



COUGARS

Syllabus for Course PSYC-220-D01
Research Design & Statistics I – Online
Department of Psychology
Fall 2025
Mon Aug 18th to Fri Oct 10th

About the Instructor

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Welcome

Psychology is the science of mind and behavior. Science is a way of knowing. In these two courses (PSYC220 & 221), you will learn how psychological science is done. 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 (e.g., using SPSS); understand the major concepts of statistics; analyze and interpret data; effectively communicate research results to your peers; and write a research paper in APA style. In short, you will learn how to do science! You'll also be able to think critically about research that you read.

What about the statistics part? Statistics is a way to make meaning out of numbers. Doesn't that sound awesome? It is; you'll see. My goal is to help you understand the major concepts of statistics. I focus on concepts over calculation. We do use some math in statistics, but you will only need basic math skills (high school algebra), and I am happy to help you refresh any skills as needed (see also Appendix A in the textbook). Many students feel anxiety about math. Don't panic; it will be okay. You won't have to memorize formulas or do mental arithmetic.

This accelerated course will require sustained dedication, time, and effort. THIS COURSE SHOULD BE YOUR HIGHEST PRIORITY. It is an essential course of the psychology major, and at the heart of psychology as a science. It is NOT intuitive, and not something you can just half-ass. This version of the course is CONDENSED so it moves FAST. It's 16 weeks crammed down into 8 weeks. DON'T PROCRASTINATE. The number one reason students don't pass this class is falling behind and not turning everything in. But if you stay on top of everything each week, put in the time and effort, and take advantage of help from me and our graduate teaching assistant, you can do this.

Bio

I am a cognitive psychologist and sentient assemblage of matter residing on planet Earth. I received my Ph.D. from the University of Illinois at Urbana-Champaign in 2012, worked as a postdoctoral researcher at Washington University in St. Louis, and taught at Fontbonne University before joining SIUE. I conduct research on memory, metacognition, and the interplay of technology and the human mind. I am a proud advocate for the queer/LGBTQIA community. A native of southern California (bachelor's degree from UCLA), I enjoy birdwatching and video games.

Teaching Philosophy

My goal is to spark a sense of wonder in students, and to equip them with the skills to think better and become better people.

Communicating with the instructor

If you have questions, the best way to get in touch with me is MS Teams. Please post in the “HELP” 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 a deluge of those everyday so I’m more likely to miss an email. I will do my best to respond within 24 hours on weekdays. Please address me as Dr. Finley, Professor Finley, or Prof. Finley.

About the Course

Course description

Methods for designing psychological studies and the statistics used to analyze and interpret the data. Focus on non-experimental methods.

Prerequisite knowledge and credit hours

- psychology major
- PSYC 111 (minimum grade of C)
- college level reading ability
- computer competency
- math competency: arithmetic, algebra

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 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.

To get physical copies: 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.

To access online copies: in Blackboard, look for the “eBooks online” section in the sidebar.

Special notes about PSYC 220/221

- 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).
- 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.
- **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.

Other course materials

- **Blackboard:** <https://bb.siue.edu>
 - Assignments

- Other resources
- **Microsoft Teams:** via link on Blackboard. I recommend downloading and installing the app on your computer.
 - Ask questions here
 - Work on group projects
 - Office hours
- **SPSS** statistical software: download and install: <https://www.siue.edu/its/labsclassrooms/vlab/spss.shtml>
- **Microsoft Office:** download and install: <https://www.siue.edu/its/office365/install.shtml>
- **Qualtrics:** we'll use for running surveys and experiments: <https://siue.qualtrics.com/>
- **YouTube:** lecture playlist: https://www.youtube.com/playlist?list=PLeqON3UblhzW_PeuhIFVaUk7rvU0t6djP
 - Instructional material created by the professor is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International license (CC BY-NC-SA 4.0). Meaning that you can share and adapt the material as long as you give credit and it is for non-commercial purposes. Content created by third parties (e.g., movies, textbooks) is covered by its own copyright licenses.

Course Requirements

Course activities/assessments

- **Pre-course questionnaire:** A self-report questionnaire to measure any pre-existing knowledge of research methods and statistics. Full credit just for completing it. A similar post-course questionnaire will be completed at the end of PSYC221.
- **CITI Research Ethics and Compliance Training**
- **Video Lectures & Worksheets:** There will be two video lectures per week that cover the main content of the course, and a worksheet that goes along with each lecture. Worksheets are due by 11:59pm on Sunday at the end of the week. There are 14 lectures & worksheets total.
- **Lab Worksheets:** These weekly worksheets are more focused on developing and practicing skills. Worksheets are due by 11:59pm on Sunday at the end of the week. There is one per week, except Week 8, 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. The due date is Sunday 11:59pm at the end of the week. 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.
- **Group Research Project:** You will be randomly 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 an APA style paper. Drafts will be submitted on Blackboard, which can automatically detect plagiarism.
Group vs. 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 on that. For all the other project components (Paper Drafts 1-4), 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.
- **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*.

Submitting work

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

Technology requirements

- 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, especially for using SPSS. 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.
- Reliable internet access on a regular basis.

Technology capabilities

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
- Navigate websites and course materials
- Reach out to tech support staff when issues arise and troubleshoot to resolve problems

Additional guidance for taking online courses can be found on the [Online at SIUE site](#).

Course Policies and University Policies

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](#). **Normally a student who plagiarizes within a course shall receive a grade of F in the course in which the act occurs.** 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.

Course Policy on AI: You are not allowed to use AI in this course. It constitutes cheating, and is forbidden.

Guys, I cannot stress this enough: **DO NOT USE GENERATIVE A.I. IN THIS COURSE!** This includes tools like ChatGPT, and Grammarly (which used to just help correct grammar, but now has AI tools to just write for you), and surely some other AI tools I have not heard of.

Using AI is **CHEATING**, as per the syllabus and university policy, and will result in an F on the assignment for the first infraction. Subsequent infractions will carry harsher penalties like reporting you for academic misconduct and failing the course.

I know you are tempted to use tools like these, to enter an assignment's prompt into ChatGPT or whatever other AI, and have it quickly write an entire paper for you. Maybe you think you can tweak the prompts you give it to make the writing look more like real student writing. Maybe you think you can rephrase the AI output so you won't get caught. I know other students online might tell you you'll never get caught and even if you did, you can just deny deny deny because the professors can't 100% prove you used AI. Don't listen to such bad advice.

Keep in mind, the instructors (i.e., me the professor, and the graduate teaching assistant) can just as easily use AI tools to generate a paper ourselves, so we know exactly what AI-generated papers look like. Also, I have been teaching for many years and I know what real undergraduate writing looks like, compared to AI writing. And I have several examples of your writing to compare against.

If you use AI, you will almost certainly get caught! It's not worth it.

Because AI use has become so rampant, this year I am trying something different. **In MS Teams, I'm making an individual channel for each student that will have a Files tab where I want you to keep your Word document as you are working on writing your paper assignment drafts.** This will let me see a **VERSION HISTORY** of the document so I can see the incremental progress you've made if you're writing the paper yourself. This will be useful to exonerate you if I or the TA suspect your paper was written by AI but it actually wasn't. We'll be able to see your version history and if it looks like the process of a human writing a paper, you'll be cleared.

Furthermore, when students use AI to cheat like this, it breaks my heart. I am here as your teacher, in good faith, to help you **LEARN**, improve your skills, and become a better version of yourself. It's important for your college education that you learn how to write and think **using your own human brain**. That's what I care about as your teacher! When you use AI to cheat, you rob yourself of self-improvement. It's like going to the gym and paying a robot to lift weight for you.

Dr. Finley

PS: When we get to the second course, PSYC221, there is one specific part where I will allow AI with explicit permission from me, for creating stimuli for experiments. Aside from that, AI use is **FORBIDDEN**.

Psychology Department 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 (i.e., 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 citations and references (if relevant).

This is by no means an exhaustive list of basic writing skills, but will give you an idea of what we are looking for in our papers. If you feel you need help with your writing, you are encouraged to seek assistance from the [writing center](#) on campus or utilize one of the many [online resources](#) they have identified to help students. 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 stop the grading process and return the paper to you with the grade of 0. You will have 48 hours to return the assignment in an acceptable form; if it still fails to meet the basic writing criteria, the grade of 0 will remain.

Grading

Your grade in this course will be based on:

Pre-Course Questionnaire	13
CITI Research Ethics and Compliance Training	13
Lecture Worksheets 14 worth 18 points each	252
Lab Worksheets 7 worth 25 points each	175
Weekly Comprehension Checks 7 worth 25 points each	175
Group Research Project Proposal v. 1: 20 Proposal v. 2: 20 Draft 1 (intro): 20 Draft 2 (+method): 20 Draft 3 (+results): 20 Draft 4 (final paper): 26 Final Group Presentation: 26 Peer evaluation: 20	172
Final exam	200
Total:	1000

Grading scale

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

895	≤	A	≤	1000
795	≤	B	<	895
695	≤	C	<	795
595	≤	D	<	695
0	≤	F	<	595

Note that 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.

Grading rubrics

The scoring of each assignment is explained on Blackboard along with the assignment instructions.

Feedback and grading timeline

We will endeavor to grade and provide feedback within 1 week of submission. For written assignments using Microsoft Word, we will return a Word 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.

Late or Missed Assignments

You can turn in 2 things up to 1 week late without penalty. After that, all late work will earn half credit up until the end of Friday of week 8.

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](#).

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.siu.edu/policies/3c1.shtml>.

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.siu.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).

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 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](tel: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](tel:618-650-2842).

Student Success Coaches

[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](tel: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

Subject to change notice

All material, assignments, and deadlines are subject to change with prior notice. It is your responsibility to stay in touch with your instructor, review the course site regularly, or communicate with other students, to adjust as needed if assignments or due dates change.

Course Schedule:

Week	Learning Activities	Assignments	Due Dates All due at 11:59 pm CST
Week 0 Getting Started	• Read course syllabus and schedule • Watch course tour and instructor introduction video(s) • Read: Overcoming Math Anxiety & Basic Math Concepts • Familiarize yourself with MS Teams (will be used for group communication)	• Pre-course questionnaire • Discussion forum: introduce yourself (text or video link; extra credit) • Syllabus quiz (Extra credit)	Sunday Aug 24, 2025
Week 1 The scientific method, & sources of information	• Read Research Methods Chapters 1-2 (linked in Bb for those who don't have textbook yet) • View two Week 1 lecture videos and accompanying PowerPoint files • Read handouts: literature search strategies, and guidelines for evaluating credibility of sources • View resources and prep for Lab 1	• Comprehension check based on the readings • Lecture worksheets • Complete Lab 1 (Part 1: using PsycINFO, Part 2: reading an article)	Sunday Aug 24, 2025
Week 2 Defining and measuring variables, and introduction to statistics	• Read Research Methods Chapter 3 and Statistics Chapter 1 • View two Week 2 lecture videos and accompanying PowerPoint files • View resources and prep for Lab 2 • View worked examples of summation [	• Comprehension check based on the readings • Lecture worksheets • Complete Lab 2 (Part 1: Group construct ideas, Part 2: guided reading of article for group project) • CITI Ethics training	Sunday Aug 31, 2025
Week 3 Surveys, Descriptive/Ob servational methods	• Read Research Methods Chapter 13 • View Week 3 lecture video and accompanying PowerPoint file • View resources and prep for Lab 3 • View group project overview material	• Comprehension check based on the reading • Lecture worksheet • Complete Lab 3 (summarize article for group project) • Group project proposal v1 [group]	Sunday Sept 7, 2025

Week	Learning Activities	Assignments	Due Dates All due at 11:59 pm CST
Week 4 Ethics, Selecting Research Participants	• Read Research Methods Chapters 4 and 5 • View two Week 4 lecture videos and accompanying PowerPoint files • View resources and prep for Lab 4	• Comprehension check based on the readings • Lecture worksheets • Complete Lab 4 (ethical vignettes) • Group project proposal v2 [group] (entering survey questions in Qualtrics)	Sunday Sept 14, 2025
Week 5 Distributions, Central Tendency	• Read Statistics Chapters 2 and 3 • View two Week 5 lecture videos and accompanying PowerPoint files • View resources and prep for Lab 5 • View resources about APA style writing	• Comprehension check based on the readings • Lecture worksheets • Complete Lab 5 (SPSS) • Draft 1 of paper (intro)	Sunday Sept 21, 2025
Week 6 Variability, Z-scores	• Read Statistics Chapters 4 and 5 • View two Week 6 lecture videos and accompanying PowerPoint files • View resources and prep for Lab 6	• Comprehension check based on the readings • Lecture worksheets • Complete Lab 6 (analyze project data in SPSS) • Draft 2 of paper (intro+method)	Sunday Sept 28, 2025
Week 7 Correlation, Regression, Probability	• Read Statistics Chapters 14 and 6 • View two Week 7 lecture videos and accompanying PowerPoint files • View resources and prep for Lab 7	• Comprehension check based on the readings • Lecture worksheets • Complete Lab 7 (correlation in Excel) • Draft 3 of paper (intro+method+results)	Sunday Oct 5, 2025
Week 8 Chi square tests	• Read Statistics Chapter 15 • View Week 8 lecture and accompanying powerpoint	• create video group presentation [group] • Lecture worksheet • Draft 4 of paper (complete) • Peer evaluation • FINAL EXAM (PSYC220) • [no lab this week]	Friday Oct 10, 2025