Course Syllabus: PSYC/SOCL 3314 Section 301
Statistics for the Social and Behavioral Sciences
Summer I, 2023

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SCHEDULING

LECTURES: The lecture portion of this class will be available in either of two formats. I will deliver live, face-to-face lectures MTWR 10:10 am -12:10 pm, June 5 through July 7 in O'Donohoe 110. For those who prefer the flexibility and convenience of online, self-paced instruction, a series of 15 prerecorded video lectures covering the same content will be available through D2L. I recommend that you choose one modality or the other and that you NOT try to mix and match live and prerecorded lectures. All testing over material delivered in lectures, both live and prerecorded, will be accomplished using D2L. I have estimated dates of tests covering lectures in a later section of this syllabus, but those dates will almost certainly change. Actual testing dates will be announced via email at least two school days in advance. That may not seem like much advance warning, but two days in the summer is more than a week during a full semester.

COMPUTER LABS: Although the computer lab in O'Donohoe 126 has been reserved for your use on TWR 9:00 am - 9:50 am, lab instruction in the use of IBM SPSS (Statistical Package for the Social Sciences) will be provided through a series of 10 prerecorded instructional videos available on D2L. There is no live, face-to-face option for computer lab instruction. All testing over material presented in the computer labs will also be accomplished using D2L. The schedule for that testing is found later in this syllabus and those dates are relatively fixed.

REQUIRED TEXTS AND MATERIALS

- Diekhoff, G. M. *Basic Statistics for the Social and Behavioral Sciences*. Zip Publishing reprint. Available in campus bookstore.

- Diekhoff, G. M. *SPSS for the Social and Behavioral Sciences (2022-2023).* Zip Publishing reprint. Available in campus bookstore.

- Battery-operated hand calculator with the following functions: +, -, x, /, x^2, square root, and memory.

- You will need to have access to a desktop or laptop computer with an installed

subscription to the IBM SPSS Statistics Standard Grad Pack (Version 29). This software is available in the O'Donohoe computer lab in room OD126 (at the far west end of O'Donohoe Hall). The lab is reserved for use by students in this class Tuesday through Thursday 9:00-9:50 am during Summer I, but if you anticipate needing to use SPSS software at other times, you should consider purchasing your own software subscription. You can purchase SPSS wherever you like, but here is one vendor who has proven to be reliable and who provided good customer service in the past: https://www.hearne.software/SPSS-Selection. Where ever you get SPSS, the cost should be about $50 for a six-month subscription. Note that SPSS software will not run on a tablet or smartphone.

- You will need to have a screen capture tool installed on your desktop or laptop computer. Windows 7 and 10 include a screen capture tool or you can try the tool that is free at this URL: https://www.techsmith.com/jing-tool.html

RECOMMENDED BUT NOT REQUIRED

- A USB flash drive is recommended to help you keep computer lab files organized

- Laerd Statistics at https://statistics.laerd.com provides an excellent guide to the use of SPSS at a very reasonable price—about $15 for six months). I recommend that you take their free tour and decide if their service might be helpful to you as you learn to use SPSS

LEARNING OBJECTIVES

In this course you will be exposed to the full range of basic statistics as they are used by researchers in the social and behavioral sciences. The course begins with descriptive statistics--methods by which we can best describe individual cases, samples consisting of multiple cases, and whole populations. Univariate significant difference tests come next, where you will learn how to determine if a difference that is observed between a sample and a population or between two or more samples is a difference that is large enough to be considered reliable and replicable. Bivariate correlational statistics help us to determine which variables covary, or "move together," and give us ways of measuring the strength and reliability of those relationships. Finally, bivariate regression analysis allows us to use an established correlation between two variables to predict a case's score on one variable when provided with a score on the other variable. Throughout the semester the emphasis will be on applications of statistical procedures. However, this is not a "cookbook" statistics course. You will learn how statistical analyses work in addition to learning how to use them. Ten prerecorded computer labs on D2L will provide you with training in the use of IBM's *Statistical Package for the Social Sciences* (IBM SPSS). This package of statistical software will enable you to perform a full range of basic statistical analyses and prepare you for the study of more complex procedures.

ATTENDANCE POLICY

Students are expected to take tests on the days they are scheduled. Students who miss a scheduled test will be able to take makeup test at the end of the semester, Friday July 7. There will be no penalty for exams taken late if the reason for missing the exam is excused, but there will be a one letter grade penalty on any test missed for unexcused reasons.

Absences are excused only under the following circumstances:

1. the student provides a written excuse from a medical practitioner or MSU official stating that the student was unable to test on the day(s) of the absence;
2. the student provides a written excuse from a medical practitioner or MSU official stating that the student's dependent child was ill on the day(s) of the test;
3. the student provides a written excuse from an MSU official stating that the student was in attendance at a mandatory university function on the day(s) of the test.

In order for an absence to be excused, the written excuse must be provided to me within one week of the absence. If this is not possible, the student must at least contact me with an explanation within one week of the absence.

Funerals, employment-related absences, illnesses not requiring medical attention, job interviews, family emergencies, automobile malfunctions, court appearances, etc. do not constitute excused absences.

GRADING

There will be four tests in the lecture portion of the class, each worth 100 points. There will be three tests in the computer lab, each worth 100 points. Finally, there will be 10 computer lab homework assignments each worth 10 points. Course grades will be based on your accumulated point totals, weighted so that the lecture portion of the course contributes 75% to your total and the lab contributes 25%.

Grades on lecture tests taken late because of an unexcused absence will be lowered by one letter grade. Grades on computer lab tests taken late because of an unexcused absence will also be lowered by one letter grade. Lab homework turned in late for any reason will receive no credit.

Your accumulated point total for the semester will be calculated as follows:

 Total =   [.75 x (Lecture Test Total)]
         + [.25 x (Lab Test Total + Lab Homework Total)]

Course letter grades will then be assigned on the following scale:

A = 360-400 points
B = 320-359 points
C = 280-319 points
D = 240-279 points
F = less than 240 points

DISABILITIES

Individuals requiring special accommodations according to the Americans with Disabilities Act please present the instructor with a special Accommodation Request Form from the MSU Disability Support Services center.

ADDITIONAL EXPECTATIONS

1. Learning requires mental activity on your part. Learning about statistics will be facilitated by taking notes, thinking of examples, paraphrasing ideas that you hear in class or on instructional videos, and so on. Please stay busy and mentally involved as you learn.

2. Leaving the classroom while class is in session is distracting and inappropriate. Please do not engage in this behavior if you choose to attend face-to-face lectures. Come to class having already taken care of your restroom needs and social obligations so that you will be prepared to stay in the classroom for the duration of our sessions. Please do not leave the classroom while we are in session unless you have true emergency, then be prepared to explain to me later why you left. If you have a medical condition that requires you to leave the classroom on a frequent basis, please work with the Disabilities Office to document your need for a special accommodation.

3. Unless you expect to receive an emergency call or text, please turn off cell phones in class. Do not use cell phones in class. If you bring a laptop, use it only for taking notes.

4. You may work with others to complete your computer lab homework assignments, but remember that the purpose of those homework assignments is to prepare you to act independently and without collaboration or outside help on exams. Cheating on lecture or lab exams will result in a grade of F for the course.

COURSE TOPICS AND READING ASSIGNMENTS

Introduction and Summation Notation—Chapter 1, Appendix A

Data distributions: Tables and graphs—Chapter 2

Descriptive statistics—Chapter 3

If you are using the prerecorded videos, view videos 1, 2, and 3 for Exam 1.

EXAM 1 June 8 via D2L*

Standard scores, the normal distribution, and standard normal distribution—Chapter 4

Sampling distributions and interval estimation—Chapter 5

If you are using the prerecorded videos, view videos 4, 5, 6, 7, 8 for Exam 2.

EXAM 2 June 20 via D2L*

Significant difference tests: one- and two-sample tests; one-way ANOVA; factorial ANOVA—Chapters 6, 7, 8, 9

If you are using the prerecorded videos, view videos 9, 10, 11, 12, 13 for Exam 3.

EXAM 3 June 28 via D2L*

Correlation and regression—Chapters 10, 11

If you are using the prerecorded videos, view videos 14, 15 for Exam 4.

EXAM 4 July 6 via D2L *
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* These are ESTIMATED exam dates and will almost certainly change. Actual lecture exam dates will be announced via email at least two school days prior to each exam.

All makeup lecture exams will be administered on Friday, July 7 via D2L.

COMPUTER LABS: WHAT YOU CAN EXPECT

Thirteen computer lab sessions (ten instructional labs and three testing sessions) are a required component of this course. The schedule for the instructional and testing labs is found at the end of this syllabus. There will be no face-to-face lab instruction in the computer lab, but the computer lab in O'Donohoe 126 is reserved for your use TWR 9:00-9:50 am throughout the summer term for accessing D2L, studying, working on lab homework, taking tests, etc. The computer lab is scheduled for use by several other courses during the summer so you cannot always count on being able to use the lab when you want to. That is why I recommend you get a personal subscription to IBM SPSS Version 29. The 10 instructional labs will be pre-recorded and made available to you online through D2L. Those videos will be posted to D2L as shown on the lab schedule that follows. Your performance on the three computer lab exams and ten computer lab homework assignments will contribute 25% toward your course grade.

Missing a lab exam results in a 10% (one letter grade) penalty unless you provide documentation that the absence was excused. All lab makeup tests will be administered via D2L on Friday, July 7. Lab homework assignments cannot be turned in late for any reason as you have plenty of scheduling flexibility to get those turned in on time. I suggest that you aim to turn in homework assignments early so that if something slows you down, you will still have time to get assignments in by the deadline.

If you have problems with D2L, contact D2LHelp@mstutexas.edu

LAB HOMEWORK

- No lab homework will be accepted late.

- Lab homework assignments that are improperly labeled will not be graded. Instructions on correct labeling will be provided.

- It is recommended that lab homework assignments should be completed and turned in immediately following the corresponding instructional lab. This will keep you from falling behind and will give me time to send you corrective feedback. The deadline for turning in homework assignments associated with each computer lab test is any time during the 24 hours that the tests are available. Thus, homework for Labs 1-3 is due any time during the 24 hour period of time that Lab Test 1 is available to you; home work for Labs 4-6 is due any time during the 24 hour period of time that Lab Test 2 is available to you; homework for Labs 7-10 is due any time during the 24 hour period of time that Lab Test 3 is available to you.

COMPUTER LAB SCHEDULE

Instructional videos will be posted on D2L according to the schedule shown below and you can view them at your convenience once they are posted. Lab exams are also shown on the schedule. You will have a 24 hour period of time to complete each lab exam—from 8:00 am on the date listed below until 8:00 am the following morning. During that 24 hour window, you will need to complete each exam within a 50 minute period of time. The homework assignments associated with each lab exam also must be turned in during the 24 hour period of time that the test is available. No homework will be accepted late.

June 6– No lab
June 7—Lab 1, Getting Started With SPSS; Creating Data Files
June 8—Lab 2, Editing and Modifying Data Files
June 13—Lab 3, Generating Reports and Graphs
June 14—Lab Exam 1 (Individual Exercises Homework from Labs 1-3 are due)
June 15—Lab 4, Data Distributions and Descriptive Statistics
June 20—Lab 5, One-Sample Significant Difference Tests
June 21—Lab 6, Two-Sample Significant Difference Tests
June 22—Lab Exam 2 (Individual Exercises Homework from Labs 4-6 are due)
June 27—Lab 7, One-Way ANOVA and Related Statistics
June 28—Lab 8, Two-Way Factorial ANOVA
June 29—Lab 9, Bivariate Correlation and Scatterplots
July 5—Lab 10, Bivariate Regression
July 6—Lab Exam 3 (Individual Exercises from Labs 7-10 are due)

Homework associated with each of the computer labs exams is due any time during the 24 hour period of time that the lab exam is available to you.

All makeup exams for the computer lab will be administered via D2L on June 7, 2023.