

Course Syllabus: Psychology 3314  
Statistics for the Social and Behavioral Sciences  
PSYC/SOCL 3314 Section 201  
Spring, 2018

Instructor: George M. Diekhoff, Ph.D.  
Office: O'Donohoe 118  
Office phone: (940) 397-4348  
E-mail: [george.diekhoff@mwsu.edu](mailto:george.diekhoff@mwsu.edu)

### Required Text 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 (2018-2019)*. Zip Publishing reprint. Available in campus bookstore.
- Battery-operated hand calculator with the following functions: +, -, x, /,  $x^2$ , square root, and memory.
- USB flash drive

### 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 even 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 several samples is a difference that is large enough to be attributed to factors beyond the natural variability that is 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 associations. 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

Students are allowed four unexcused absences (as defined below) in PSYC/SOCL 3314 lectures during the spring 2019 semester. Each additional unexcused absence beyond these will result in the reduction of your course grade by 20 points (half a letter grade). Each tardy is counted as one-half absence, but if you are tardy you must alert me to your presence at the end of the class period. Leaving class prior to dismissal is considered equivalent to a tardy.

Students who miss one or more lecture exams because of absences will be allowed to take makeup exams, but there will be a one letter grade penalty for exams that were missed for unexcused reasons.

Absences are excused only under the following circumstances: (a) the student provides a written excuse from a medical practitioner stating that the student was unable to attend class on the day(s) of the absence; (b) the student provides a written excuse from a medical practitioner stating that the student's dependent child was ill on the day(s) of the absence; or (c) the student provides a written excuse from an official of Midwestern State University stating that the student was in attendance at a mandatory university function on the day(s) 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 allowed unexcused absences to cover these situations.

### Attendance Policy for Computer Labs

Thirteen computer lab sessions (ten instructional labs and three testing sessions) are a required component of this course. Your performance in lab will contribute 25% toward your course grade as described below in the section on "Grading."

Lab policies and procedures are described separately later in this syllabus.

### 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%. Finally, each unexcused absence beyond the four that are allowed will result in a 20 point (one-half letter grade) reduction of accumulated point total. Remember that each tardy counts

as one-half absence. 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 =  $[.75 \times (\text{Lecture Test Total}) ] + [ .25 \times (\text{Lab Test Total} + \text{Lab Homework Total}) ]$   
-  $[(20 \times \text{number of absences beyond 4}) ]$

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, 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.

## 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

Standard scores, the Normal Distribution, and the Standard Normal Distribution—  
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

[illegible]

## PSYC/SOC 3314 Computer Lab Policies and Procedures

## Attendance

Attendance in computer labs is optional except on days of computer lab exams. (See schedule of lab activities below.) If you are able to learn the material on your own, complete the homework assignments on time, and pass the lab exams on schedule, you do not need to attend labs except on days of computer lab exams.

Do not come late to a computer lab. Once the lab begins, the door is locked. No one will be admitted to the lab after it has started.

Review the relevant chapter in your lab manual before you come to lab. It will be assumed that you are familiar with that material.

Students who miss one or more lab exams because of absences will be allowed to take makeup exams, but there will be a one letter grade penalty for exams that were missed for unexcused reasons. Make arrangements to take makeup exams with your lab instructor.

## 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 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 when you sit to take Lab Exam 1; home work for Labs 4-6 is due when you sit to take Lab Exam 2; homework for Labs 7-10 is due when you sit to take Lab Exam 3.

[illegible]

## Computer Lab Schedule

The lab for this course meets on Friday, 9:00-9:50 in O'Donohoe 126. Exceptions to this schedule, are noted below.

### Lab Schedule for PSYC/SOCL 3313(201)

1/18/2019—No Lab

1/25/2019—Lab 1, Getting Started With SPSS; Creating Data Files

2/1/2019—Lab 2, Editing and Modifying Data Files

2/8/2019—Lab 3, Generating Reports and Graphs

2/15/2019—Lab Exam 1 (Individual Exercises from Labs 1-3 are due)

2/22/2019—Lab 4, Data Distributions and Descriptive Statistics

3/1/2019—Lab 5, One-Sample Significant Difference Tests

3/8/2019—Lab 6, Two-Sample Significant Difference Tests

3/15/2019—Lab Exam 2 (Individual Exercises from Labs 4-6 are due)

3/22/2019—No Lab—Spring Break

3/29/2019—Lab 7, One-Way ANOVA and Related Statistics

4/5/2019—Lab 8, Two-Way Factorial ANOVA

4/12/2019—Lab 9, Bivariate Correlation and Scatterplots

4/19/2019—No Lab—Easter Break

4/26/2019—Lab 10, Bivariate Regression

5/3/2019—Lab Exam 3 (Individual Exercises from Labs 7-10 are due)