

Research Design and Statistics II

PSYC 221-004 & 005 Spring 2021

Instructor	Dr. Carlee Beth Hawkins (please call me Carlee)
Office Hours on Teams	Mon & Wed 12-1 or by appointment
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Grad Assistants	Gabrielle (GiGi) Lewis	Thomas Wierenga	Lisa Wood
Office Hours on Teams	Fri 1-2pm	Tues 11am-12pm	Fri 10-11am
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Course Description

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 PSYC220**

Course Objectives

In this course, students will learn to:

- 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

Gravetter, F. J., & Wallnau, L. B. (2021). *Essentials of statistics for the behavioral sciences* (10th ed.). Belmont, CA: Cengage.

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

A computer that will accommodate SPSS software (a Chromebook will not) or the ability to travel to campus to access SPSS

A simple calculator, such as the TI-30Xa. You may not use your phone or a graphing calculator.

Course Structure

Due to COVID-19, PSYC221 will be online for Spring 2021 with the following structure:

- “Class” is typically Mon and Wed for 50 minutes, but will be held asynchronously online
 - Course materials will be released on Sundays at 8am each week
- “Lab” is typically Fri for 50 minutes and will be held synchronously online in Teams
 - Section 004 will be 11-11:50am
 - Section 005 will be 12-12:50pm
- All assignments for class and lab will be submitted online and due Fridays at midnight

University policy expects that you will work for THREE HOURS for everyone ONE CREDIT HOUR of a class. PSYC221 is a 3-credit class, so that means I expect you to work NINE HOURS per week on this class. Please plan ahead to make time for this class.

I will provide a weekly to do list with approximate time commitments for each task, but keep in mind these are estimated averages. Depending on your productivity (aka ability to stay off social media) and previous experience with research and statistics, you may work more or less than 9 hours. If you do not have this time now, you should consider taking this course another semester.

How to Do Well and Stress Less in This Course

- **Understand course expectations** – read syllabus, ask questions, complete intro materials
- **Complete weekly material** – read textbook, critically review lectures, take notes
- **Post on Teams page** – attend office hours on Teams, communicate with group
- **Submit assignments** – assignments and exams are due on Blackboard Friday at midnight

Required Technology

We will use Blackboard and Microsoft Teams in this course. It is your responsibility to address any computer or internet problems that might occur. Such problems are not an excuse for delays in meeting expectations or for missing course deadlines. Support for using Blackboard and Teams is available by calling 618-650-5500, or by visiting <http://www.siu.edu/its/bb/> At a minimum, you will need the following software/hardware to participate in this course:

- computer with an updated operating system (e.g. Windows, Mac, Linux) that can accommodate SPSS software available for free from SIUE (NOT Chromebooks or tablets)
- updated Internet browser (Apple Safari, Internet Explorer, Google Chrome, Mozilla Firefox)
- DSL or Cable Internet connection or a connection speed no less than 6 Mbps. A secure, encrypted Wifi (requiring a login and password) is acceptable. Note that some Blackboard components will not work properly on free wifi from places like Starbucks or McDonalds.
- Microsoft Office, including Teams (SIUE students get Free Office 365)
- Other useful software is available at <http://www.siu.edu/its/software/index.shtml>

Course Requirements and Grading

<u>Assessment</u>	<u>Point Total</u>	<u>Percent of Grade</u>	<u>Grade Breakdown</u>
Exams	100 pts	20%	90% – 100% = A
Quizzes	120 pts	24%	80% – 89% = B
Survey project	235 pts	47%	70% – 79% = C
Lab participation	45 pts	9%	60% – 69% = D
Total points	500 pts	100%	below 60% = F

- **Exams [100 points]**. Exam 1 is worth 40 points and Exam 2 is worth 60 points and up to 1/3 of those points will be cumulative. You will complete both exams online through Blackboard.
 - **Justification for assessment.** In order for you to earn a psychology degree, you need to understand basic research design and statistics. Exams encourage you to study the course material and store it in long-term memory so you can retrieve it later to learn in your advanced psychology classes. Exam 2 is cumulative.
 - **Exam format.** Exams are completed on Blackboard and open book/open notes, but *not* open-Google. Exams will cover material from the textbook, lectures, and class discussions. Exams will include factual and conceptual questions, problems, and questions that require you to think about the concepts and apply them to a new topic.
 - **Exam timing.** You will have 60 minutes for Exam 1 and 100 minutes for Exam 2; you must complete them in one sitting. Given the time limit and applied questions, you should study for exams. On exam weeks (lab 8 and 15), lab will be an optional

study session.

- **Exam grading policy.** I perform item analyses on every exam to ensure that they are psychometrically sound. Any items that are not sound will be purged from the exam on a post-hoc basis and all students will be granted points for those items.
- **Quizzes [120 points].** You will have 6 online quizzes worth 20 points each.
 - **Justification for assessment.** A basic learning principle in cognitive psychology is the *testing effect* – that material is learned better if it is retrieved from memory through frequent testing. Quizzes require you to retrieve information from memory, which helps you understand your knowledge. Quizzes also prepare you for exams.
 - **Quiz timing and format.** Quizzes are completed on Blackboard and are open-book, but *not* open-Google. Quizzes are untimed, but must be completed in one sitting.
- **Lab experiment [235 points].** You will complete an experiment that requires you to create a hypothesis, read research, design a study, collect and analyze data, and understand your results. This project will culminate in a full APA-style report. More information in Lab1.
 - **Justification for assessment.** The lab experiment assesses your ability to apply the knowledge gained in class to your own project. Running your own experiment will also provide you with hands-on engagement with research design and statistics. This project allows you to learn by *doing* rather than just listening and reading.
- **Lab engagement [45 points].** You will earn 3 points for each lab you attend and participate in. In order to receive these points, you need to have your camera and/or mic on, and verbally check in with the instructor, TAs, and your groupmates.
 - **Justification for assessment.** Labs are designed for interactive work with your groupmates and TAs, and represents our only synchronous time as a class. To get the most out of our “live” labs, we all need to attend and engage.

Late Policy

Any assignment, quiz, or exam can be completed up to 72 hours late with a graduated penalty – 5% for 24 hours, 10% for 48 hours, and 15% for 72 hours. No need to request an extension – just complete your work within that period. If you are having personal struggles that prevent you from completing your work regularly, please talk to me.

Course Calendar

Date	Week	Topic	Assignment due Fri 11:59pm	Points
1/19-1/22	Week1	Orientation and 220 review		
1/22	Lab1	Overview of lab experiment	Quiz 1	20
1/25-1/29	Week2	Experiments		
1/29	Lab2	Literature search	Study Plan Worksheet	15
2/1-2/5	Week3	Between-groups experiments		
2/5	Lab3	Study design	Sources Worksheet	15
2/8-2/12	Week4	Review and preview		
2/12	Lab4	Study design	Quiz 2	20
2/15-2/19	Week5	Sampling distributions		
2/19	Lab5	Writing lab	Intro & Method	30
2/22-2/26	Week6	Hypothesis testing		
2/26	Lab6	Programming study	Quiz 3	20

3/1-3/5	Week7	One-sample t-tests		
3/5	Lab7	Programming study	Qualtrics Study	15
3/8-3/12	Week8	Lab experiment and study		
3/12	Lab8	Exam 1 review	Exam 1	40
3/15-3/19	Week9	Independent samples t-tests		
3/19	Lab9	SPSS lab	SPSS Worksheet	15
3/22-3/26	Week10	Within-groups experiments		
3/26	Lab10	SPSS lab	Quiz 4	20
3/29-4/2	Week11	Repeated measures t-tests		
4/2	Lab 11	SPSS lab	Results Worksheet	15
4/5-4/9	Week12	Review and preview		
4/9	Lab12	Writing lab	Quiz 5	20
4/12-4/16	Week13	ANOVA		
4/16	Lab13	Revising papers	Results & Discussion	30
4/19-4/23	Week14	Factorial designs		
4/23	Lab14	Final paper workshop	Quiz 6	20
4/26-4/30	Week15	Revise paper & study		
4/30	Lab15	Exam 2 review	Final Paper	100
May 3-7	Week16	Finals week – no class or lab	Exam 2	60

Course Policies and Expectations

- **Teams.** We will use Teams for announcements, class discussions, and communications between students and the professor. Please check Teams daily. I do my best to respond to messages on Teams within 24 hours during business hours (M-F 9-4).
- **Blackboard.** We will use Blackboard for course materials and submitting assignments.
- **Submitting your work using Turn It In.** Your papers and assignments will be submitted electronically through Turn It In, a plagiarism detection service to which the University subscribes. You should save your TurnItIn receipt as proof that you submitted your work on time. If you have issues with TurnItIn, you can also email me your paper for a timestamp.
- **Blackboard maintenance.** Please note that there are scheduled maintenance times for Blackboard. It is essential that you be aware of those times and make sure that you have submitted any work in progress (e.g. tests, assignments, posts to journal, wikis or discussion boards) prior to the systems being shut down for maintenance. Any work in progress will be lost when the servers go down for maintenance. Visit the Blackboard Maintenance Times (<http://www.siue.edu/its/bb/maintenance.shtml>) web site for specifics times.
- **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.
- **Academic honesty.** If you are involved in any case of academic dishonesty, you will earn an F 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:
 - **Plagiarism.** Do not plagiarize. See department policy below.
 - **Cheating.** If you are on your phone during an exam, I can only assume you are cheating. You will fail the exam and I will report academic dishonesty.

- **Giving and receiving help.** You are encouraged to study for exams with classmates and brainstorm research ideas or discuss course content. You will also work together on your survey projects. However, you SHOULD NOT work together on your papers.

Student Services

<ul style="list-style-type: none"> • Lovejoy Library Resources • Academic Success Sessions • Tutoring Resource Center • The Writing Center • Academic Advising 	<ul style="list-style-type: none"> • Financial Aid • Campus Events • Counseling Services • Cougar Cupboard (food pantry) • ITS (tech and Blackboard help)
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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.

COVID-19 Pandemic Policies Related to Classroom Instruction (Fall 2020)

- **Health and Safety.** Consistent with the Illinois Board of Higher Education guidance contained in “Safely Launching Academic Year 2020” released on June 23, 2020 and guidelines established by Governor J. B. Pritzker and Restore Illinois, Southern Illinois University Edwardsville has implemented a new policy to help ensure the safety of all students, faculty and employees during the pandemic. The measures outlined below are required and any student who does not comply may be in violation of the COVID-19 People-Focused Health and Safety Policy, as well as the University’s Student Code of Conduct. The full text of the COVID-19 People-Focused Health and Safety Policy can be found here: <https://www.siu.edu/policies/Covid.shtml>.
- **Classrooms, Labs, Studios, and Other Academic Spaces.** While in the classroom, lab, studio, or other academic spaces, students shall practice social distancing measures by maintaining a distance of at least six feet from others in the classroom and wearing a face covering. Extra care should be taken upon entering and leaving the classroom spaces. Classroom furniture should not be rearranged, and furniture that has been taped off or covered should not be used.
 - Students who forget to wear a face mask or face shield will be reminded of their obligation to comply with SIUE’s COVID-19 People-Focused Health and Safety Policy and temporarily asked to leave the class until they are able to conform to the policy. Students who forget or lose their face coverings may be able to obtain replacements from a friend, a faculty member, or a nearby departmental office. Face coverings are also available for purchase in the Cougar Store (MUC).
 - Students who refuse to wear a face covering will be asked to leave the classroom and referred to the Dean of Students for non-compliance with community health and safety protocols. Repeated non-compliance may result in disciplinary actions, including the student being administratively dropped from an on-ground/face-to-face course or courses without refund if no alternative course format is available.
 - If a student has a documented health condition which makes wearing a face covering medically intolerable, that student should contact ACCESS to explore options with the understanding that ACCESS will not grant accommodations which excuse the need for a face covering while on campus or in the classroom. ACCESS will work with qualifying individuals to find reasonable alternatives, whenever such solutions are available. Please call or contact the ACCESS Office via email to schedule an online appointment to discuss potential alternatives. ACCESS office (Student Success Center, Room 1203, 618-650-3726, and myaccess@siue.edu).
- **General Health Measures.** At all times, students should engage in recommended health and safety measures, which include:
 - Conducting a daily health assessment. If you have COVID-19 symptoms, but not yet tested positive, have had COVID-19 close contact exposure, or are COVID-19 diagnosed as presumptive or confirmed positive, stay home and contact your health provider or SIUE Health Service at cougarcare@siue.edu or 618-650-2842. More information is available on the SIUE COVID-19 website.
 - Frequent washing or disinfecting of hands.
 - Social distancing by maintaining a distance of at least six feet from others.
 - Face masks or face coverings that cover the nose and mouth are required in indoor public spaces regardless of the ability to maintain social distance. Indoor public spaces include common spaces or community settings that anyone can access, such as reception areas with walk-in access, restrooms, hallways, classrooms, teaching

and research laboratories, as well as common spaces in residence halls, conference rooms, lobbies, and break rooms.

- Adhere to directional signs and traffic flow patterns in buildings and offices. Doors for entering and exiting buildings will be designated. Where multiple doors exist, in and out doors will be marked with “Entrance” and “Exit” signs. Plans that consider traffic flow in and out of buildings, and within buildings (i.e. stairs, hallways, etc. where possible) will be marked.
- **Academic Integrity.** Students are reminded that 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. The full text of the policy can be found here: <https://www.siue.edu/policies/3c2.shtml>.
- **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. 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>.
- **Potential for Changes in Course Schedule or Modality.** As the COVID-19 pandemic continues, there remains a possibility that planned classroom activities will need to be adjusted. Depending on circumstances and following state-issued recommendations, potential changes include changes in course modality (e.g., transition from face-to-face to online) or in course scheduled meetings. These changes would be implemented to ensure the successful completion of the course. In these cases, students will be provided with an addendum to the class syllabus that will supersede the original version.