PSYC 3330.001 - Psychological Statistics

Lecture: 12:30 pm – 1:45 pm TR
Instructor: Mark Ludorf  215G- Education Building
Email address: mludorf@sfasu.edu (using the D2L email is best)
Phone: +1 936 468 1460 (D2L email is better)
Graduate Assistant: TBD
Course website: https://d2l.sfasu.edu/
Department: Psychology

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<tr>
<th>Office Hours</th>
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<tr>
<td>1:45 pm – 4:45 pm (Campus)</td>
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<td>8:00 – 10:00 am (Online)</td>
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If you want to schedule a specific time outside of the office hours above to discuss issues, please send an email and we will find a mutually agreeable time to discuss your issues/concerns. I am here to help you, so please do not hesitate to contact me.
**Student Wellness and Well-Being**
SFA values students’ overall well-being, mental health and the role it plays in academic and overall student success. Students may experience stressors that can impact both their academic experience and their personal well-being. These may include academic pressure and challenges associated with relationships, emotional well-being, alcohol and other drugs, identities, finances, etc.

If you are experiencing concerns, seeking help, 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 Resources:**
The Dean of Students Office (Rusk Building, 3rd floor lobby)
www.sfasu.edu/deanofstudents
936.468.7249
dos@sfasu.edu

SFA Human Services Counseling Clinic Human Services, Room 202
www.sfasu.edu/humanservices/139.asp
936.468.1041

The Health and Wellness Hub “The Hub”
Location: corner of E. College and Raguet St.

To support the health and well-being of every Lumberjack, the Health and Wellness Hub offers comprehensive services that treat the whole person – mind, body and spirit. Services include:
- Health Services
- Counseling Services
- Student Outreach and Support
- Food Pantry
- Wellness Coaching
- Alcohol and Other Drug Education

www.sfasu.edu/thehub
936.468.4008
thehub@sfasu.edu

**Crisis Resources:**
- Burke 24-hour crisis line: 1.800.392.8343
- National Suicide Crisis Prevention: 9-8-8
- Suicide Prevention Lifeline: 1.800.273.TALK (8255)
Crisis Text Line: Text HELLO to 741-741
Course Description:
Application of descriptive and inferential statistical techniques in processing behavioral data. Includes normative techniques, parametric and nonparametric applications.

PSYC 3330 “Psychological Statistics” (3 credits) is designed to introduce students to the application of descriptive and inferential statistical techniques to behavioral data. These techniques include normative, parametric, and nonparametric applications. The course typically meets 150 minutes a week in two 75-minute segments or three 50-minute segments. The course runs for 15 weeks with a 2-hour final examination period. Students typically have significant weekly reading assignments, statistics homework, and are expected to take regular examinations of their skills and knowledge of statistics. These activities average at a minimum 6 hours of work each week to prepare outside of classroom hours. Online course sections contain extensive written content that includes the same information students in a face-to-face lecture sections receive, requiring students to engage the online modules for at least three hours per week. For every hour a student spends engaging with the online content, he/she spends at least two hours completing associated activities and assessments.

Program Learning Outcomes

PLO
The student will demonstrate familiarity with the major concepts, theoretical perspectives, empirical findings, and historical trends in psychology. Advanced
The student will understand and apply basic research methods in psychology, including research design, data analysis, and interpretation. Advanced
The student will respect and use critical and creative thinking, skeptical inquiry, and, when possible, the scientific approach to solve problems related to behavior and mental processes. Advanced
The student will understand and apply psychological principles to personal, social, and organizational issues. Intermediate
The student will value empirical evidence, tolerate ambiguity, act ethically, and reflect other values that are the underpinnings of psychology as a science. Intermediate

Student Learning Outcomes

• A learner will demonstrate the ability to use statistics to describe data including frequency distributions, percentiles and histograms/polygons.
• A learner will demonstrate the ability to identify and calculate several measures of central tendency and variability
• A learner will demonstrate the ability to use the hypothesis testing process
• A learner will demonstrate an understanding of probability
• A learner will demonstrate the ability to compute measures of correlation and test for statistical significance
• A learner will demonstrate the ability to compute statistics testing statistical significance of differences in means (i.e., t and Z)
• A learner will demonstrate the ability to compute statistics testing statistical significance of differences in variances (i.e., F_{max}, F, and t)
• A learner will demonstrate an understanding of single factor (between and within-subjects) ANOVAs
• A learner will demonstrate facility with statistical calculators and software.
Text and Materials:
Wike: Numbers: A primer of data analysis. HARSF, 1987 (provided by Professor)

TI 83/84 family of calculator. I will be using a TI 84* (Silver Plus) calculator for the course (see image below). Since you do not have to purchase a textbook, you are required to have a calculator from this family of calculators or an emulator (see Wabbitemu). I will only be demonstrating how to perform functions on the TI-84. I would encourage you to read the calculator's manual (and view any relevant YouTube videos) to determine how to use the statistical functions. In the vernacular of students, by the end of the course your calculator should be your BFF.

*the Wabbitemu emulator for the TI-84

Course Requirements:
The course is an intuitive approach to applied statistics with an emphasis on solving problems. The book will be divided into six sections with a quiz over each section. Using the required calculator will facilitate doing statistics. The final examination is optional and comprehensive. Points earned on the final will be substituted for the lowest quiz grade when the points on the final are higher than the lowest quiz points.

In the course site I have provided additional problems and (video and written) solutions for you to use as you practice and enhance your problem solving skills we initially develop in class. You are encouraged to complete the problems including the See-Try-Fly and textbook problems. These problems will not be collected, but will provide you with an additional opportunity to prepare for the quizzes. If you can do these problems, then you should perform well on the quizzes. The key to doing well in this class is to work as many problems as you can.

I have also provided video lectures covering many of the topics covered in class. You should review these videos after reading the chapter and prior to class where we discuss the chapter. Even though you might feel like the videos are challenging, having watched them prior to our in-class discussion will facilitate your understanding of the information. You should also re-review the videos after class. If you have any questions these videos, please do not hesitate to contact me.
### Course Calendar:

#### Lectures Schedule

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<th>Month</th>
<th>Week of</th>
<th>Tuesday</th>
<th>Thursday</th>
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<tr>
<td>August</td>
<td>28</td>
<td>Welcome&lt;br&gt;Chapter 1&lt;br&gt;Introduction&lt;br&gt;<em>Numbers Numbers Numbers</em></td>
<td>Chapter 1&lt;br&gt;Introduction&lt;br&gt;<em>Numbers Numbers Numbers</em>&lt;br&gt;Chapter 2&lt;br&gt;Organizing and picturing numbers&lt;br&gt;<em>Putting Numbers into Piles for fun and Profit</em></td>
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<tr>
<td>Sept</td>
<td>4</td>
<td>Chapter 2&lt;br&gt;Organizing and picturing numbers&lt;br&gt;<em>Putting Numbers into Piles for fun and Profit</em></td>
<td><strong>Quiz 1</strong>&lt;br&gt;Chapters 1 &amp; 2</td>
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<td>11</td>
<td>Chapter 3&lt;br&gt;Centers&lt;br&gt;<em>Being More Exact about Centers</em></td>
<td>Chapter 3&lt;br&gt;Centers&lt;br&gt;<em>Being More Exact about Centers</em>&lt;br&gt;Chapter 4&lt;br&gt;Variability&lt;br&gt;<em>Nailing Down Spread</em></td>
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<td>18</td>
<td>Chapter 4&lt;br&gt;Variability&lt;br&gt;<em>Nailing Down Spread</em></td>
<td><strong>Quiz 2</strong>&lt;br&gt;Chapters 3 &amp; 4</td>
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<td>25</td>
<td>Chapter 5&lt;br&gt;Beginning inference&lt;br&gt;<em>Flippin' Coins and Buyin' Beers</em></td>
<td>Chapter 5&lt;br&gt;Beginning inference&lt;br&gt;<em>Flippin' Coins and Buyin' Beers</em></td>
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<td>Oct</td>
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<td>Chapter 5&lt;br&gt;Beginning inference&lt;br&gt;<em>Flippin' Coins and Buyin' Beers</em></td>
<td><strong>Quiz 3</strong>&lt;br&gt;Chapter 3&lt;br&gt;Chapter 5</td>
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<td>9</td>
<td>Chapter 6&lt;br&gt;Linear correlation&lt;br&gt;<em>Rho Rho Rho the Boat</em></td>
<td>Chapter 6&lt;br&gt;Linear correlation&lt;br&gt;<em>Rho Rho Rho the Boat</em>&lt;br&gt;Chapter 7&lt;br&gt;Regression&lt;br&gt;<em>Still Rhoing</em></td>
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<td>16</td>
<td>Chapter 7&lt;br&gt;Regression&lt;br&gt;<em>Still Rhoing</em></td>
<td><strong>Quiz 4</strong>&lt;br&gt;Chapters 6 &amp; 7</td>
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<td>23</td>
<td>Chapter 8&lt;br&gt;Centers&lt;br&gt;<em>Comparing Centers</em></td>
<td>Chapter 8&lt;br&gt;Centers&lt;br&gt;<em>Comparing Centers</em>&lt;br&gt;Chapter 9.1 (2nd half)&lt;br&gt;Variabilities&lt;br&gt;<em>Comparing Spreads</em></td>
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<td>Date</td>
<td>Chapter</td>
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<td>Nov</td>
<td>30</td>
<td>Chapter 9.1 (1st half)</td>
<td>Quiz 5</td>
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<td>Variabilities</td>
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<td><em>Comparing Spreads</em></td>
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<td>Nov</td>
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<td>Chapter 9.2 (2nd half)</td>
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<td><em>Comparing Spreads</em></td>
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<td>13</td>
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<td>Chapter 10</td>
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<td>Comparing k centers</td>
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<td><em>A Pie with a Few Slices - Testing k Means</em></td>
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<td>20</td>
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<td>Thanksgiving</td>
<td>Quiz 6</td>
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<td>Dec</td>
<td>4</td>
<td>Review</td>
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<td>Exam Week</td>
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Grading Policy:
Your course grade will depend upon the total number of points earned on the quizzes (600 possible). A final distribution of total points and the cutoffs for each grade will be made following the final examination. This is a curve grading scheme thus, letting someone cheat from you only hurts your grade!!!!!!! The most conservative curve for the course will be

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<tr>
<td>A</td>
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<td>B</td>
<td>495</td>
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<td>C</td>
<td>435</td>
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<td>D</td>
<td>375</td>
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<td>F</td>
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As mentioned above there will be six quizzes, each covering a section of the book. The quizzes will be available during the scheduled class time Thursday of quiz week.

For each quiz you can use a “help sheet” (on a maximum 8.5” x 11” sheet of paper on both sides). You can either use the help sheet provided or you can construct your own. If you create your own sheet, you can format it any way you desire. I am available for consultation on construction. You can include anything you want (e.g. formulas, sample problems,...) on your sheet.

You are encouraged to use a calculator on the quizzes. Make sure you complete your quiz within the allotted time. If you run over time, you will earn a zero for that quiz. There will be no make-up or early quizzes.

Attendance Policy:
Attendance is encouraged at all lectures. Quizzes will only be administered the day they are scheduled. THERE WILL BE NO MAKE UP OR EARLY QUIZZES. If you miss a quiz you can just substitute the FINAL for the missed quiz. You do not need to bring any note for your absence.

Technology

Email
All email must be sent to me via MyCourses (D2L). Monday-Friday I will try to respond to your email as soon as possible. I will respond to all substantive email (most within 24 hours). If 24 hours has elapsed since your email, please send it again.

Email sent to my email account outside of the course site (e.g., @sfasu.edu account) will not receive a response.

Specific grades and performance can NEVER be discussed via email due to federal regulations regarding the release of learner information. If you have questions about your grade or performance, please contact me. I will also load an Excel Gradebook App for you to (on a PC computer only – the app does not work on a phone or a Mac) easily keep track of your grade and where you stand in the course.
**Phones and other electronic devices**

My philosophy of technology in the educational environment is that (1) it should support the academic performance of the learners and (2) the technology cannot be (even mildly) disruptive to others in the course (including the professor).

With those criteria as a guide (1) all phones must be turned off in class. If you know of an impending emergency (expecting a call from a parent regarding a hospitalization, etc.) please leave your phone on silent and quietly leave the classroom to take the call. If it is a significant emergency, you should reflect on whether you will be able to concentrate in the class while waiting for the call and consider alternatives.

Sending, receiving, and/or reading of texts is **NOT** acceptable at any time.

**Warning:** Research has shown that use of laptops in a classroom is related to lower performance in the course. Use of laptop computers may be acceptable for note taking only (see the data below regarding the detrimental effect related to accessing the web). Use **must be approved by the professor and will be monitored throughout the course.** With approval also comes your agreement to allow the professor to randomly look at the history of sites visited for that day. Your computing activity must **NOT BE** disruptive to others in the course. You might also note that research shows that learners using laptops remember **SIGNIFICANTLY LESS** information than learners without laptops. Posted in the course site is additional information about the detrimental outcomes related to the use of a laptop in a course.

Any recording of any part of the course violates copyright laws and therefore is not permitted except when approved by the instructor. If you are not sure whether the technology you want to use in the classroom is acceptable, please talk with me prior to using the technology in question. Violators of these guidelines will be asked to cease using the technology and may be asked to leave the classroom.

**MyCourses (D2L)**

If you are having technical trouble with D2L, please contact student support at SFA Online at d2l@sfasu.edu or 936-468-1919. If you call after regular business hours or on a weekend, please leave a voicemail.

For general computer support (not related to D2L), contact the Technical Support Center (TSC) at 936-468-HELP (4357) or at helpdesk@sfasu.edu.

To learn more about using D2L, visit SFA ONLINE at https://www.sfasu.edu/covid19/students/student-guide-for-brightspace, where you will find additional information.
I do not take kindly to **ANY FORM** of "Academic Misconduct" and will take necessary steps to ensure none occurs. Each incident will be dealt with on an individual basis. As part of the Syllabus Quiz you will need to confirm that you have read and understood the university’s Student Academic Dishonesty policy linked below and available for your review.

**Academic Integrity**
The Code of Student Conduct and Academic Integrity outlines the prohibited conduct by any student enrolled in a course at SFA. It is the responsibility of all members of all faculty, staff, and students to adhere to and uphold this policy.

Articles IV, VI, and VII of the new Code of Student Conduct and Academic Integrity outline the violations and procedures concerning academic conduct, including cheating, plagiarism, collusion, and misrepresentation. Cheating includes, but is not limited to: (1) Copying from the test paper (or other assignment) of another student, (2) Possession and/or use during a test of materials that are not authorized by the person giving the test, (3) Using, obtaining, or attempting to obtain by any means the whole or any part of a non-administered test, test key, homework solution, or computer program, or using a test that has been administered in prior classes or semesters without permission of the Faculty member, (4) Substituting for another person, or permitting another person to substitute for one’s self, to take a test, (5) Falsifying research data, laboratory reports, and/or other records or academic work offered for credit, (6) Using any sort of unauthorized resources or technology in completion of educational activities.

Plagiarism is the appropriation of material that is attributable in whole or in part to another source or the use of one’s own previous work in another context without citing that it was used previously, without any indication of the original source, including words, ideas, illustrations, structure, computer code, and other expression or media, and presenting that material as one’s own academic work being offered for credit or in conjunction with a program course or degree requirements.

Collusion is the unauthorized collaboration with another person in preparing academic assignments offered for credit or collaboration with another person to commit a violation of any provision of the rules on academic dishonesty, including disclosing and/or distributing the contents of an exam.

Misrepresentation is providing false grades or résumés; providing false or misleading information in an effort to receive a postponement or an extension on a test, quiz, or other assignment for the purpose of obtaining an academic or financial benefit for oneself or another individual or to injure another student academically or financially.
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 coursework 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 to compute the grade point average. For additional information, go to https://www.sfasu.edu/policies/course-grades-5.5.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), 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 promptly may delay your accommodations. For additional information, go to http://www.sfasu.edu/disabilityservices/.

I reserve the right to change or modify this syllabus at any time throughout the semester. This is a tentative schedule and syllabus. The official ones are available when you log into the course.

Wike's Handy Hints for Problems:
1. If you have difficulty with the first four chapters of the course, you may need additional math preparation.
2. If you cannot do the problems, seek help from me or our TA (if we have one).
3. List formulas and follow them. Messy work gets wrong answers. Be systematic.
4. Master your calculator. It should become your best friend.
5. NEVER be afraid to ask questions. Someone else has the same question and they are also afraid to ask.
6. When you obtain any answer, always ask yourself: DOES THE ANSWER MAKE SENSE???????

I reserve the right to change or modify this syllabus at any time throughout the semester.
Notes
Statistics Humor

“Remember the old days when we used to eat his statistics homework?”

Statistics Teachers Rock

Lies Damned Lies & Statistics