GENESEO
THE STATE UNIVERSITY OF NEW YORK

PSYC 250-04: Introduction to Behavioral Statistics
Spting 2016 Syllabus[1]
MWF 12:30-1:20pm
Bailey 103

Instructor:	Dr. Karen Mooney
Office:	Bailey 117
Office Hours:	Tuesdays 3-4 pm, Thursdays 10-11 am, Fridays 2-3 pm, and by appointment
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Required Materials:

Gravetter, F. J., & Wallnau, L. B. (2013). *Statistics for the behavioral sciences*
(9th ed.). Belmont, CA: Wadsworth.

Aplia Access Code: If you did not purchase the access code to this online software bundled
with your textbook, you can go to http://login.cengagebrain.com/ or
http://www.aplia.com/ to purchase access.
Our Aplia Course Key is: 3WDA-3WBK-ZHM8

Calculator: You will need a scientific calculator (has a square root key ($\sqrt{}$) and an exponent
key (y^x)) for in-class practice problems and exams. It is also beneficial if your
calculator has an x^2 key. Graphing calculators are permitted, but unnecessary. If
you don't already have a scientific calculator, you can usually find them for around
$10-$20. **You will NOT be allowed to use calculator apps on cell phones,
laptops, iPads, etc. during exams.**

MyCourses: Course announcements, the course syllabus, PowerPoint slides, and grades will be
available on myCourses.

Goals: Research studies (in psychology and other fields) are constantly producing all sorts of
findings and conclusions. The purpose of this course is to give you some understanding of
how researchers arrive at their conclusions. In other words, how do researchers decide
whether or not their study provided their field with new, useable knowledge?

Intended Learning Outcomes: Students will demonstrate the ability to:
1. understand the basic concepts and principles of statistics: central tendency and dispersion,
basic probability theory, descriptive and inferential statistics, and hypothesis testing;
2. calculate descriptive and inferential statistics by hand;
3. know when to use which statistical test;
4. and recognize and understand the application of statistics in empirical research.

Lectures:

I will post the PowerPoint slides for each lecture topic on myCourses at least 1 day before
we discuss the topic. I strongly recommend printing out the slides before class and using
them to guide your note-taking. I will conduct lecture at a pace that assumes you have

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[1] The contents of this syllabus are tentative and subject to change by the instructor.

these slides. These slides are **NOT** to be considered everything you will need from class, but they will help by giving you a structure for your notes, wording for definitions, etc. **If you do not <u>take additional notes</u> to what are on the slides (e.g., more specific details of concepts, examples), then you probably will not do well on the homework and exams.**

Class periods will be a mix of me lecturing and you practicing the concepts we are learning about. Therefore, you should **bring your calculator and textbook to every class**. I encourage questions and participation. If something is not clear, do not hesitate to ask for clarification!

During class, please be courteous to me and your fellow students (e.g., turn off cell phones, do not talk to your neighbors or listen to music). These things can be very distracting to your classmates. I will begin class at 12:30 and end class at 1:20. If you arrive late, please try to minimize the distraction.

Homework Assignments: There will be a homework assignment for each chapter that we cover. All homework will be completed on Aplia, an online program developed by your textbook publishers. The due dates vary; please consult the schedule for dates when each assignment is due. All assignments will be due by 11:45:00 pm on the due date. **Aplia will NOT accept late assignments**. It is your responsibility to find access to a working computer in time for the assignments. If the Aplia website is down (which is extremely rare), I will get an email from the company immediately notifying me of the situation. I will then contact the class with further instructions.

For each homework question, Aplia will give you 3 attempts. Your score for each of the attempts is then averaged and recorded, and counts toward your grade for the assignment. The best strategy is to try to get the highest possible number of points on the first attempt. If you get the problem incorrect, Aplia will generate the same problem (but with different numbers) so that you must do the calculations again. (Aplia will also generate different number sets for each student – you are allowed to work on the homework assignments together; however, you will each have different answers to the problems). After each attempt, Aplia will show you how to do the problem (but remember – don't intentionally get a 0 on the first attempt – that will negatively impact your grade. Really try first.). If you are happy with your score, you do not need to complete other attempts. Each homework assignment is worth 10 points. Your lowest two homework assignment grades will be dropped.

You will also find electronic versions of the book chapters and some practice problems for each chapter on the Aplia website. The homework assignments will always have the word "Graded" next to them. The Aplia website requires me to list "due dates" for the book chapters and practice problems. Those due dates are meaningless. However, the due dates for the graded homework assignments are very important.

Exam Information:
Exams: There will be five exams throughout the semester, plus a final exam. Having so many exams means that there is less material covered on each exam. The questions on these exams will focus on the material between exam periods, but because material in statistics is inherently cumulative, sometimes prior material will be needed on exams. It should be clear from class lectures and the homeworks what this material will be. There will be two parts to each exam: a conceptual part and a computational part. The conceptual part will consist of multiple choice questions. The computational part will involve problems

similar to those in homework assignments and class examples, and will also consist of multiple choice questions. Your lowest exam grade of the 5 regular exams will be dropped from your final grade. Because of this policy, **make-up exams will NOT be given.** The final exam will be a cumulative exam. I will provide you with any formulas and tables you will need during the exams. You may **NOT** bring your own "cheat sheet" to exams.

Early exams: If you know in advance that you will be absent for an exam, you can arrange a time to take the exam early. You must notify me at least one week before the scheduled exam.

Attention Psychology Majors: Psychology majors are required to complete PSYC 250 with a minimum grade of "C-." Psychology majors may only repeat this course once.

Academic Integrity: I fully support SUNY Geneseo's policy on Academic Dishonesty and Plagiarism described in the Undergraduate Bulletin. Academic dishonesty degrades the learning process, deflates the meaning of grades, discredits the accomplishments of past and present students, and tarnishes the reputation of the University for all its members. Violations include, but are not limited to, using notes or electronic devices on exams, looking at another student's exam, turning in plagiarized materials, and helping another student cheat.

Academic sanctions range from a warning to expulsion from the university, depending on the severity of your violation and your history of violations. Whatever the sanction, I will file a report of academic dishonesty to the psychology department chairperson and the dean of the college.

Accommodations for Students with Disabilities: Reasonable accommodations are available for students who have documented physical, emotional, or cognitive disabilities. Accommodations will also be made for medical conditions related to pregnancy or parenting. Students should contact Dean Buggie-Hunt in the Office of Disability Services (tbuggieh@geneseo.edu or 585-245-5112) and their faculty to discuss needed accommodations as early as possible in the semester.

Procrastination: I firmly believe that procrastination or apathy on your part does **NOT** constitute an emergency or "special treatment" on my part. That is, if you fail to plan ahead and do what you are required to do, I am not responsible for bailing you out. Computers crash and the internet does not always work. That is a risk you take if you put something off until the last minute.

Doing Well in This Course: The nature of the course material is inherently cumulative. That means that if you don't understand a concept in week 2, you will have a very difficult time understanding concepts in subsequent weeks. I encourage you to come talk to me if you are struggling with a concept. The assigned problems in this course probably will require a bit more time and trial and error than you're used to seeing in psychology courses. Be patient with yourself if it takes you a few attempts to understand (and allot enough time for yourself for this process). Please note that there are many ungraded practice problems available to you, so that you can be confident in your work when your problems are graded.

There is no attendance policy for this class, but because the course material builds on itself, attendance is essential for success. Class periods will be a mix of lecture and problem solving. Missing class could put your understanding of the remaining course concepts in

jeopardy. If you miss class, it is your responsibility to get the notes from one of your classmates. <u>My notes will not be available</u>.

Finally, giving yourself ample time on the assignments is essential for success. Your homework will be completed using an online, interactive software package called Aplia. The assignments must be completed **BEFORE** the deadline; late assignments will **NOT** be accepted. Time management is essential here. It also helps to space out the problems so that you're working on them every day of the week; repetition spaced over time has been shown to increase learning. Starting the assignments early will also give you time to come to me with any questions you may have.

Extra Credit: You will be able to earn some extra credit by participating in psychology research studies. You will earn 2 points for every credit of research you participate in, for up to 4 credits of research (8 points). Information on where and how to sign up is posted on myCourses. I will let you know when you can start signing up for studies.

Grade Breakdown:

17 Aplia homework assignments (10 points each)	170 points
4 exams (50 points each)	200 points
Final exam	75 points
TOTAL	**445 points**

Your final grade for this course will be based on the total number of points you earn:

Grade	Points	Grade	Points
A	412-445	C+	345-353
A-	399-411	C	323-344
B+	390-398	C-	310-322
B	368-389	D	265-309
B-	354-367	E	≤ 264

COURSE SCHEDULE

Date:	Topic:	Readings/Assignments Due:
January 20	Introduction to the course	**Aplia #1: Aplia orientation (due 1/27)**
INTRODUCTION AND DESCRIPTIVE STATISTICS		
January 22 & 25	Introduction to statistics	Ch. 1; **Aplia #2: Ch. 1 (due 1/28)**
January 27	Frequency Distributions	Ch. 2; **Aplia #3: Ch. 2 (due 1/31)**
Jan. 29 & Feb. 1	Central Tendency	Ch. 3; **Aplia #4: Ch. 3 (due 2/4)**
February 3 & 5	Variability	Ch. 4; **Aplia #5: Ch. 4 (due 2/7)**
February 8	*Exam 1*	
FOUNDATIONS OF INFERENTIAL STATISTICS		
February 10 & 12	*z*-Scores	Ch. 5; **Aplia #6: Ch. 5 (due 2/16)**
February 15	Probability	Ch. 6; **Aplia #7: Ch. 6 (due 2/18)**
February 17 & 19	Sampling distributions	Ch. 7; **Aplia #8: Ch. 7 (due 2/23)**

February 22, 24, & 26	Hypothesis testing	Ch. 8; **Aplia #9: Ch. 8 (due 2/28)**
February 29	*Exam 2*	
USING t STATISTICS		
March 2, 4, & 7	*t* test: Single sample	Ch. 9; **Aplia #10: Ch. 9 (due 3/10)**
March 9 & 11	*t* test: Independent samples	Ch. 10
March 14, 16, & 18	*Spring Break – No class*	
March 21	*t* test: Independent samples *t* test: Related samples	Ch. 10; **Aplia #11: Ch. 10 (due 3/22)** Ch. 11
March 23	*t* test: Related samples	Ch. 11; **Aplia #12: Ch. 11 (due 3/24)**
March 25	*Exam 3*	
ANALYSIS OF VARIANCE		
March 28, 30, & April 1	One-way ANOVA	Ch. 12; **Aplia #13: Ch. 12 (due 4/5)**
April 4	Repeated-measures ANOVA	Ch. 13
April 6	Repeated-measures ANOVA Two-way ANOVA	Ch. 13; **Aplia #14: Ch. 13 (due 4/10)** Ch. 14
April 8 & 11	Two-way ANOVA	Ch. 14; **Aplia #15: Ch. 14 (due 4/12)**
April 13	*Exam 4*	
CORRELATIONS AND NONPARAMETRIC TESTS		
April 15 & 18	Correlation	Ch. 15
April 20	Correlation Regression	Ch. 15; **Aplia #16: Ch. 15 (due 4/24)** Ch. 16
April 22	Regression	Ch. 16; **Aplia #17: Ch. 16 (due 4/26)**
April 25 & 27	Chi-Square	Ch. 17; **Aplia #18: Ch. 17 (due 4/28)**
April 29	*Exam 5*	
May 2	Choosing the right statistic/Review	Ch. 19 (optional); **Aplia #19: Ch. 19 (due 5/3)**
Wed. May 11, 12-2:30 pm	*Final exam*	