

PSY 295: Data Analysis in Psychological Research
Summer 2020
Online, May 11th – June 25th

Instructor: Katie Leahy
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Required Materials (needed by May 11th, 2020)

- Aron, A., Coupe, E. J., & Aron, E. N. (2013). Statistics for psychology (6th ed.). Upper Saddle River, NJ: Prentice Hall.
- Calculator

Course Overview

This course is designed as an introduction to basic concepts and procedures used in descriptive and inferential statistics, especially as applied to the behavioral sciences. This course will cover descriptive statistics (such as central tendency, measures of dispersion, and standardized scores) and inferential statistics (such as z- and t-tests, ANOVA, correlation, regression, and chi-square). Finally, the course will link various statistical analyses with particular research questions pertaining to various branches of psychology.

Course Goals

By the end of this course, you should be able to do the following: 1) Explain basic concepts of statistics. 2) Summarize numeric data by computing descriptive statistics and by creating tables and graphs. 3) Differentiate between different inferential statistics and understand their applications to psychological research. 4) Compute various inferential statistics. 5) Test hypotheses and interpret research findings. 6) Apply the correct statistical analysis when provided with a specific research question.

Time Zones

All times and due dates listed in this syllabus are for Eastern Standard Time (EST). If you are taking this course in a different time zone, you will want to be aware of this and change your time zone to EST so that you don't miss any due dates/times.

Workload

Summer courses are intense, and statistics takes time to fully understand. Plan to spend around 4 hours per day working on PSY 295 (assuming a 5-day work week). This includes the time you spend reading the text, viewing lectures, working on homework problems, taking quizzes, and studying the material. The best way to be successful in PSY 295 is to stay on top of the material. We will follow a compressed schedule during our 7 weeks together so it can be easy to fall behind if you are not self-disciplined. Remember, we will cover the same material that is normally covered in an entire semester! Homework is due each week. Likewise, you will have to

complete six quizzes that will occur at the end of each week starting in Week #2. You should commit yourself to seven weeks of working very hard. Do not plan a summer vacation in the middle of this class! If these considerations do not fit with your plans or your personality, then drop this class as soon as possible. Note that you must have access to the required textbook to succeed in this course.

Honors Option

An honors option is not offered for this course.

Course Website: D2L

This version of PSY 295 will be held entirely online through the Desire 2 Learn (D2L) course management system (<https://d2l.msu.edu/>). All lectures, quizzes, and homework assignments will be administered online on D2L. Due to the online nature of this class, you will need to have a high-quality computer with consistent access to a high-speed internet connection. **You need to have access to high-speed internet when all of the course assignments are due.** If your internet connection is down when you need to turn in a homework assignment or take a quiz, it is your responsibility to get access to the internet ASAP! **In the case of missing deadlines because of internet connectivity problems, I will not give extensions on quizzes and homework assignments.** Access to a printer is also strongly recommended.

Please follow these suggestions to prevent problems during your participation in this course:

1. Use a recommended browser, like Chrome or Firefox.
2. Clear your cache and cookies before starting a quiz.
3. Have D2L open only to the quiz browser. If you have the course open in a second browser then you may have guest status in the exam browser and be logged in with your NETID in the other. Your quiz could end up with blank sections even after you enter data or it can skip questions.

Course Content Disclaimer

You are not allowed to sell or post any lecture notes or other course materials without authorization from the instructor. Photographing lectures, slides, and/or recording of the lectures are also prohibited.

Technical Assistance

If you need technical assistance at any time during the course or to report a problem, you can:

- Visit the Distance Learning Services Support Site at <https://lib.msu.edu/dls/>
- Visit the Desire2Learn Help Site at <http://help.d2l.msu.edu/>
- Or call Distance Learning Services (D2L Help Line) at (800) 500-1554 or (517) 355-2345
- If you experience other technological issues, including D2L outside of business hours EST, call the MSU Help Line at (844) 678-6200 or (517) 432-6200. Help is available 24 hours / 7 days a week! The help line can also help troubleshoot issues with your

computer. Time differences will not be an acceptable excuse for not reporting problems to the help line; they are available 24/7 throughout the course.

Many professors and instructors have found the Help Line very useful. It is my recommendation to take advantage of the Help Line or MSU Help Line before emailing me with any questions or concerns about D2L or other technical issues.

Course Requirements

This course is composed of seven homework assignments (the lowest two are dropped), and six quizzes.

Homework

Statistics are better understood when they have been applied. For this reason, there are 7 homework assignments in PSY 295 and they account for 10% of your grade. Homework will be available by 8am EST of the Monday of the week that the assignment is due. All homework is **due by 5pm EST** of the Thursday of that week. **There is no back-tracking for homework assignments, meaning after you answer a question, you will not be able to return and change your answers later.** There are no make-ups for homework assignments; instead, your two lowest homework assignment grades will be dropped. Therefore, only your top 5 HWs will be counted towards your final grade. You will be able to review incorrect homework responses for 24 hours after you have submitted your homework.

Quizzes

There are six quizzes in PSY 295. Each quiz will be worth 15% of your final grade. These will occur at the end of Weeks 2 to 7 in the course. You will have 1 hour to complete the quiz starting from the time that you begin to take the quiz. The quizzes will be “open” on D2L for a 24-hour period starting from 5 pm EST on Thursday until 5 pm EST on Friday (**except for Quiz #6, the last quiz, which will open from 5pm EST on Wednesday (6/24) to 5 pm EST on Thursday (6/25)**). You can take that quiz anytime during that 24-hour window.

Do not start the quiz after 4 pm EST on the day that it is due, because you will not complete the quiz by 5 pm EST! There is no back-tracking for the quiz, meaning after you answer a question, you will not be able to return and change your answers later. There are no make-ups for quizzes without a certified medical excuse, for example, a doctor’s note. You will be able to review incorrect responses 24 hours after the quiz closes.

Grade Information

There is a total of 500 points in this course. Please note that the cutoffs for each grade are final. Scores that are on the cusp between grades will not be rounded up at the end of the term. **There is no extra credit for this course.** The table below shows the breakdown per requirement.

Course Components	Points	TOTAL Points for Component
Quizzes (6)	15% of total grade each	450 (90% of total grade)
Quiz #1	75 points	
Quiz #2	75 points	
Quiz #3	75 points	
Quiz #4	75 points	
Quiz #5	75 points	
Quiz #6	75 points	
Homework (5 of 7; lowest two are dropped)	2% of total grade each	50 (10% of total grade)
Homework #1	10 points	
Homework #2	10 points	
Homework #3	10 points	
Homework #4	10 points	
Homework #5	10 points	
Total Available Points in Class	500	

Numerical grades will be assigned according to the table below:

Total Points	Grade
450 – 500	4.0
425 – 449.99	3.5
400 – 424.99	3.0
375 – 399.99	2.5
350 – 374.99	2.0
325 – 349.99	1.5
300 – 324.99	1.0
0 – 299.99	0.0

Viewing Your Grade in D2L

1) Select your course. 2) Click the Assessments dropdown. 3) Select Grades.

Academic Honesty

Any and all forms of cheating are unacceptable. Students are expected to complete homework and quizzes individually and without outside help. Any student caught cheating on exams or homework will receive a ZERO in this course. You can only use a basic calculator for your quizzes.

Article 2.3.3 of the Academic Freedom Report states that "The student shares with the faculty the responsibility for maintaining the integrity of scholarship, grades, and professional standards." The Department of Psychology adheres to the policies on academic honesty as specified in General Student Regulations 1.0, Protection of Scholarship and Grades; the all-University Policy on Integrity of Scholarship and Grades; and Ordinance 17.00, Examinations. For extensive details see Spartan Life: Student Handbook and Resource Guide. Further information about cheating can be found on a website provided by the MSU Ombudsman (<https://www.msu.edu/~ombud/academic-integrity/student-faq.html>). Make sure you are familiar with MSU definitions regarding academic dishonesty.

Accommodations

Michigan State University is committed to providing equal opportunity for participation in all programs, services, and activities. Requests for accommodations by persons with disabilities may be made by contacting the Resource Center for Persons with Disabilities at 517-884-RCPD (TTY: 517- 353-1293) or on the web at https://login.msu.edu/?App=RCPD_Profile. Once your eligibility for an accommodation has been determined, you will be issued a verified individual services accommodation ("VISA") form. Please present this form to me via email at the start of the term and/or two weeks prior to the accommodation date (test, assignment, etc.). Requests received after this date will be honored whenever possible.

Email Communication

Direct all email questions me (Katie, leahyka1@msu.edu) and be professional in your correspondence. This process will ensure the timeliest responses. The main purpose of email should be brief inquiries regarding course content not addressed in the syllabus or information otherwise not available to students. When a student needs to discuss a set of personal circumstances regarding their course performance, an online meeting via Zoom with the instructor is the appropriate venue.

Any correspondence for this course should originate from a Michigan State University email account. ***Please include PSY 295 in the subject of a message.*** Be aware that it may take up to 24 hours Monday-Friday and up to 48 hours Saturday-Sunday for your emails to receive a response. Students also have the option to meet with me through a Zoom meeting online. If you'd prefer to meet with me over Zoom, please email me at least 24 hours in advance requesting to meet online, and we can choose a time and day that works for both of us.

The following types of email will not receive a response:

- Inquiries about information which is provided in the syllabus or otherwise accessible (i.e., library policies)
- Rude or disrespectful correspondence
- Correspondence from an account not issued by Michigan State University

Office Hours

Because this is an online course, there are no in-person office hours. However, I will host office hours online. **Every Monday from 1:30pm to 3:30pm EST, I will be at my computer to answer all email correspondence. Online meetings via Zoom during this time are first come, first serve.**

Limits to Confidentiality

Please be aware that class materials are generally considered confidential pursuant to the University's student record policies. However, all University employees, including instructors, cannot maintain confidentiality when it conflicts with their responsibility to report certain issues based on external legal obligations or health and safety considerations of MSU community members and others. As the instructor, I must report the following information to other University offices if you share it:

- Suspected child abuse/neglect, even if this maltreatment happened when you were a child,
- Allegations of sexual assault or sexual harassment when they involve MSU students, faculty, or staff, and
- Credible threats of harm to oneself or to others

These reports may initiate contact from a campus official who will want to talk to you about the incident that you have shared. In almost all cases, it will be your decision whether you wish to speak with that individual or not. If you would like to talk about these events in a more confidential setting, you are encouraged to make an appointment with the MSU Counseling Center. Here is the link: <https://caps.msu.edu/services/index.html>

Course Schedule Disclaimer

The next page is a general indication of when we will cover the topics in the course. However, as the instructor, I reserve the right to adjust this schedule according to the pace of the course and the needs of the students. This also includes making any changes that I deem necessary to the details and/or policies listed in this syllabus. Check D2L regularly to keep up with the topics. You will be given notice of any changes. Also, please know that you are responsible for keeping track of all homework assignments and quizzes. The instructor is not responsible for reminding you about upcoming deadlines.

PSY 295 Course Schedule for Summer Session (5/11-6/25)

2020

Week	Dates	Lecture Topics	Readings	Key Dates
1	5/11 – 5/15	Displaying data	Ch. 1	
		Central tendency and variability	Ch. 2	
		Homework 1		Due May 14th
2	5/18 – 5/22	Key ingredients for inferential statistics	Ch. 3	
		Introduction to hypothesis testing	Ch. 4	
		Homework 2		Due May 21st
		Quiz 1		5/21 – 5/22
3	5/25 – 5/29	Hypothesis tests with means	Ch. 5	
		Effect size and power	Ch. 6	
		Homework 3		Due May 28th
		Quiz 2		5/28 – 5/29
4	6/1 – 6/5	<i>t</i> -tests: Single sample and dependent means	Ch. 7	
		<i>t</i> -tests: Independent means	Ch. 8	
		Homework 4		Due June 4th
		Quiz 3		6/4 – 6/5
5	6/8 – 6/12	Introduction to ANOVA	Ch. 9	
		Factorial ANOVA	Ch. 10	
		Homework 5		Due June 11th
		Quiz 4		6/11 – 6/12
6	6/15 – 6/19	Correlation	Ch. 11	
		Prediction	Ch. 12	
		Homework 6		Due June 18th
		Quiz 5		6/18 – 6/19
7	6/22 – 6/25	Chi-Square tests	Ch. 13	
		Non-parametric tests	Ch. 14	
		Homework 7		Due June 25th
		Quiz 6		6/24 – 6/25