Syllabus
Psychology 400-3003-03
Psychological Statistics
Spring 2020

Instructor: **Dr. Robert T. Hitlan**
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Office Phone: **273-2223**
Office Hours: **M, W, F 9:00-10:00am and by appointment**
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Course Website can be accessed via my homepage at: http://www.uni.edu/~hitlan/

Class Time: M, W, F 2:00-2:50 (Sabin 127);
Lab: F 3:00-3:50 (Sabin 109)

Required Text: Gravetter, F. J., & Wallnau, L. B (2017). Statistics for the Behavioral Sciences (10th Ed.). Pacific Grove, CA: Wadsworth/Cengage. ISBN: 978-1-305-50491-2 111830991.

LEARNING OUTCOMES:

1. Define the basic concepts and principles of statistics: central tendency and dispersion, basic probability theory, descriptive and inferential statistics, and hypothesis testing;

2. Determine which type of descriptive and inferential test is best to perform based on a given hypothesis/research question.

3. Calculate descriptive and inferential statistics by hand and via statistical software (i.e., SPSS).

4. Interpret/summarize the results of various descriptive and inferential statistical tests.

COURSE DESCRIPTION/OVERVIEW:

This course provides students with an introduction to the basic methods of collecting, organizing, and analyzing psychological data. Students will learn a variety of descriptive and inferential statistical techniques. The inferential techniques include an emphasis on statistical inference (e.g., t tests, F tests, and selected non-parametric statistics). The course is designed to provide the student with the basic statistical concepts and skills necessary for the

laboratory research, survey work and to provide adequate quantitative background for understanding psychological literature. Prerequisites: 400:1001; 400:3002; one college-level mathematics course or consent of instructor.
You are expected to read the chapters that correspond to the lectures **in advance** and complete the problem sets within each chapter. We will proceed from the front to the back of the book (we may not cover every chapter), excluded chapters will be announced.

CREDIT HOURS:

This course is 4 credit hours. This course meets the Course Credit Hour Expectation outlined in the Course Catalog. Students should expect to work approximately 2 hours per week outside of class for every course credit hour.

OFFICE OF COMPLIANCE AND EQUITY MANAGEMENT:

The University of Northern Iowa does not discriminate in employment or education. Visit 13.03 Equal Opportunity & Non-Discrimination Statement (https://policies.uni.edu/1303) for additional information.

STUDENT ACCESSABILITY SERVICES:

The University of Northern Iowa (UNI) complies with the Americans with Disabilities Act Amendments Act of 2008 (ADAAA), Section 504 of the Rehabilitation Act of 1973, the Fair Housing Act, and other applicable federal and state laws and regulations that prohibit discrimination on the basis of disability. To request accommodations please contact Student Accessibility Services (SAS), located at ITTC 007, for more information either at (319) 273-2677 or Email accessibilityservices@uni.edu. Visit Student Accessibility Services (https://sas.uni.edu/) for additional information.

ETHICS POLICY:

Students must observe the Academics Ethics Policies (http://www.uni.edu/policies/301). Instances of cheating and plagiarism will be dealt with on an individual basis, but understand that cheating and/or plagiarism are unacceptable and may result in an "F" for the course.

Grading:

Homework = 30%
Midterm Exams (x3 @ 15% each) = 45%
Final Exam = 15%
Laboratory Assignments = 10%

Grading Scale:

>= 93% = A
90-92% = A-
87-89% = B+
83-86% = B
80-82% = B-
77-79% = C+
73-76% = C
70-72% = C-
67-69% = D+
63-66% = D
60-62% = D-
<60% = F

HOMEWORK:

There will be approximately 12 homework assignments throughout the semester. Homework assignment comprise 30% of your overall course grade. Homework assignments will be given out at the end of class and due at the **beginning** of the next class meeting. If you are unable to attend class when a homework assignment is given out or when a homework assignment is due, never fear!

All homework assignments will be posted on the course website the same day that they are handed out in class. So…..even if you were not able to attend class you can still print off a copy of the homework assignment and have it completed by the due date. If you are not able to make it to class when a homework assignment is due, never fear!

You can email your homework assignment. If you choose to do this, make sure that the homework assignment is sent **no later** than the start of class for that day. **Please include your last name, your section number, and the homework assignment number in the subject line**.

Be advised - in order to be fair to all students, I will be checking the date/time emails were sent.

Why is this important; well…..**late homework WILL NOT be accepted (unless you meet one or more of the "must be excused" reasons from section 3.06 of the student policies and procedures manual related to class attendance and make-up work**).

There is no way to make up homework for unexcused absences, but **one homework grade -- the lowest -- will be dropped**.

COURSE EXAMS including the Final Exam:

There will be three exams and a final exam throughout the semester. These will count for 60% of your overall grade in this course. Each exam is weighted equally @ 15%.

Each exam will consist of multiple choice, short answer questions, and problems. Each exam will only cover material since the previous exam.

You are **NOT** permitted to use your book on any of the exams or the final exam. I do, however, allow you to use a formula card (5" x 7" max) on each of the midterms. The formula cards are for you to write formulas. You are **NOT** allowed, however, to put any words or other identifying information on the formula card (i.e., information to help you determine the correct formula to use with a given problem). Any formula card observed with this kind of information will be taken away prior to beginning an exam. If you are unsure of the type of information that is OK for the formula card **see me PRIOR** to the exam.

Exams **cannot** be made-up. Please refer to the information above regarding absences and make-up work for additional information on the relevant student policies and procedures related to absences and make-up work.

No personal electronic devices (other than one's non-phone calculator) are permitted to be used during any quizzes or exams).

In addition, on exam days please make sure you have used the restroom recently because you WILL NOT be allowed to leave in the middle of an exam to use the restroom. One you leave the classroom, it is assumed you have completed your exam in its entirety.

LABORATORY ASSIGNMENTS:

During the semester you will have several lab sessions (this lab session is why statistics is a 4 hour course and not a three hour course). During lab each week you will learn different aspects of the statistical program SPSS. This is one of the most widely used statistical programs used in psychology, sociology business, etc...

The final exam will also consist of some output from this program that you will have to interpret (these should be easy points assuming you attend and listen at the lab sessions).

Overall the lab aspect of the course is worth 10% of your grade. We will have approximately 10 lab sessions throughout the semester and attendance **WILL** be taken at each lab session. I take attendance because sometimes you will not have a lab worksheet and taking attendance is the only way to fairly allocate lab credit in these instances.

CALCULATORS:

Calculators may be used for homework and exams. Also, we will be working through numerous examples during class so it is imperative that you bring your calculator to every class to work problems. At minimum, obtain a calculator that takes square roots.

Prior to exams, be sure to charge the batteries. I do **NOT** have spare calculators to lend out. Additionally, it is your responsibility to know how to work your own calculator. When in doubt, your first course of action should be to - **Read the manual of your calculator**.

Unless a problem is very simple, you should **show all work** that led to your final answer. Partial credit may be given if you do a problem by the correct procedure but make a minor computational error. However, if your final answer is incorrect and you do not show your intermediate work/computations, NO credit will be awarded.

ASSISTANCE:

The time to get assistance is when a difficulty first occurs, not the day before the midterm or final examination. This is particularly the case in statistics because each section may depend on the previous sections.

PET PEEVES:

1. Out of courtesy for both your fellow students and the instructor, make sure all electrical devices are shut off for the duration of class (e.g., pagers, cell phones, etc.)

2. If you must come to class late, do not walk in front of the instructor but take the first available seat

3. If you miss a class, please do not email me to ask what you missed or if the lecture material for that day was important. If I go over a topic – it **IS** important for you to know. Look at the course schedule and/or get the notes from a fellow student.

4. Other class disruptions are also frowned upon (e.g., sarcastic remarks directed toward another student and/or the instructor)

TENTATIVE COURSE SCHEDULE

Date	Chapter	Material	Assignments	Notes
Mon. Jan. 13	Introduction	Index Cards/Syllabus		
Weds. Jan. 15	Chapter 1	Introduction to Statistics		
Fri. Jan. 17	Chapter 1	Introduction to Statistics		
Mon. Jan. 20	***University Holiday***	***No Class***	***No Class***	
Weds. Jan. 22	Chapter 1/2	Introduction to Statistics	Homework #1 handed out	
Fri. Jan. 24	Chapter 2	Frequency Distributions	Homework #1 Due	**Lab #1**
Mon. Jan. 27	Chapter 2/3	Frequency Distributions	Homework #2 handed out	
Weds. Jan. 29	Chapter 3	Central Tendency	Homework #2 Due	
Fri. Jan. 31	Chapter 3	Central Tendency	Homework #3 handed out	**Lab #2**
Mon. Feb. 3	Chapter 4	Variability	Homework #3 Due	
Weds. Feb. 5	Chapter 4	Variability		
Fri. Feb. 7	Chapter 5	Variability/z-scores	Homework #4 handed out	**Lab #3**
Mon. Feb. 10	Chapter 5	z-scores	Homework #4 Due	
Weds. Feb. 12	**Chapter 5/ Review Chapters 1-5**	z-scores/Review (time permitting)		
Fri. Feb. 14	**Exam #1**	**Exam #1**	**Exam #1**	

Mon. Feb. 17	Chapter 6	Probability		
Wed. Feb. 19	Chapter 6	Probability		
Fri. Feb. 21	Chapter 6	Probability	Homework #5 handed out	
Mon. Feb. 24	Chapter 7	Probability and Samples	Homework #5 Due	
Weds. Feb. 26	Chapter 7	Probability and Samples	Homework #6 handed out	
Fri. Feb. 28	Chapter 8	Introduction to Hypothesis Testing	Homework #6 Due	**Lab #4**
Mon. March 2	Chapter 8	Introduction to Hypothesis Testing		
Wed. March 4	Chapter 8/9	Introduction to Hypothesis Testing	Homework #7 handed out	
Fri. March 6	Chapter 9	Introduction to the t-statistic	Homework #7 Due	**Lab #5**
Mon. March 9	Chapter 9	Introduction to the t-statistic	Homework #8 handed out	
Wed. March 11	**Review Chapters 6-9**	t-statistic/Review	Homework #8 Due	
Fri. March 13	**Exam #2**	**Exam #2**	**Exam #2**	
Mon. March 16	Spring Break	No	***Classes***	
Wed. March 18	Spring Break	No	Classes	
Fri. March 20	Spring Break	No	***Classes***	
Mon. March 23	Chapter 10	t-test for Two Independent Samples		
Wed. March 25	Chapter 10	t-test for Two Independent Samples		

Fri. March 27	Chapter 10/12	t-test for Two Independent Samples/ Introduction to Analysis of Variance (ANOVA)	Homework #9 handed out	**Lab #6**
Mon. March 30	Chapter 12	Introduction to Analysis of Variance (ANOVA)	Homework # 9 due	
Wed. April 1	Chapter 12	Introduction to Analysis of Variance (ANOVA)		
Fri. April 3	Chapter 12	Introduction to Analysis of Variance (ANOVA)	Homework #10 handed out	**Lab #7**
Mon. April 6	Chapter 14	Two Factor ANOVA	Homework #10 due	
Wed. April 8	Chapter 14	Two Factor ANOVA		
Fri. April 10	Chapter 14	Two Factor ANOVA	Homework #11 handed out	**Lab #8**
Mon. April 13	Chapter 14	Two Factor ANOVA	Homework #11 Due	
Weds. April 15	Review Chapters 10,12,14	Review		
Fri. April 17	**Exam #3**	**Exam #3**	**Exam #3**	
Mon. April 20	Chapters 15/16	Correlation and Regression		
Wed. April 22	Chapters 15/16	Correlation and Regression		
Fri. April 24	Chapters 15/16	Correlation and Regression	Homework #12 hand out	**Lab #9**

Mon. April 27	Chapters 17	Chi Square Statistic	Homework #12 Due	
Wed. April 29	Chapter 17	Chi Square Statistic	In Class Problems	
Fri. May 1	Chapter 17	Chi Square Statistic	In Class Problems	

Final Exam: Week of May 4-8 (Monday May 4 from 3-4:50pm).