Course Syllabus: PSYC/SOCL 3314 Sections 101 and 102
Statistics for the Social and Behavioral Sciences
Spring, 2021

Instructor: George M. Diekhoff, Ph.D.
Office: O'Donohoe 218
Office phone: (940) 397-4348
E-mail: george.diekhoff@msutexas.edu

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 (2021-2022).* 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 a desktop or laptop computer with an installed subscription to the IBM SPSS Statistics Standard Grad Pack (Version 28.0). You can purchase this wherever you like, but here is one vendor that has proven to be reliable and who provided good customer service in the past: https://www.hearne.software/SPSS-Selection. Where ever you get it, the cost should be about $50 for a six-month subscription. Note that IBM 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. You can obtain such a tool anywhere you like, but TechSmith Capture (formerly "Jing") 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 the free tour and decide if their guide 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, behavioral, and biomedical sciences. The course begins with descriptive statistics--methods by which we can best describe individual cases, samples of several 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 attributed to factors beyond the natural variability that is a characteristic of samples. 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. Thirteen 50-minute computer labs will provide you with training in the use of IBM's *Statistical Package for the Social and Behavioral 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 FOR LECTURES

This class will be taught in a face-to-face format and attendance is expected, with exceptions for excused absences (as defined below). Students are allowed 5 unexcused absences (as defined below) in this class. Each additional unexcused absence beyond these 5 will result in a lowering of the course grade by one-half letter grade (20 points from the accumulated total for the semester).

Students who miss the calling of the roll at the beginning of the class will be counted as absent for that day unless you alert me to your presence at the end of the class period to let me know you were only tardy. Each tardy counts as one-half an unexcused absence.

There will be no grade penalty on exams missed because of an excused absence. There will be a one letter grade penalty on each exam missed because of an unexcused absence.

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 attend class 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 absence;
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 absence.

In order for an absence to be excused, the written excuse must be provided 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. Please reserve your 5 allowed absences to cover these situations.

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

Your accumulated point total will be calculated as follows:

Total = [.75 x (Lecture Test Total)]
+ [.25 x (Lab Test Total + Lab Homework Total)]
- [(20 x # of absences beyond 5)]

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

MIDTERM PROGRESS REPORT

In order to help students keep track of their progress toward course objectives, the instructor for this class will provide a Midterm Progress Report through each student's WebWorld account. Only students who are identified as being at risk for earning grades of D or F will be notified in this manner. Midterm grades will not be reported on the student' transcript, nor will they be calculated in the cumulative GPA. They simply give students an idea of where they stand at the midpoint of the semester. Students earning below a C at the midway point should seek tutoring.

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, and so on. Please stay busy and mentally involved in class.

2. Leaving the classroom while class is in session is distracting and inappropriate. Please do not engage in this behavior. 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 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 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

EXAM 1*

Probability and the normal distribution—Chapter 4

Sampling distributions and interval estimation—Chapter 5

EXAM 2*

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

EXAM 3*

Correlation and regression—Chapters 10, 11

EXAM 4*
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* Exam dates will be announced in class one week prior to each exam.

All makeup lecture exams will be administered on Monday, May 2 at 3:30 in PY102.

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. Although the computer lab in O'Donohoe 126 will be available for your use throughout the semester, there will be no face-to-face lab instruction in the computer lab and you should not count on being able to use the lab for testing. It is for that reason that you will need to purchase a personal subscription to IBM SPSS Version 28. The 10 instructional labs will be pre-recorded and made available to you online through D2L. Your lab instructor, Mr. Lawrence Maher (lawrence.maher@msutexas.edu) will be in touch with you via email with details about the lab. Your performance on the three computer lab exams and ten computer lab homework assignments will contribute 25% toward your course grade. The lab instructor will be in touch with you via email to communicate specific information about the lab exams.

Missing a lab exam results in a 10% (one letter grade) penalty unless you provide documentation that the absence was excused. You will need to arrange lab makeup tests with your lab instructor. 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.

You should contact lawrence.maher@msutexas.edu for all questions or problems pertaining to the lab portion of this course. 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

- 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. However, hard deadlines for homework assignments are shown in the schedule below.

- 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 released on Thursdays and you can view them at your convenience. The first two computer lab exams will also be scheduled for Thursdays, with the third lab scheduled for Tuesday of final exam week. You will have a 24 hour period of time to complete each lab exam. During that 24 hour window, you will need to complete each exam within a 50-minute period of time. Your lab instructor will provide specific instructions for each exam.

This schedule is tentative and subject to change.

Jan. 13—No Lab
Jan. 20—Lab 1, Getting Started With SPSS; Creating Data Files
Jan. 27—Lab 2, Editing and Modifying Data Files
Feb. 3—Lab 3, Generating Reports and Graphs
Feb. 10—Lab Exam 1 (Individual Exercises from Labs 1-3 are due)
Feb. 17—Lab 4, Data Distributions and Descriptive Statistics
Feb. 24—Lab 5, One-Sample Significant Difference Tests
Mar. 3—Lab 6, Two-Sample Significant Difference Tests
Mar. 10—Lab Exam 2 (Individual Exercises from Labs 4-6 are due)
Mar. 17—No Lab
Mar. 24—Lab 7, One-Way ANOVA and Related Statistics
Mar. 31—Lab 8, Two-Way Factorial ANOVA
Apr. 7—Lab 9, Bivariate Correlation and Scatterplots
Apr. 14—No Lab
Apr. 21—Lab 10, Bivariate Regression
Apr. 28—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.