, a sheet of formulas provided by the instructor.

Post-Exam Reflections (4 points each, 8 points total)

After the first two exams, you will be asked to reflect on your work in the course thus far. The goal of these assignments is for you to reflect on your progress in the course and make necessary adjustments that will help you succeed.

Mini-Quizzes (5 points each, 55 points total)

Each week there will be a mini-quiz on Friday. These mini-quizzes are aimed at reflecting on what we have learned that week, and identifying points of clarification. There will be 11 mini-quizzes.

Cumulative Final Exam (40 points)

The final exam covers material from all units. You will need your calculator and a sheet of formulas that the instructor will provide. I cannot schedule early final exams without a documented excuse. See FSU’s policy on final exams, which I am mandated to follow (http://registrar.fsu.edu/registration_guide/Links to an external site.). The final exam will be: Friday, December 11th due by 8:00 PM.
GRADING SCHEME

The following grading standards will be used in this class:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Range</th>
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<tbody>
<tr>
<td>A</td>
<td>94% to 100%</td>
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<tr>
<td>A-</td>
<td>90% to 93%</td>
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<tr>
<td>B+</td>
<td>87% to 89%</td>
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<tr>
<td>B</td>
<td>84% to 86%</td>
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<tr>
<td>B-</td>
<td>80% to 83%</td>
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<tr>
<td>C+</td>
<td>77% to 79%</td>
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<tr>
<td>C</td>
<td>74% to 76%</td>
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<tr>
<td>C-</td>
<td>70% to 73%</td>
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<tr>
<td>D+</td>
<td>67% to 69%</td>
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<tr>
<td>D</td>
<td>64% to 66%</td>
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<tr>
<td>D-</td>
<td>60% to 63%</td>
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<td>F</td>
<td>59% and below</td>
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CANVAS SUPPORT

Need help with Canvas? Contact FSU Canvas Support:

Email: help@campus.fsu.edu

Phone: (850) 644-8004

Website: distance.fsu.edu/canvasLinks to an external site.

Hours: 8am to 5pm, Monday - Friday
COURSE POLICIES

COMMUNICATIONS/NETIQUETTE

For Discussions:

- Please use polite, respectful behavior when posting your responses to prompts in the Discussion Boards.
- Be mindful of how you express your emotions and humor, and be sensitive to cultural differences of your online peers.
- Keep postings to the point, and make sure your comments are relevant to the topic of discussion.
- Avoid messages such as, "Wow," "Way to go," or "Ditto" and aim for comments that validate other members’ ideas through careful explanation of why.
- When replying, give a short description in the subject line of what you are replying to, and use correct punctuation and spelling throughout your post.

For Email Communication:

- For email, please respond to your instructor’s messages within a 24-hour period.
- Use a brief description in the subject line that outlines the topic of discussion.
- Avoid using slang or profane words.
- Use the title your instructor prefers for communication.
- Avoid using emoticons, such as smiley faces, and maintain a professional demeanor.
- Sign your email messages using your full name.
- AVOID USING ALL CAPS. This makes the message visually difficult to read and is perceived by the reader as "shouting."
- Use correct spelling, grammar, and punctuation, just as you would for any communication.
- Ask yourself whether you would be comfortable if someone other than the intended receiver were to read it. Remember, email is not a completely secure form of communication.
- Refrain from "flaming," which is expressing a strongly held opinion without tact or regard for others. Don’t assume that recipients will know the intent of the message (e.g., "just kidding"). It reads differently when it’s in print (electronic or not).
- Report any inappropriate communication considered to be of a serious nature to your instructor, as it may be a violation of University policy.
- Treat others with respect by making messages clear and succinct.
ABSENCE POLICY

Excused absences include documented illness, deaths in the family and other documented crises, call to active military duty or jury duty, religious holy days, and official University activities. These absences will be accommodated in a way that does not arbitrarily penalize students who have a valid excuse. Consideration will also be given to students whose dependent children experience serious illness.

POLICY FOR MISSED TESTS

Documentation is required for an absence to be excused. You must provide me a copy of the printed documentation and keep a copy for your own records. Having an excused absence will permit you to make up a missed quiz. If you miss a quiz for other reasons, you will get a 0 for that quiz.

POLICY FOR HOMEWORK

Chapter Problems and Data Analysis Assignments are submitted online. **Late assignments are not accepted without documentation**; students with excused absences should submit their assignments in advance or by the day they are due (scan with phone, send as email attachment).

POLICY ON RESPONDING TO STUDENTS

- Email responses typically within 24 hours.
- Graded assignments typically returned within 1 week of due date.

UNIVERSITY POLICIES

UNIVERSITY ATTENDANCE POLICY

Excused absences include documented illness, deaths in the family and other documented crises, call to active military duty or jury duty, religious holy days, and official University activities. These absences will be accommodated in a way that does not arbitrarily penalize students who have a valid excuse. Consideration will also be given to students whose dependent children experience serious illness.

ACADEMIC HONOR POLICY

The Florida State University Academic Honor Policy outlines the University's expectations for the integrity of students' academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process. Students are responsible for reading the Academic Honor Policy and for living up to their pledge to "...be honest and truthful and... [to] strive for personal and institutional integrity at Florida State University." (For more details see the [FSU Academic Honor Policy and procedures for addressing alleged violations](Links to an external site.).)

AMERICANS WITH DISABILITIES ACT

Students with disabilities needing academic accommodation should (1) register with and provide documentation to the Student Disability Resource Center and (2) bring a letter to the instructor indicating the need for accommodation and what type. Please note that instructors are not allowed to
provide classroom accommodation to a student until appropriate verification from the Student Disability Resource Center has been provided. This syllabus and other class materials are available in alternative format upon request. For more information about services available to FSU students with disabilities, contact the:

Student Disability Resource Center
Links to an external site. 874 Traditions Way
108 Student Services Building
Florida State University
Tallahassee, FL 32306-4167
(850) 644-9566 (voice)
(850) 644-8504 (TDD)
Email: sdrc@admin.fsu.edu

FREE TUTORING FROM FSU

On-campus tutoring and writing assistance is available for many courses at Florida State University. For more information, visit the Academic Center for Excellence (ACE) Tutoring Services'Links to an external site. comprehensive list of on-campus tutoring options - email: tutor@fsu.edu. High-quality tutoring is available by appointment and on a walk-in basis. These services are offered by tutors trained to encourage the highest level of individual academic success while upholding personal academic integrity.

SYLLABUS CHANGE POLICY

Except for changes that substantially affect implementation of the evaluation (grading) statement, this syllabus is a guide for the course and is subject to change with advance notice.
## COURSE SUMMARY

All course assignments, quiz dates, and the final exam are listed below. To be successful in this course, be sure to complete all required assignments and tests by the due date.

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic and Reading for week</th>
<th>Assignments Due</th>
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<tbody>
<tr>
<td>Week 1: August 24 – August 30</td>
<td><strong>Introduction and Sampling and Data</strong>&lt;br&gt;Chep 1 in Illowsky &amp; Dean (2016). Introductory Statistics. OpenStax, ISBN 1938168208, <a href="http://www.openstax.org/details/introductory-statistics">www.openstax.org/details/introductory-statistics</a> (Links to an external site).&lt;br&gt;Read the Intro, section 1.1, and section 1.3 of our online textbook. Also skim section 1.2 on different types of data and sampling. SKIP sections 1.4, 1.5, and 1.6.&lt;br&gt;Introduction and Chapter One PowerPoint&lt;br&gt;Read through the entire PowerPoint. To view captions for the images and additional notes, download the PowerPoint file rather than viewing it in the Canvas preview.</td>
<td>1. Syllabus Quiz Due August 26 by 11:59 PM to Avoid Drop!&lt;br&gt;2. Data Analysis Assignment Due by August 27th 11:59 PM.&lt;br&gt;3. Chapter Problems Week 1 – Due August 30 by 11:59 PM.&lt;br&gt;4. Mini Quiz Due August 30 by 11:59 PM</td>
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<td>Week 2: August 31 – September 6</td>
<td><strong>Measures of Central Tendency</strong>&lt;br&gt;Textbook Chapter 2&lt;br&gt;Read: Intro, Section 2.3, Section 2.5, and Section 2.6&lt;br&gt;Chapter 2- PowerPoint</td>
<td>1. Data Analysis Assignment due September 2nd by 11:59 PM.&lt;br&gt;2. Chapter Problems Week 2 – Due September 6 by 11:59 PM.&lt;br&gt;3. Mini Quiz 2 – Due September 6 by 11:59 PM</td>
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<td>Week 3: September 7 - September 13 (Labor Day – September 7)</td>
<td><strong>Range, IQR, Variance, and Standard Deviation</strong>&lt;br&gt;Chapter 2: Re-read Section 2.3, plus Section 2.4 and 2.7&lt;br&gt;Week 3: Chapter 2 PowerPoint.</td>
<td>1. Data Analysis Assignment Due September 9th by 11:59 PM&lt;br&gt;2. Chapter Problems Week 3 – Due September 13th by 11:59 PM&lt;br&gt;3. Mini Quiz 3 – due September 13th by 11:59 PM</td>
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<td>Week 4: September 14 – September 20</td>
<td><strong>Probability and Probability Distributions</strong></td>
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<td>Chap 3: Introduction and Section 3.1 on terminology, skim Section 3.4 on contingency tables. Chap 4: Introduction. Chap 5: Introduction. Also browse the rest of Chap 4 and 5. Week 4 Power Points</td>
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<td><strong>REVIEW FOR QUIZ!!</strong></td>
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<td>Week 4: PowerPoint</td>
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<tr>
<th>Week 5: September 21 – September 27</th>
<th><strong>Quiz 1</strong></th>
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<tr>
<td>For this week, you must review class materials from weeks 1 to 4 and read through the sample questions available on Canvas. Preview the document</td>
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<tr>
<td>1. Self-reflection – due September 27th by 11:59PM</td>
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<td>2. Quiz 1 – due September 27th by 8:00PM</td>
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<tr>
<th>Week 6: September 28 – October 4</th>
<th><strong>Normal Distribution</strong></th>
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<tr>
<td>Week 5: PowerPoint</td>
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<tr>
<td>1. Data Analysis Assignment due September 30th by 11:59PM</td>
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<td>2. Chapter Problems Week 6 due October 4th by 11:59PM</td>
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<td>3. Mini Quiz 5 due by October 4th by 11:59 PM</td>
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<tr>
<th>Week 7: October 5 – October 11</th>
<th><strong>Central Limit Theorem and Sampling Distribution</strong></th>
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<tr>
<td>Chapter 7: Sections 7.1 and 7.3 in Illowsky &amp; Dean (2016). Introductory Statistics.</td>
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<tr>
<td>Week 6: Power Point</td>
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<tr>
<td>1. Data Analysis Assignment October 7th by 11:59PM</td>
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<tr>
<td>2. Chapter Problems Week 7 due by October 11 by 11:59PM</td>
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<tr>
<td>3. Mini Quiz 6 due by October 11 by 11:59PM</td>
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| Week 8: October 12 – October 18 | **Confidence Intervals**  
Chapter 8: The Introduction and Sections 8.1, 8.2, and 8.3 in Illowsky and Dean (2016). Introductory Statistics  
**REVIEW FOR QUIZ!**  
Week 7: Power Point | 1. Data Analysis Assignment due October 14th by 11:59PM  
2. Chapter Problems Week 8 due October 18th by 11:59PM  
3. Mini Quiz 7 due October 18th by 11:59PM |
| --- | --- | --- |
| Week 9: October 19 – October 25 | **Quiz 2**  
For this week, you must review class materials from weeks 6-8 and read through the sample questions available on Canvas.  
Preview the document | 1. Quiz 2 – due October 25th by 8:00 PM  
2. Self-reflection – due October 25th by 11:59PM |
| Week 10: October 26 – November 1 | **Testing If Two Groups Differ**  
2. Chapter Problems Week 10 due November 1st by 11:59PM  
3. Mini Quiz 8 due November 1st by 11:59PM |
| Week 11: November 2 – November 8 | **Testing Difference of 3 or More Groups**  
2. Chapter Problems Week 11 due November 8th by 11:59PM  
3. Mini Quiz 9 due November 8th by 11:59PM |
| Week 12: November 9 – November 15 (Veteran’s Day- November 11) | **Linear Regression and Correlation**  
2. Chapter Problems Week 12 due November 15th by 11:59PM  
3. Mini quiz 10 due November 15th by 11:59PM |
| Week 13:  
November 16 – November 22 | **Cross Tabs and Chi-Square**  
Due November 18th by 11:59 PM  
2. Chapter Problems Week 13  
due by November 22nd by 11:59 PM  
3. Mini Quiz 11 due by  
November 22nd by 11:59 PM |
| --- | --- | --- |
| Week 14:  
November 23 – November 29  
(Thanksgiving Break – No Classes this week) | **No Classes**  
**REVIEW FOR QUIZ AND FINAL EXAM!** | **No Assignments Due** |
| Week 15:  
November 30 – December 6 | **Quiz 3**  
**Final Exam Review** | **Quiz 3 due December 6 by 8:00 PM** |
| Week 16:  
December 7 – December 11 | **Final Exam** | **Final Exam Due December 11th by 8:00PM** |