Psychology 3130.640 - Psychological Statistics
Psychology 3300.093 - Psychological Statistics Laboratory
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Lecture: 12:30 pm – 1:45 TR 269 Online (as necessary)
Laboratory: 2:30 pm – 3:45 W Online (as necessary)

Instructor: Mark Ludorf  215G- Education Building
Email address: mludorf@sfasu.edu (using the Blackboard email is best)
Phone: +1 920 240 4463 (Skype)
Lab Assistant: TBD
Course website: https://d2l.sfasu.edu/
Department: Psychology

Office Hours: Online and by Appointment

I am usually very active in the course and will respond to email inquiries in a timely fashion. If you want to schedule a specific time to discuss issues either via chat, email, phone, Skype, etc. 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.

The following is included per the request of the university. Given we are online and have no face-to-face meetings, it does not apply to this course.

COVID-19 MASK POLICY  Masks (cloth face coverings) must be worn over the nose and mouth at all times in this class and appropriate physical distancing must be observed. Students not wearing a mask and/or not observing appropriate physical distancing will be asked to leave the class. All incidents of not wearing a mask and/or not observing appropriate physical distancing will be reported to the Office of Student Rights and Responsibilities. Students who are reported for multiple infractions of not wearing a mask and/or not observing appropriate physical distancing may be subject to disciplinary actions.


Course Description:
Application of descriptive and inferential statistical techniques in processing behavioral data. Includes normative techniques, parametric and nonparametric applications.

PSYC 3330 “Psychological Statistics” (4 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. The course laboratory typically meets in additional weekly, 75-minute session in which students develop experience working with computer software for organizing data and implementing statistical methods to examine research on behavior. 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 8 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.

PSYC 3130L “Psychological Statistics Lab” (1 credit) is designed to introduce students to the application of descriptive and inferential statistical techniques to behavioral data. The course laboratory typically meets 75 minutes a week in one time segment. Students develop experience working with computer software for organizing data and implementing statistical methods to examine research on behavior.

Program Learning Outcomes

<table>
<thead>
<tr>
<th>PLO</th>
<th>Proficiency Level</th>
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<tbody>
<tr>
<td>The student will demonstrate familiarity with the major concepts, theoretical perspectives, empirical findings, and historical trends in psychology.</td>
<td>Advanced</td>
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<tr>
<td>The student will understand and apply basic research methods in psychology, including research design, data analysis, and interpretation.</td>
<td>Advanced</td>
</tr>
<tr>
<td>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.</td>
<td>Advanced</td>
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<tr>
<td>The student will understand and apply psychological principles to personal, social, and organizational issues.</td>
<td>Intermediate</td>
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<tr>
<td>The student will value empirical evidence, tolerate ambiguity, act ethically, and reflect other values that are the underpinnings of psychology as a science.</td>
<td>Intermediate</td>
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</table>
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 (click the * for image of the emulator). Since you do not have to purchase a textbook, **you 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.**

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. There will be a quiz and laboratory assignment 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 addition to the laboratory assignments you are encouraged to complete the problems at the end of each chapter. The problems from the end of each chapter **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.**
## Course Calendar:

### Lecture and Office Hour Schedule

<table>
<thead>
<tr>
<th>Month</th>
<th>Week of</th>
<th>Tuesday</th>
<th>Thursday</th>
<th>Quiz Availability &amp; Labs</th>
</tr>
</thead>
<tbody>
<tr>
<td>August</td>
<td>26</td>
<td>Welcome Chapter 1 Introduction Numbers Numbers Numbers</td>
<td>Chapter 1 Introduction Numbers Numbers Numbers Chapter 2 Organizing and picturing numbers Putting Numbers into Piles for fun and Profit</td>
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<td></td>
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<td></td>
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<tr>
<td>Sept</td>
<td>2</td>
<td>Chapter 2 Organizing and picturing numbers Putting Numbers into Piles for fun and Profit</td>
<td>Chapter 2 Organizing and picturing numbers Putting Numbers into Piles for fun and Profit Chapter 3 Centers Being More Exact about Centers</td>
<td></td>
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<td></td>
<td>9</td>
<td>Chapter 3 Centers Being More Exact about Centers</td>
<td>Chapter 3 Centers Being More Exact about Centers</td>
<td>Quiz 1 Chapters 1 &amp; 2 Labs 1 &amp; 2 due</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>Chapter 4 Variability Nailing Down Spread</td>
<td>Chapter 4 Variability Nailing Down Spread Chapter 5 Beginning inference Flippin' Coins and Buyin' Beers</td>
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<td></td>
<td>23</td>
<td>Chapter 5 Beginning inference Flippin' Coins and Buyin' Beers</td>
<td>Chapter 5 Beginning inference Flippin' Coins and Buyin' Beers</td>
<td>Quiz 2 Chapters 3 &amp; 4 Labs 3 &amp; 4 due</td>
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</tbody>
</table>
| Date | Chapter 5 | Chapter 6 | Chapter 7 | Quiz 3  
|------|-----------|-----------|-----------|--------
| Oct 30 | Beginning inference  
*Flippin' Coins and Buyin' Beers*  
Chapter 5 | Linear correlation  
*Rho Rho Rho the Boat*  
Chapter 6 | -  
| Oct 7 | Chapter 6  
Linear correlation  
*Rho Rho Rho the Boat*  
Chapter 6 | Regression  
*Still Rhoing*  
Chapter 7 | -  
| Oct 14 | Chapter 7  
Regression  
*Still Rhoing*  
Chapter 7 | Regression  
*Still Rhoing*  
Chapter 8 | Quiz 3  
Chapter 5  
Labs 5 due  
| Oct 21 | Chapter 8  
Centers  
*Comparing Centers*  
Chapter 8 | Centers  
*Comparing Centers*  
Chapter 9 (1st half)  
Variabilities  
*Comparing Spreads*  
Chapter 9 | Quiz 4  
Chapters 6 & 7  
Labs 6 & 7 due  
| Nov 28 | Chapter 9 (1st half)  
Variabilities  
*Comparing Spreads*  
Chapter 9 | Chapter 9 (2nd half)  
Variabilities  
*Comparing Spreads*  
Chapter 9 (2nd half)  
Variabilities  
*Comparing Spreads*  
Chapter 10  
Comparing k centers  
*A Pie with a Few Slices - Testing k Means*  
Chapter 10 | Quiz 5  
Chapters 8 & 9  
(1st half)  
Labs 8 & 9  
(1st half) due  
| Nov 4 | Chapter 9 (2nd half)  
Variabilities  
*Comparing Spreads*  
Chapter 9 | Chapter 9 (2nd half)  
Variabilities  
*Comparing Spreads*  
Chapter 9 (2nd half)  
Variabilities  
*Comparing Spreads*  
Chapter 10  
Comparing k centers  
*A Pie with a Few Slices - Testing k Means*  
Chapter 10 | Quiz 5  
Chapters 8 & 9  
(1st half)  
Labs 8 & 9  
(1st half) due  
| Nov 11 | Chapter 10  
Comparing k centers  
*A Pie with a Few Slices - Testing k Means*  
Chapter 10 | Chapter 10  
Comparing k centers  
*A Pie with a Few Slices - Testing k Means*  
Chapter 10 | Quiz 5  
Chapters 8 & 9  
(1st half)  
Labs 8 & 9  
(1st half) due |
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<tr>
<th></th>
<th>18</th>
<th>Chapter 10 Comparing k centers</th>
<th>Chapter 10 Comparing k centers</th>
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<tbody>
<tr>
<td></td>
<td>25</td>
<td>Thanksgiving</td>
<td>Quiz 6</td>
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<tr>
<td></td>
<td>2</td>
<td>Chapters 9 (2nd half) and 10</td>
<td>and 10 Labs 9 &amp; 10 due</td>
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<tr>
<td></td>
<td>9</td>
<td>Review</td>
<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 – 100 each quiz) and the laboratory assignments (200 points). A final distribution of total points (i.e., the sum of quiz and laboratory assignment points) and the cutoffs associated with the different letter grades will be available after the last quiz and before the final. You can then decide if you want to take the optional final. The cutoffs will be fixed after the last quiz and will not change after the final. **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 744 points (A), 664 (B), 584(C), 504 (D) and < 504 (F) curve.

As mentioned earlier there will be six quizzes, each covering a section of the book. The quizzes will be available for a few days and you can take when it best fits your scheduled. Every quiz will be electronically proctored. All quiz work is to be done by you alone.

For each quiz you can use a “help sheet”. 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 write **anything** you want (e.g. formulas, sample problems,...) on your sheet. Whether you use the supplied help sheet or create your own, you will also need to print out the tables from the textbook that you will need for each quiz.

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. If you miss a quiz you can just substitute the FINAL for the missed quiz.**
Attendance Policy:
Attendance is encouraged at all Live Zoom sessions. Live Zoom sessions will be held at the original time of the course (12:30 pm Tuesdays) and I will increase or decrease Zoom sessions as warranted. **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 any documentation for any absence.

**Technology**

**Live Zoom Sessions**
As noted above, we will be meet Tuesdays 12:30 pm for a Live Zoom session. We will discuss the content for the week as well as answer any questions you have. The frequency of theses sessions may decrease during the semester depending upon how things are going.

**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 accounts 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 computer only) easily keep track of your grade and where you stand in the course.

Any recording of any part of the course beyond what I provide violates copyright laws and therefore is not permitted except where approved by me. If you are not sure whether some technology-mediated behavior is acceptable, please talk with me prior to using it.

**Laboratory Sessions**
Laboratory sessions will likely include some video and some novel data to use in order to develop your understanding of the concepts. We will use MS Excel and a website or two (e.g., Vassarstats) to conduct the analysis confirming our calculated outcomes.

Laboratory assignments will also include the **F**lys, which I will discuss in the first day of class. The laboratory sessions for a section will be due within 1 hour of you submitting your quiz for the section. There will be a dropbox for each section. You will be able to submit multiple files in the section dropbox.
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 http://www.sfasu.edu/academics/sfaonline, where you will find written instructions and video tutorials.

*the Wabbitemu emulator for the TI-84 (click here to move back to calculator section)
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.

I do not take kindly to ANY FORM of "Academic Dishonesty" and will take necessary steps to ensure none occurs. During a quiz, if I THINK you are not doing your own work you will receive a zero for that quiz. Also on quiz day leave your baseball caps at home.

Please read the complete policy at http://www.sfasu.edu/policies/academic_integrity.asp

Withheld Grades Semester Grades Policy (A-54)
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/.
Acceptable Student Behavior
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 Student Conduct Code, policy D-34.1). 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 Early Alert Program. This program provides students with recommendations for resources or other assistance that is available to help SFA students succeed.

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 one of us. That's why we have office hours.
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.