

Research Design and Statistics II

PSYC 221-006 & 007 Spring 2025

Instructor	Dr. Carlee Beth Hawkins	Email	carhawk@siue.edu
Office	AH 0132	Class Info	MW 11-11:50 FH 3115
Office Hours	Mon 10-11a; Wed 12-1p	Lab Time	Fri 11-11:50 or Fri 12-12:50
Phone	618-650-2253	Lab Room	FH3103
Grad Assistant	Ashleonia Coleman	Grad Assistant	Olivia Piekarski
Office Hours	Tues 11-12a; Wed 3-4p	Office Hours	Mon 1-2p; Fri 1-2p
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Course Description (what the course is about)

Psychology is a science. PSYC220 and PSYC221 introduce students to the common research designs and statistics used in psychology and other behavioral sciences. PSYC220 focuses on nonexperimental research designs and descriptive statistics. PSYC221 focuses on experimental research designs and inferential statistics. These classes will prepare you to critically engage with research in all areas of psychology and develop your scientific skepticism as a consumer of research. **Prerequisite: C or better in PSYC 111 and PSYC 220**

Course Objectives (what we will learn)

- Understand experimental research designs and their appropriate statistical analyses
- Compute inferential statistics by hand and use SPSS (statistics software) to analyze data
- Design and conduct experimental studies and write research reports in APA style

Required Materials (what you need)

Research Methods textbook: Gravetter, F. J., Wallnau, L. B., Forzano, L. B., & Witnauer, J. E. (2018). *Essentials of statistics for the behavioral sciences* (9th ed.). Cengage.

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

SPSS software: Version 26 <https://www.siue.edu/its/labsclassrooms/vlab/spss.shtml>

Calculator: Simple calculator, such as TI-30Xa (not your phone or a graphing calculator)

How to Do Well and Stress Less in This Course (some advice)

- **Understand course expectations** – read syllabus, ask questions, review weekly to do lists
- **Complete weekly material** – read textbook, pay attention in class, take notes, study
- **Attend and get help** – attend class and lab, communicate with lab team, professor, TAs
- **Submit assignments** – keep track of assignments; deadlines Wednesdays or Fridays at 2pm

Course Requirements and Grading (how you will be graded)

<u>Assessment</u>	<u>Point Total</u>	<u>Percent</u>	<u>Grade Breakdown</u>
4 Exams (10pts each; lowest dropped)	30 pts	30%	90% – 100% = A
4 Study Guides (2.5pts each)	10 pts	10%	80% – 89% = B
Lab project	40 pts	40%	70% – 79% = C
Attendance and Engagement	20 pts	20%	60% – 69% = D
Total points	100 pts	100%	below 60% = F

- **Exams [30 points]**. Four exams are worth 10 points each. I will drop your lowest exam grade, so exams will be worth 30 points total. Exams 1-3 are not cumulative, but up to 1/3 of Exam 4 will be cumulative. Exams are multiple choice and completed in class. You may use your books and approved hand-written study guides. Exams will cover material from the textbook, lectures, and class discussions and will include factual and conceptual questions, problems, and questions that require you to apply concepts to new topics.
 - **Missed exams**. If you miss an exam, that can be your dropped exam. If you are sick or detained and want a make-up exam, request one by email as early as possible.
- **Study guides [10 points; 4SGs*2.5pts]**. Study guides will be provided weekly and graded before each exam. Approved hand-written study guides can be used during in-person exams.
- **Lab project [40 points]**. You will complete an experiment that requires you to create a hypothesis, read research papers, design an experiment, collect and analyze data, and understand results. This allows you to learn by *doing* rather than just listening and reading. Three lab assignments (LAs) and three drafts build up to a final APA-style paper.
 - **Lab Assignments [15pts; 3 LAs*5pts]**. We will work on lab assignments and paper drafts in lab each week. LAs must be submitted in person and hand-written.
 - **Drafts [15pts; 3 Drafts*5pts]**. Three drafts will be typed in a shared Microsoft Word document stored in OneDrive and submitted before the deadline through Turnitin.
 - **Final Paper [10pts]**. You will revise your drafts based on feedback to complete an APA-style final paper worth 10% of your grade (rubric will be provided).
- **Attendance [10 points]**. You are expected to attend most classes, but please stay home if you're sick. We will meet 44 times this semester (three times a week for 15 weeks with one holiday). Attendance will be collected every day in person. Full points are awarded for 80-100% attendance. That is, you can miss up to 9 classes without penalty. Starting with the 10th missed class, you will be penalized 0.5 point for each missed class.
- **Engagement [10 points]**. Engagement is important in this class and essential in lab. To assess engagement, I will provide an evaluation to you (self-reflection), myself, and your lab project group members. The average of the three evaluations will be your engagement grade.

Course Calendar (what we are doing and what is due)

Date	Topic	Reading	Assignment due 2pm	Points
1/13 Week1	Introduction to PSYC221			
1/15 Week1	220 review and 221 preview	220 Chs		
1/17 Lab 1	Lab experiment study design		CITI certificate on file	--
1/20 Week2	NO CLASS – MLK Day!			
1/22 Week2	Two kinds of experiments	M-Ch7		
1/24 Lab 2	Lab experiment study design		LA#1: Study design	5
1/27 Week3	Between-groups experiments	M-Ch8		
1/29 Week3	Between-groups experiments		SG#1: Weeks 1-3	2.5
1/31 Lab 3	Understanding articles			
2/3 Week4	ONLINE – See to do list	220 Chs		
2/5 Week4	Exam 1 (Weeks 1-4)		Exam #1	10
2/7 Lab 4	Lit review & article summaries		Onedrive shared	--
2/10 Week5	Sampling distributions	S-Ch7		
2/12 Week5	Sampling distributions			

Date	Topic	Reading	Assignment due 2pm	Points
2/14 Lab 5	Writing Introductions		LA#2: Intro outline	5
2/17 Week6	Hypothesis testing	S-Ch8		
2/19 Week6	Hypothesis testing			
2/21 Lab 6	Introductions and Qualtrics		Draft#1: Introduction	5
2/24 Week7	One-sample <i>t</i> -tests	S-Ch9		
2/26 Week7	One-sample <i>t</i> -tests		SG#2: Weeks 5-7	2.5
2/28 Lab 7	Writing Methods			
3/3 Week8	Catch-up and review			
3/5 Week8	Exam 2 (Weeks 5-8)		Exam #2	10
3/7 Lab 8	Revising Introductions			
3/10 – 3/14	Spring Break (woohoo!) – NO CLASS AND NO LAB			
3/17 Week9	Independent samples <i>t</i> -tests	S-Ch10		
3/19 Week9	Independent samples <i>t</i> -tests			
3/21 Lab 9	SPSS and Writing Method			
3/24 Week10	Independent samples <i>t</i> -tests			
3/26 Week10	Within-groups experiments	M-Ch9		
3/28 Lab 10	SPSS and Writing Results		Draft#2: Intro&Method	5
3/31 Week11	ONLINE – See to do list			
4/2 Week11	Repeated measures <i>t</i> -tests	S-Ch11	SG#3: Weeks 9-11	2.5
4/4 Lab 11	SPSS and Writing Results			
4/7 Week12	Catch-up and review			
4/9 Week12	Exam 3 (Weeks 9-12)		Exam #3	10
4/11 Lab 12	Creating graphs and tables			
4/14 Week13	ANOVA	S-Ch12		
4/16 Week13	ANOVA			
4/18 Lab 13	Writing Discussions		LA#3: Data worksheet	5
4/21 Week14	ONLINE – See to do list			
4/23 Week14	Factorial designs	M-Ch11		
4/25 Lab 14	Discussions & posters		Draft #3: Results&Disc	5
4/28 Week15	Factorial designs			
4/30 Week15	Revise paper & study		SG#4: Weeks 13-15	2.5
5/2 Lab 15	Revise paper & study	--	Final Paper	10
Thurs 5/8	10-11:40am Final Exam	--	Exam #4	10

Missed Classes and Late Submissions (what to do when you miss class or deadlines)

Missed classes. Whenever you miss class, please follow these steps:

- **Make up the missed material.** Read the textbook, review the posted slides from lecture, get notes from a classmate.
- **Complete missed work.** Study guides and lab assignments will be provided in hard copy only. You can pick up SGs/LAs in the box outside my office or attend my or the TAs' office hours. Complete missed work as soon as you can.

- **Getting help.** After completing these steps, if you still have questions about what you missed, come to office hours to discuss.
- **Attendance points.** You will not receive attendance points for missing class, regardless of the reason. You can miss up to 9 class periods without penalty. If you miss more than 9 classes, then we can discuss whether absences may be excused.

Late submissions. Any assignment (other than exams) can be submitted up to five days late with a 20% late penalty. After the five-day window, all work will receive a zero.

- If you miss class the day we turn in our work (Wed and Fri), you can take a picture and email it to your TA as a timestamp, and then get the hard copy turned in to your TA within five days of the deadline. Late work without a timestamp gets a late penalty.
- It is ALWAYS better to submit an assignment late than to receive a zero.

Course Policies and Expectations (what we can expect of each other)

- **Paper copies of SGs and LAs.** If you miss class or misplace your LA or SG, copies are available in the box outside my office, or from the TAs or myself in office hours.
- **Check your SIUE email BEFORE class.** In case of illness, exposure, and childcare issues, I may need to move class online. Please check your email before leaving home for class.
- **Illness policy.** If you have any illness symptoms that cannot be explained by a chronic condition you have, PLEASE stay home. Make up the work when you feel better. If you miss on a day we submit our work, follow the missed class policy to submit your work.
- **Open door.** My office is AH0132. If my door is open, you're welcome to drop in for help.
- **Emailing me.** With over 100 students, my email can be madness. I can help you much better in person than by email. Stop by my office, see me after class, or email your TAs. Please email me only if you have a significant ongoing issue and cannot get help in person.
- **Grades.** Student grades will be posted regularly on Blackboard. If you believe there is a discrepancy in the grade posted and the grade you received on an assignment, it is your responsibility to provide me with the graded assignment to justify any grade changes.
- **Extra credit.** Extra credit will be offered to the entire class, and not to individual students. Please do not ask for extra credit at the end of the semester to improve your grade.
- **Onedrive.** We will create a shared OneDrive folder that contains relevant documents for your lab project (such as annotated articles), as well as a shared Microsoft Word document where you will develop your final paper over the course of the semester in lab.
- **Turn It In.** We will grade and provide feedback on the shared Word doc in the Onedrive folder. However, we will submit drafts and the final paper through Turnitin to receive a timestamp (indicating you're ready for your paper to be graded) and to check similarity. Do not worry about APA formatting in Turnitin, as we will be grading the shared Onedrive doc.
- **Academic honesty.** If you are involved in any case of academic dishonesty, you will receive a 0 on the assignment and will be reported to the Provost's office. A repeat offense will result in failing the class and additional reporting. Academic dishonesty cases may involve:
 - **AI.** Using AI in my classes is cheating. Generative AI has many uses, but not in my classroom. Any use of artificial intelligence (AI) tools and applications (including ChatGPT, DALL-E, and others) to produce any part of your work in this class is a violation of SIUE's academic policy and is prohibited.
 - **Plagiarism.** Do not plagiarize. See department policy below.
 - **Cheating.** You are encouraged to study for exams with classmates and brainstorm research ideas or discuss course content. You will also work together in class. However, any work you submit with your name on it should be completely your own.

Student Services (where you can go if you need some help)

<ul style="list-style-type: none">• Lovejoy Library Resources• Tutoring Resource Center• The Writing Center• Academic Advising• Dean of Students	<ul style="list-style-type: none">• Financial Aid• Counseling Services• Cougar Cupboard (food pantry)• ITS (tech and Blackboard help)• SIUE Housing
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University and Psychology Department Policies

- **Psychology Department policy on plagiarism.** Plagiarism includes presenting someone else's words without quotation marks (even if you cite the source), presenting someone else's ideas without citing that source, or presenting one's own previous work as though it were new. When paraphrasing from another source or your own work, at the very least, the student should change the wording, sentence syntax, and order of ideas presented in the paper. Additionally, you should not submit a paper, or parts of a paper, written to fulfill the requirements of one class for the requirements in another class without prior approval of the current instructor and appropriate citation. Ideally, the student will integrate ideas from multiple sources while providing critical commentary on the topic in a way that clearly identifies whether words and ideas are those of the student or are from another source. Plagiarism is one type of academic misconduct described in SIUE's Student Academic Code (<http://www.siu.edu/policies/3c2.shtml>). University policy states that "Normally a student who plagiarizes shall receive a grade of F in the course in which the act occurs. The offense shall also be reported to the Provost." (<http://www.siu.edu/policies/1i6.shtml>). The University policy discusses additional academic sanctions including suspension and expulsion from the University. To insure that you understand how to avoid plagiarism, we encourage you to review the information on plagiarism provided on the Department of Psychology web page at <http://www.siu.edu/education/psychology/plagiarism.shtml>.
 - 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 Dr. Hawkins 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.
- **Psychology Department policy on Incomplete Grades, Pass-No Credit Option, and Withdrawal.** It is the student's responsibility to officially withdraw from a course through the Enrollment Office by the dates set by the university if the student is not intending to complete the course. Students who do not withdraw and have not completed the course will receive an Unauthorized Withdrawal (UW). Only under special circumstances may a faculty member agree to give the student an Incomplete (INC) grade in order to allow the student to complete the remaining work for the course no later than the end of the following semester. An INC is never automatic but must be approved by the instructor. If an instructor agrees to give a student an INC grade, the instructor and student will fill out a form (Memorandum of Incomplete Grade) indicating why an INC is being given. One copy of the completed form will be given to the student, one copy will be given to the instructor, and one copy will be kept by the Department of Psychology secretary. If the work is not completed by the specified time, the grade will be changed from INC to F.
- **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 (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 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

(<http://www.siu.edu/is/writing>) or utilize one of the many online resources they have identified to help students (<http://www.siu.edu/is/writing/resources.shtml>).

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.

- **SIUE Statement on disabilities.** Students needing accommodations because of medical diagnosis or major life impairment will need to register with Accessible Campus Community & Equitable Student Support (ACCESS) and complete an intake process before accommodations will be given. The ACCESS office is located in the Student Success Center, Room 1270. You can also reach the office by e-mail at myaccess@siue.edu or by calling 618.650.3726. For more information on policies, procedures, or necessary forms, please visit the ACCESS website at www.siu.edu/access.
- **SIUE statement on diversity.** All societies and peoples have contributed to the rich mix of contemporary humanity. In order to achieve domestic and international peace, social justice, and the development of full human potential, we must build on this diversity. SIUE nurtures an open, harmonious, and hospitable climate that facilitates learning and work. Each member of the University is responsible for contributing to such a campus environment.
- **SIUE nondiscrimination policy.** Southern Illinois University Edwardsville (SIUE) is a public comprehensive University committed to creating and maintaining a diverse community in which students, faculty, and staff can learn and work together in an environment free of discrimination and free from any form of illegal harassment. Such actions violate the dignity of the individual and the integrity of the University as an institution of learning. SIUE prohibits discrimination against employees, applicants for employment and students on the basis of age, color, disability, marital status, national origin, race, religion, sex, sexual orientation, or veteran's status. Discrimination in any form will not be tolerated; management and supervisory personnel, at all levels, are responsible for taking reasonable and necessary action to prevent discrimination.
- **University Guidance on Artificial Intelligence.** 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.