Research Design & Statistics I

online, asynchronous

PSY-220-D01   Spring 2025   Mar 14th – May 9th

"Psychological science is the antidote to the pitfalls of unaided intuition" (Myers, 1997; pp. 111)

About the Instructor	**About the Graduate TA**
Name: Dr. Ashley Abraham	Name: Hope Dunn
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Office Hours: M: 3 – 4PM, W: 11AM – 12PM	Office Hours: TBD

Required Textbooks

Gravetter, F. J. & Forzano, L. B. (2018). *Research methods for the behavioral sciences* (6th ed.). Belmont, CA: Cengage.

Gravetter, F. J., Wallnau, L. B., Forzano, L. B., & Witnauer, J. E. (2018). *Essentials of statistics for the behavioral sciences* (10th ed.). Cengage.

Undergraduate students can rent textbooks from SIUE. Please visit the Textbook Service website for more information. For off-campus classes, the textbook may be shipped to you. Look for the option "Off-Campus Classes have special instructions, click here for these." Note: shipping time may take up to two weeks.

Required Software/Tools

Access to R and R Studio via Posit Cloud is required for statistical analyses. More information about R, RStudio and Posit Cloud is available in the Course Tools section of the syllabus.

Note: R is a free, open-source program. Mac users may need to install additional programs to use R Markdown locally

Syllabus and course schedule are subject to change at the instructor's discretion

Welcome to Research Design and Statistics!

Course Overview
TL/DR: You will learn how to do science! And to think critically about research!

Have you ever heard that "absence makes the heart grow fonder?" Maybe you've heard "Out of sight-out of mind." Both sayings seem quite intuitive, and probably we've all stated both with varying degrees of conviction some time in our past, so which saying is correct? People rarely recognize that we often act on intuition, folk-wisdom, proverbs, and sayings—even if we are totally wrong! If so many people base decisions on advice that is contradictory or even wrong, how can you know what to trust, particularly when it comes to human behavior? The answer is…psychological science!

Psychology is the science of mind and behavior. Science is a way of knowing. In Research Design and Statistics, you will learn how psychological science is done. The main purpose of this course is to help you learn to think like a psychological researcher. This means, by the end Research Design and Statistics, you will have the tools necessary to become critical consumers AND generators of the research information found throughout all other psychological courses. To accomplish this purpose, students will be exposed to the philosophy of science, methods for designing research, strategies for making sense of data (e.g., statistics), guidelines for presenting results, and ethical constraints that we all must abide by as members of the psychological community. You will be able to:
- read, understand, and critically evaluate published research
- generate empirically testable hypotheses
- design a research study and collect data
- select and calculate appropriate statistics
- understand the major concepts of statistics
- analyze and interpret data
- effectively communicate research results to your peers
- write a research paper in APA style

What about the statistics part?
The mere mention of the word "*statistics*" makes many students feel slightly overwhelmed or even extreme dread. *This is very normal.* Statistics is just a way to make numbers meaningful. Do. Not. Panic. I believe you can succeed in this course, even if you feel apprehensive about statistics in the beginning. For me to help you succeed*, it is important that you ask questions or seek help whenever something does not make sense*. I am not omniscient, but I am compassionate. I will help you to understand the material, provided you let me know when something is not clear. I *expect* you to have questions about this stuff; it would be atypical not to have questions. Asking questions is a sign of curiosity and desire to learn so please ask questions! Your TA and I are here to help!

Special notes about PSYC 220/221
1. If you need to remain a full-time student (e.g., for financial aid), you should be registered for at least 15 credit hours this semester. Why? In the unfortunate event that you fail this course (PSYC220), you will be dropped from PSYC221, which will reduce your credit hours. Thus, you should have 15 hours in order to be able to drop PSYC221 and still remain at full-time status (12 hours).

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2. This course has a "2 attempt" rule—you may only attempt the course (including W, WF, WP) two times. After two unsuccessful attempts, you will be dropped from the major.
3. *A grade of C or better in PSYC220 is required to progress to PSYC221*. If you earn a course grade of D or F in PSYC220, contact your academic advisor immediately to determine whether there is any possibility of getting enrolled in a section of this course next semester.

Communicating with the instructor

Please address me as Dr. Abraham, Professor Abraham, or Prof. Abraham. If you have questions, the best way to get in touch with me is MS Teams. Please post in the "Help Me!" channel unless your question is personal or very specific to you, in which case you can direct message me on Teams. Email is also an option, but I get bombarded by email everyday so I'm more likely to miss an email. I will do my best to respond within 24 hours on weekdays.

Technology requirements

1. A reliably working **computer** that runs Windows or Mac OS. Tablets and smart phones might work for some things in this course, but we can't guarantee they will work for everything. Chromebook laptops are also problematic. If you do not have a working computer that runs Windows or Mac OS, contact Information Technology Services about borrowing a laptop from the university. There are also computers for student use in the library.
2. Reliable internet access on a regular basis.

Technology capabilities

Additional guidance for taking online courses can be found here, Online at SIUE.

Students in an online course should be able to:

- Use a word processor, such as MS Word, to compose assignments, and be able to use tracked changes and comments from your instructor
- Use a slide presentation program such as MS PowerPoint
- Attach files to emails and upload them to Blackboard
- Give files meaningful names, and store them in meaningful folder structures on your computer (this will be very important in this course – make sure you know how to do it)
- Navigate websites and course materials
- Reach out to tech support staff when issues arise and troubleshoot to resolve problems

Submitting work

All work will be submitted via Blackboard. For writing assignments, be sure to upload a Microsoft Word document (not a PDF, .pages, shared document or any other format). We will be using tracked changes and comments in Word documents to give you feedback for your research papers.

Course Information

Prerequisite knowledge and credit hours

As a student in this course, it is expected that you:
- have a college level reading ability
- have a basic level of computer competency

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- have a basic level of math competency (arithmetic, algebra)
- are a declared psychology major
- completed PSYC 111 with a grade of C or higher

Course goals and objectives

1. Describe and distinguish among various research methods
2. Explain the role of statistics in psychological research
3. Discover, read, and evaluate published research
4. Design and conduct research studies
5. Analyze & interpret data using descriptive & inferential statistics
6. Write a research paper in APA style

Course Tools

- **Blackboard**: Primarily a "classroom" space
  - Assignments
  - Course Material
  - Other resources
- **Microsoft Teams**: Primarily a communication space. I recommend downloading and installing the app on your computer instead of using the browser version
  - Ask questions here
  - Work on group projects
  - Office hours
- **Posit Cloud:** For statistical analysis. Posit Cloud provides free access to a cloud based version of the R Statistical Computing Environment. It provides access to RStudio, R packages (aka, add-ons) and other tools. We will use Posit Cloud because it will allow us to use these data analysis tools collaboratively. R, RStudio, and R packages are also freely available can all be downloaded and installed to your personal computer.
- **Microsoft Office**: download and install here, https://www.siue.edu/its/office365/install.shtml
- **Qualtrics**: For use in research. we'll use this for running surveys and experiments. You must access Qualtrics through the SIUE Qualtrics link, https://siue.qualtrics.com/

Recommended Texts and Resources

*Navarro, D. (2019). *Learning statistics with R: A tutorial for psychology students and other beginners* (6.1). Creative Commons. https://learningstatisticswithr.com/book/index.html.

APA (2019). *Publication Manual of the American Psychological Association* (7th ed.). Washington, DC: American Psychological Association.

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APA Style and Grammar Guides https://apastyle.apa.org/style-grammar-guidelines

Note: Navarro (2019) is an open-source text; you can use the provided link to access the text anytime.

Course Assessments

- **Video Lectures & Activities**: There will be at least two lecture videos each week. These cover the main content of the course. You will complete two lecture activities each week. New lecture content will be made available on Tuesday mornings.
- **Lab Assignments**: These weekly assignments are more focused on developing and practicing skills. There is one lab per week, except Week 16, thus there are 7 total.
- **Weekly Comprehension Checks**: These are multiple choice questions based on the book chapter readings for that week. There will be 10 questions (5 from each chapter), drawn randomly from a question pool. Before the deadline, you have unlimited time and an unlimited number of attempts. Each attempt will consist of another random drawing of questions. Your score each week will be the highest of all your attempts for that week. You may use your books and notes for the comprehension checks, but do not search the internet for answers, and do not work with anyone else.

Assessments	Points
Lecture Activities (15pts x 14)	210
Lab Assignments (25pts x 7)	175
Weekly Comprehension Checks (25pts x 7)	175
Post-Course Survey	20
Group Research Project Literature Library: 20 Proposal: 20 Draft 1 (intro): 20 Draft 2 (+method): 20 Draft 3 (+results): 20 Draft 4 (final paper): 70 Final Group Presentation: 30 Peer evaluation: 20	200
Final exam	200
Total:	**1000**

- **Group Research Project**: You will be assigned to a group of approximately 4-5 students. You will work with your group to design and conduct a survey study. You will be given a group channel on MS Teams to facilitate working together. The project will be completed in stages with due dates throughout the 8-week course as you create a professional APA style paper. Drafts will be submitted on Blackboard (which can automatically detect plagiarism).
  Note: Group and individual evaluation: Your group will turn in Project Proposal version 1, and Project Proposal version 2, and everyone in the group will receive the same score on that. Likewise, you will create the final presentation as a group and everyone in the group will receive the same score. For all the other project components, you will complete your own individual version and receive your own individual score.
- **Final Exam:** The final exam will be cumulative, with a 4-hour time limit, and only one attempt allowed. It will be available on Blackboard for 48 hours and due by 11:59pm on the Friday of Week 8.

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- **Post-course Survey:** A self-report questionnaire to measure knowledge of research methods and statistics. Full credit just for completing it. A similar pre-course questionnaire was done at the start of PSYC220. The department looks at the change in scores from pre-course to post-course as a measure of learning.
- *Hypothetical* **Extra Credit:** I reserve the right to *potentially* offer bonus assignments for extra credit. Any such assignments would be *equally available to all students*.

Grading scale

Final letter grades will be based strictly on the following scale:

Point Range	Maximum Points	Final Grade
895 – 1000	1000	A
795 – 894	895	B
695 – 794	795	C
595 – 694	695	D
0 – 594	595	F

Note. 925 points is 92.5%, and so on. Fractional points will be handled as follows: a final score of 800.50 would be rounded up to 801, and a final score of 800.49 would be rounded down to 800.

Feedback and grading timeline

We will endeavor to grade and provide feedback within 1 week of submission. For written assignments using Microsoft Word or Google Docs, we will return a document to you with comments and tracked changes. You can find your graded work by clicking the My Grades link on the left menu of the Blackboard course.

Course Policies

Department of Psychology Writing Policy

As a student in this course, you will be expected to display university-level writing, which includes completing course assignments that meet the following basic writing criteria. Specifically, all written assignments completed for this course should include:

- clear transitions from sentence to sentence and idea to idea (e.g., paper is organized/flows well)
- verb tense consistency
- clear and unambiguous sentences and ideas
- writing that is free of typos, spelling errors, and major grammatical errors
- properly formatted paper including headings, citations and references, per the 7th edition of the APA manual

This is by no means an exhaustive list of basic writing skills. If you feel you need help with your writing, you are encouraged to seek assistance from the writing center on campus (http://www.siue.edu/is/writing) or utilize one of the many online resources they have identified to help students (http://www.siue.edu/lss/writing/resources.shtml).

Here are some additional considerations for quality college-level writing in any discipline…

- Clear, direct organizational structure
- Has a clear thesis statement

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- Paragraphs are well structured around main ideas
- Provides evidence and analysis
- Uses direct, appropriate language
- Concisely and precisely written
- Uses the appropriate vocabulary for your audience
- Includes a conclusion

Course Writing Policy
If your graded written assignments fail to meet the basic writing requirements listed above (and any others found to be appropriate by your instructor), the instructor will not grade your paper. If more than three writing errors are found on any one page of a written assignment, grading will stop, and the student's paper will be returned with a grade equal to 50% of the total point value for the assignment.

AI Use Policy

UNACCEPTABLE USE OF AI IS A FORM OF PLAGIARISM AND IS SUBJECT TO THE SAME ACAEMIC SANCTIONS. See the plagiarism policy below.

In this course, students must be the primary and majority authors of text, code, analysis, and all course work products and assignments. Students must keep drafts of assignments and logs of interactions with AI applications to demonstrate their contribution and original authorship, and to check what is permissible for each assignment. Assignments will be submitted via Turnitin, a tool with embedded AI detection

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About Generative AI
Generative artificial intelligence tools [software that creates new text, images, computer code, audio, video, and other content] have become widely available [e.g., ChatGPT for text and DALL-E for images]. This policy governs all such tools, including those released during our semester together. **You are prohibited from using generative AI tools on assignments in this course. You are prohibited from using any form of AI to complete exams.**

If you use generative AI tools, remember that they are typically trained on limited datasets that may be out of date. Additionally, generative AI datasets are trained on pre-existing material, including copyrighted material; therefore, relying on a generative AI tool may result in plagiarism or copyright violations. Finally, keep in mind that the goal of generative AI tools is to produce content that seems to have been produced by a human, not to produce accurate or reliable content; therefore, **relying on a generative AI tool may result in your submission of inaccurate content.** It is your responsibility—not the tool's—to assure the quality, integrity, and accuracy of work you submit in any college course. As specified elsewhere in the syllabus, this course may require electronic submission of essays, papers, or other written projects through the originality assessment service Turnitin. Turnitin will also attempt to detect AI-generated text.

Permitted Uses

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Use of AI tools to check grammar or style are permitted. When you are unsure, please ask BEFORE using an AI tool. <u>Any student work submitted using AI tools should clearly indicate what work is the student's work and what part was completed by the AI [see below].</u>

For my class, a responsible use of any AI-based tools in completing coursework or assessments must be done in accordance with the following:

- You must **complete the AI Use Log** on [see BB]. It is your responsibility to document your interactions with AI and to maintain a record of your authorship. My recommendation is to screen shot and <u>save everything</u> just in case (i.e., what prompts you used, what answers were produced, where, why, and how).
- You must be transparent in how you used the AI-based tool, including what work is your original contribution. An AI detector such as GPTZero (https://gptzero.me/) may be used to detect AI-driven work.
- This is new territory, but basic attribution rules still apply. Cite everything, otherwise you are likely violating academic integrity policies. You must clearly cite the use of AI-based tools in your work. Any work that utilizes AI-based tools in any way must be clearly marked as such, including the specific tool(s) used. For example, if you use ChatGPT-3, you must cite "ChatGPT-3. (YYYY, Month DD of query). "Text of your query." Generated using OpenAI. https://chat.openai.com/"
- You must ensure your use of AI-based tools does not violate any copyright or intellectual property laws.
- You must not use AI-based tools to cheat on assessments.
- You must not use AI-based tools to plagiarize without citation.

In this class, unacceptable uses of artificial intelligence (AI) assistance will be treated the same as plagiarism and/or an academic dishonesty violation.

[1]Some examples of acceptable and unacceptable uses are provided but this list is not exhaustive. If in doubt, ask.

Acceptable AI use or assistance includes:	Unacceptable AI use or assistance includes:
Brainstorming a topic	Using AI to draft entire essays or complete unfinished portions of an assignment
Generating search terms or keywords for research	Using AI to write or rewrite significant portions of a text [i.e., several sentences in a paragraph]
Formatting citations (keep in mind that AI often includes incorrect quotations and citations within a text)	Using AI to summarize primary material source material [e.g., article summaries]. Rewording an AI generated summary is *still* plagiarism.
Finding errors and receiving general suggestions for improving without using AI tools to explicitly compose an essay or text	Using entire sentences suggested by an app without providing quotation marks and a citation, just as you would to any other source. Citations should take this form: OpenAI, chatGPT. Response to prompt: "Explain what is meant by the term 'Triple Bottom Line'" (February 15, 2023, **https://chat.openai.com/**).

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[1] Adapted from KSU Writing Program Director, Jennifer M. Cunningham, Associate Professor of English

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Searching for specific information as one would do with search engines, browsers, and databases	Improperly crediting AI tools for any artistic piece used for illustrative purposes
Generating AI artwork, audio, images, or videos with proper credits to the AI tool used	Failing to document appropriate use of AI

In this class, I permit students to use ChatGPT for the following types of tasks:
- Outlining content
- Providing background knowledge (with the understanding that ChatGPT is often wrong—just read Wikipedia; it's better for this anyways)
- Checking grammar and syntax
- Creating materials [i.e., survey items, sentences, images] for research experiments

Potential consequences for inappropriate use of AI
Depending on the nature and severity of the offense, students will be subject to one or more of the following consequences:

- Meet with instructor to develop a learning plan including clear resubmission due date and consequences for failing to resubmit, likely a 0 on the assignment
- Removal from group project and 20% reduction in total project score
- Zero on the assignment and plagiarism report to the Provost
- Zero on the research project and plagiarism to the Provost
- Fail the course, plagiarism report to the Provost

Academic integrity/plagiarism
The expectations and academic standards outlined in the Student Academic Code (3C2) apply to all courses, field experiences and educational experiences at the University, regardless of modality or location. Plagiarism is the use of another person's words or ideas without crediting that person. Plagiarism and cheating will not be tolerated and may lead to failure on an assignment, in the class, or dismissal from the University, per the SIUE academic dishonesty policy. Students are responsible for complying with University policies about academic honesty as stated in the University's Student Academic Conduct Code.

We will cover how to properly read and cite sources in class. You are responsible for understanding what plagiarism is; if you have any questions at all, you should discuss them with the professor or your TA BEFORE you turn in a plagiarized paper. A lack of knowledge of appropriate citation and referencing format will not excuse you from point deductions from written assignments or disciplinary action in the case of plagiarism. Unless expressly allowed by the instructor, the use of artificial intelligence (AI) tools and applications (including ChatGPT, DALL-E, and others) to produce content for course assignments and assessments is a violation of SIUE's academic policy and is prohibited.

We have ways of detecting plagiarism and use of AI, so don't do it!

Late Policy
You have seven 'late days' to use at your discretion. Each 24-hour period after the due date counts as one 'late day.' So, if you submit an assignment within 24 after the due date, you have used one late day; submit it within 48 hours and you've used 2 late days. If you submit an assignment seven days after the due date, you have used all seven late days on this one assignment and will not be able to turn in any other late assignments without losing points. Said another way, you can be up to 24 hours late on 7

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different assignments, 7 days late on one assignment, or you can spread your late days across a couple of assignments. As long as you have late days to use, you will not be penalized for late assignments. <u>If you run out of late days, you will lose 50% of the total points</u> for each day it is late, and no late assignments will be accepted more than 3 days past the due date. *NOTE: you may not use late days on group graded assignments.*

Additional Course Policies

Diversity and Inclusion

SIUE is committed to respecting everyone's dignity at all times. In order to learn, exchange ideas, and support one another, our virtual and physical classrooms must be places where students and teachers feel safe and supported. Systems of oppression permeate our institutions and our classrooms. All students and faculty have the responsibility to co-create a classroom that affirms inclusion, equity, and social justice, where racism, sexism, classism, ableism, heterosexism, xenophobia, and other social pathologies are not tolerated. Violations of this policy will be enforced in line with the SIUE Student Conduct Code.

The Hub https://www.siue.edu/csdi is an excellent resource for students for support and community. Any person who believes they have experienced or witnessed discrimination or harassment can contact Ms. Jamie Ball, Director in the Office of Equal Opportunity, Access and Title IX Coordination at (618) 650-2333 or jball@siue.edu. There is also an online form for reporting bias incidents at https://cm.maxient.com/reportingform.php?SIUEdwardsville&layout_id=10.

Pregnancy and Newly Parenting Policy

This policy and procedure are established to ensure the protection and equal treatment of pregnant students, students with pregnancy-related medical conditions including as a result of the termination of pregnancy, and students who become new parents including parents adopting or fostering to adopt for the first 12 weeks a child is in the home, in accordance with Federal and State guidelines and regulations. "New Parents" refers to a parent who has recently welcomed a newborn or adopted a child or is fostering to adopt a child and needs support to mitigate the disruption in academic progress within the first 12 weeks of parenting or a parent that needs support due to medical necessity attributed to pregnancy or delivery of a child; care of newborn; or lactation within the first year of child's life or legal adoption/fostering. Visit Policies & Procedures - Student Rights and Conduct - Newly Parenting Policy - 3C15 to view the full policy and learn how to request accommodations through the Office of Equal Opportunity, Access, and Title IX Coordination (EOA).

Regular and Substantive Interaction

Regular and substantive interaction (RSI) is required as part of new U.S. Department of Education regulations for distance (online) education and it supports student learning in all learning environments (online, face-to-face, hybrid, hyflex, etc.). SIUE faculty participate in RSI by initiating frequent and timely opportunities to engage with students. Because there are several ways to implement RSI, such as facilitating online discussions, scheduling a Zoom conference with a student, or holding regularly scheduled review sessions before tests, RSI may look different in every class. To learn more about RSI, use the Online Tips links for Faculty and Students in your Blackboard course websites or visit the Faculty Resources for Regular and Substantive Interaction webpage.

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Recordings of Class Content

Faculty recordings of lectures and/or other course materials are meant to facilitate student learning and to help facilitate a student catching up who has missed class due to illness or quarantine. As such, students are reminded that the recording, as well as replicating or sharing of any course content and/or course materials without the express permission of the instructor of record, is not permitted, and may be considered a violation of the University's Student Conduct Code (3C1), linked here: https://www.siue.edu/policies/3c1.shtml.

Technology Privacy Information

We will be using Blackboard in this course. View the Anthology Blackboard Privacy Statement to review how your data is being used and stored.

Additional Student Support

Services for Students Needing Accommodations

It is the policy and practice of Southern Illinois University Edwardsville to create inclusive learning environments. If there are aspects of the instruction or design of this course that result in barriers to your inclusion or to accurate assessment of achievement—such as time-limited exams, inaccessible web content or the use of non-captioned videos—please contact Accessible Campus Community and Equitable Student Support (ACCESS) as soon as possible. In order to properly determine reasonable accommodations, students must register with ACCESS either online at siue.edu/access or in person in the Student Success Center, Room 1203. You can also reach the office by emailing us at myaccess@siue.edu or by calling 618-650-3726.

If you feel you would need additional help in the event of an emergency situation, please notify your instructor to be shown the evacuation route and discuss specific needs for assistance.

Academic and Other Student Services

As an enrolled SIUE student, you have a variety of support available to you, including:

- Lovejoy Library Resources
- Academic Success Sessions
- Tutoring Resource Center
- The Writing Center
- Academic Advising
- Financial Aid
- Campus Events
- Counseling Services

If you find that you need additional support, please reach out to me and let me know.

Cougar Care

Dealing with the fast-paced life of a college student can be challenging, and I always support a student's decisions to prioritize mental health. Students have access to counseling services on campus (Student Success Center, 0222). Make an appointment by visiting cougarcare.siue.edu or by calling 618-650-2842.

Student Success Coaches

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Student success coaches work across campus to serve the SIUE student population with the tools and resources to adjust to and meet the demands of the college experience. Success coaches provide direct services such as time management support and referrals to campus resources. If you find yourself in need of academic or personal support, or in a situation that is preventing you from being successful in the classroom, please utilize Starfish to connect with a coach as soon as possible. The sooner you engage, the sooner you can access the information or tools you need that may help you get back on track.

Technical Support

Since this is an online course, you are expected to have reliable Internet access on a regular basis. It is your responsibility to address any computer problems that might occur. Such problems are not an excuse for delays in meeting expectations or for missing course deadlines.

Contact ITS at 618-650-5500 or at help@siue.edu with any technical concerns. You can also check the functionality of University systems, including Blackboard, at the ITS System Status page, or search the ITS Knowledge Base for various how-to and troubleshooting guides.

Tips for taking online assessments:

- Set up a wired (Ethernet) Internet connection on your computer
- Do not use a mobile device, such as a phone or tablet
- Read the instructions and directions carefully
- Be prepared to complete the assessment in the allotted time

Research Design and Statistics I

The schedule is subject to change at the instructor's discretion. Changes to the schedule may be announced on Teams. If substantial changes need to be made to the schedule, a revised reading and assignment schedule will be posted on BB.

All assignments must be submitted on BB or Teams as described in the assignment – no exceptions. Assignments emailed to me will not be accepted.

All assignments are due on Tuesdays at 8:00am on the date it is listed unless otherwise noted.

Course Schedule

Week	Learning Activities	Assignments	Due
Week 9 *Sampling distribution Hypothesis testing*	• Read Statistics Chapters 7 and 8 • View two Week 9 lecture videos and accompanying PowerPoint files, do the ACTIVITY (sampling distribution) • Watch video on inclusive demographics	• Comprehension check based on the readings • Lecture worksheets • Lab 9 (prepare for project)	Tuesday March 25 2025
Week 10 *t-test, and Experiments*	• Read Statistics Chapter 9, Research Methods Chapter 6 pp. 147-154 and Chapter 7 • View two Week 10 lecture videos and accompanying PowerPoint files, do the ACTIVITY (reading experiment) • View resources and prep for Lab 10 • Read seed article assigned to group for group project	• Comprehension check based on the readings • Lecture worksheets • Complete Lab 10 (interpret results of reading experiment activity) • Project Literature Review and Ideas	Tuesday April 1 2025
Week 11 *Between-subjects experiments and t-test*	• Read Research Methods Chapter 8 and Statistics Chapter 10 • View two Week 11 lecture videos and accompanying PowerPoint files, do the ACTIVITY (read/generate experiment) • View resources and prep for Lab 11	• Comprehension check based on the readings • Lecture worksheets • Complete Lab 11 (interpret results of read/generate experiment activity, and practice with operational definitions) • Project Proposal [group]	Tuesday April 8 2025
Week 12 *Within-subjects experiments and t-test*	• Read Research Methods Chapter 9 and Statistics Chapter 11 • View two Week 12 lecture videos and accompanying PowerPoint files • View resources and prep for Lab 12 (including video on running experiments in Qualtrics) • Work on implementing group project experiment in Qualtrics	• Comprehension check based on the readings • Lecture worksheets • Complete Lab 12 (between-subjects t-test in SPSS) • Draft 1 of paper (intro)	Tuesday April 15 2025

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Week 13 *One-way ANOVA, significance, effect size*	• Read Statistics Chapter 12, and Gurnsey (2017) pp. 1-18, 39-57 • View two Week 13 lecture videos and accompanying PowerPoint files • View resources and prep for Lab 13	• Comprehension check based on the readings • Lecture worksheets • Complete Lab 13 (one-way ANOVA in SPSS) • Draft 2 of paper (intro+method) • Run experiments online via Qualtrics	Tuesday April 22 2025
Week 14 *Factorial Designs, Two-way ANOVA*	• Read Research Methods Chapter 11 and Statistics Chapter 13 • View two Week 14 lecture videos and accompanying PowerPoint files • View resources and prep for Lab 14	• Comprehension check based on the readings • Lecture worksheets • Complete Lab 14 (analyze data from group project if ready) •	Tuesday April 29 2025
Week 15 *Quasi-experimental and developmental research designs*	• Read Research Methods Chapter 10 and Twenge (2010) • View two Week 15 lecture videos and accompanying PowerPoint files • View resources and prep for Lab 15	• Comprehension check based on the readings • Lecture worksheets • Complete Lab 15 (bar graph) • Draft 3 of paper (intro+method+results)	Tuesday May 6 2025
Week 16 *Small-N experiments, and Bayesian statistics*	• Read Research Methods Chapter 14 • View two Week 14 lecture videos and accompanying PowerPoint files	• Comprehension check based on the reading • Lecture worksheets • Create final presentation video [group] • Draft 4 of paper (complete) • Peer evaluation • Post-course questionnaire • FINAL EXAM (PSYC221)	Friday May 9, 2025

Note: Friday May 9th is the last day of the 8-week semester. All work must be completed by 11:59PM, no exceptions

Syllabus and course schedule are subject to change at the instructor's discretion