

## Research Design & Statistics II

FALL 2026 PSY220-005/006

Lectures: Monday and Wednesday 11:00-11:50 a.m. (@ AH0302)

Labs (005): Friday 11:00-11:50 a.m. (@ AH1201)

Labs (006): Friday 12:00-12:50 p.m. (@ AH1203)

Instructor: Mitsuru Shimizu

Office: AH0331; Office Hours: Monday 12:00 – 12:50 a.m. or by appointment

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GTA (005): Lauren Dinnsen

Office: AH0320; Office Hours: Monday 2pm-4pm and Friday 1:15pm-2:15pm.

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GTA (006): Seth Walker

Office: AH0319; Office Hours: Tuesday 11am-12pm and Wednesdays 2pm-5pm

Email: [sewalke@siue.edu](mailto:sewalke@siue.edu)

Required Materials (rent the books from Textbook Services):

- Gravetter, F. J., & Forzano, L. B. (2018). Research methods for the behavioral sciences (6th ed.). Belmont, CA: Wadsworth- Cengage Learning.
- Gravetter, F. J., Wallnau, L. B., Forzano, L. B. & Witnauer, J. F. (2018). Essentials of statistics for the behavioral sciences (9th ed.). Belmont, CA: Wadsworth- Cengage Learning.
- Calculator: Students must acquire a statistics calculator for both PSYC 220 and 221. This calculator must be capable of computing squares, square roots, sums of scores ( $\Sigma x$ ), sums of squares ( $\Sigma x^2$ ), and standard deviations ( $\sigma$ ). The professors teaching these courses are strongly recommending the Texas Instruments TI-30Xa calculator. We have chosen this calculator due to its affordability, functionality, and user-friendliness. It is your responsibility to understand how your calculator works. Please note that phones are not permitted in either PSYC 220 or 221.

Course Objectives: In this course, you will learn about non-experimental research methods in psychology. The primal goals of this course are to:

- 1) Provide you with the background to choose the methods that are most appropriate for your area of study.
- 2) Help you design and conduct non-experimental research (e.g., surveys) studies.
- 3) Help you use SPSS to analyze survey data.
- 4) Help you to report the findings from survey data in APA style.

**Class Format:** The core of the course will consist of a series of lectures and lab activities. The readings will complement the lecture materials. However, some material will be covered in lectures that is not covered in the book. You are responsible for learning everything covered in class, including material presented during group activities. Lecture notes will be posted, but they are only an approximation of what will be covered in class. The best strategy is to print the notes before class, bring them to class, and write additional notes on them during the lecture. In the lab sessions, you are required to attend your assigned lab section (005 or 006) so that you can complete the lab assignments (activities or homework) each week with your group members.

**Evaluation:** You will be graded on the basis of the following:

- a) **In-class Quizzes and Activities (15%):** There will be pop-up quizzes and activities. Each quiz will consist of four questions and will typically be given at the end of each section. For the activities, you will be asked to collaborate with other students.
- b) **Exams (55%):** The first, second, and third exams will each constitute 12.5% of your final grade (37.5% in total), while the final cumulative exam will constitute 17.5% of your final grade (see schedule). All exams will consist of multiple-choice questions. These exams are **not open-book or open-note**. Unless you can document that you experienced an illness or crisis during an exam, there will be no make-up exams.
- c) **Lab Activities and Homework (30%):** You will be asked to participate in lab activities, including the final research project (see schedule). Typically, you will be asked to collaborate with other students on lab activities.

Grades: I will use the following scale to assign letter grades:

90 and above = A              80-89 = B              70-79 = C              60-69 = D              59 and below = F

**Accommodations for Disabilities:** Notify the professor immediately of any needed accommodations for documented disabilities at the beginning of the course. If you are expecting accommodations at any time in this class, you must speak Disability Support Services in Rendleman 1218 before you need accommodations. According to SIUE safety and procedures policies, students with disabilities have the option of developing a written plan for evacuation in the unlikely event of an emergency that requires evacuation. If any student with a disability would like to develop a written evacuation plan for this class, please contact the instructor.

**The Psychology Department's Policy on Withdrawals and Incompletes:** All withdrawals must be completed by the end of the 13th week of classes during fall and spring, and by a similarly late date (i.e., before 82% of class meetings have occurred) in any summer term. When students discontinue attending class and do not withdraw from a course they may receive the grade of UW (Unauthorized Withdrawal). The grade of UW will only be given when a student's grade based on the course requirements is an F. The grade of UW is calculated as an F in a student's grade average. The granting of a grade of I (Incomplete) is not automatic and is available only in cases when a student has completed most of the work required for a class but is prevented by a medical or similar emergency from completing a small portion of the work not later than the end of the following semester. An I must be approved by the instructor with appropriate documentation provided by the student. If an instructor agrees to give a student an I, the instructor will fill out a Memorandum of Incomplete Grade to be kept with the student's records. If the work is not completed by the time specified on the Memorandum, the student's grade will be changed from I to F.

**The Psychology Department's Policy on Plagiarism:** Plagiarism includes either presenting someone else's words without quotation marks (even if you cite the source) or presenting someone else's ideas without citing that source. If you plagiarize, your instructor cannot evaluate your understanding of the topic. When paraphrasing from another source, at the very least the student should change the wording, sentence syntax, and order of ideas presented in the paper. 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.siue.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.siue.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.siue.edu/education/psychology/plagiarism.shtml>.

## **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>.

Use of an AI Generator such as ChatGPT, iA Writer, MidJourney, DALL-E, etc. is **explicitly prohibited** unless otherwise noted by the instructor. The information derived from these tools is based on previously published materials. Therefore, using these tools without proper citation constitutes plagiarism. Additionally, be aware that the information derived from these tools is often inaccurate or incomplete. It's imperative that all work submitted should be your own. Any assignment that is found to have been plagiarized or to have used unauthorized AI tools may receive a zero and / or be reported for academic misconduct. By submitting assignments in this class, you pledge to affirm that they are your own work and you attribute use of any tools and sources.

## **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, 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.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>).

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 (see below for the specific policy for this class).

## **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>.

## Services for Students Needing Accommodations

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. Students who believe they have a diagnosis, but do not have documentation, should contact ACCESS for assistance and/or appropriate referral. The ACCESS office is located in the Student Success Center, Room 1203. You can also reach the office by emailing us at [myaccess@siue.edu](mailto: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. ***It is your responsibility to communicate with me ahead of time of what accommodations you need. Just sending me an ACCESS letter is not sufficient, you have to communicate it with me.***

## 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 Center for Student Diversity & Inclusion <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](mailto:jball@siue.edu). There is also an online form for reporting bias incidents at [https://cm.maxient.com/reportingform.php?SIUEdwardsville&layout\\_id=10](https://cm.maxient.com/reportingform.php?SIUEdwardsville&layout_id=10).

## Additional Support

### Academic and Other Student Services

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

- [Lovejoy Library Resources](#)
- [The Writing Center](#)
- [Academic Advising](#)
- [Campus Events](#)
- [Counseling Services](#)

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

## Tentative Course Schedule

| Date         | Lecture and Activity                                                    | Readings: Methods | Stats    |
|--------------|-------------------------------------------------------------------------|-------------------|----------|
| 8/24         | Introduction                                                            |                   |          |
| 8/26         | Philosophy of Science                                                   | Ch1               |          |
| 8/28         | Introduction to lab sessions and instruction to survey research project |                   |          |
| 8/31         | In-Class Activity (Galileo Dice)                                        |                   |          |
| 9/2          | Overview of Research Methods                                            | Ch6               |          |
| 9/4          | Lab Activity (Understanding Research Articles)                          |                   |          |
| 9/7          | <i>Labor Day</i>                                                        |                   |          |
| 9/9          | Overview of Research Methods (cont.)                                    | Ch6               |          |
| 9/11         | Lab Activity (Finding Research Articles)                                |                   |          |
| 9/14         | Ethics in Psychological Research                                        | Ch4               |          |
| 9/16         | Ethics in Psychological Research (cont.)                                |                   |          |
| 9/18         | Lab Activity (Fraud and Plagiarism)                                     |                   |          |
| <b>9/21</b>  | <b>Exam 1</b>                                                           |                   |          |
| 9/23         | Non-experimental Research Methods                                       | Ch10              |          |
| 9/25         | Lab Activity (Writing Introduction Sections)                            |                   |          |
| 9/28         | Non-experimental Research Methods (cont.)                               |                   |          |
| 9/30         | Observation and Measurement                                             | Ch3               |          |
| 10/2         | Lab Activity (Writing Method Sections)                                  |                   |          |
| 10/5         | Validity and Reliability                                                | Ch6               |          |
| 10/7         | Validity and Reliability (cont.)                                        |                   |          |
| 10/9         | Lab Activity (Developing Surveys)                                       |                   |          |
| 10/12        | Threats to the Internal and External Validity                           | Ch6               |          |
| 10/14        | Threats to the Internal and External Validity (cont.)                   |                   |          |
| 10/16        | Lab Activity (Methodology Problems)                                     |                   |          |
| <b>10/19</b> | <b>Exam 2</b>                                                           |                   |          |
| 10/21        | Basics of Statistics, Probability, Intro to SPSS                        |                   | Ch1, Ch6 |
| 10/23        | Lab Activity (Introduction to SPSS)                                     |                   |          |
| 10/26        | Frequency Distribution and Central Tendency                             |                   | Ch2, Ch3 |
| 10/28        | Frequency Distribution and Central Tendency (cont.)                     |                   |          |
| 10/30        | Lab Activity (Frequency Distribution and Central Tendency)              |                   |          |
| 11/2         | Variability                                                             |                   | Ch4      |
| 11/4         | Variability (cont.)                                                     |                   |          |
| 11/6         | Lab Activity (Variability)                                              |                   |          |
| 11/9         | z-Scores: Standardized Distributions                                    |                   | Ch5      |
| 11/11        | z-Scores: Standardized Distributions (cont.)                            |                   |          |
| 11/13        | Lab Activity (Writing Results Sections)                                 |                   |          |
| 11/16        | In-Class Activity (z-Scores and Descriptive Stats Review)               |                   |          |
| <b>11/18</b> | <b>Exam 3</b>                                                           |                   |          |
| 11/20        | No Lab                                                                  |                   |          |

|       |                                                |      |      |
|-------|------------------------------------------------|------|------|
| 11/23 | <i>Thanksgiving Break Week</i>                 |      |      |
| 11/25 |                                                |      |      |
| 11/27 |                                                |      |      |
| 11/30 | Generating Research Ideas                      |      |      |
| 12/2  | Correlation and Regression                     | Ch12 |      |
| 12/4  | Lab Activity (Writing Discussions Sections)    |      |      |
| 12/7  | In-Class Activity (Correlation and Regression) |      | Ch15 |
| 12/9  | General APA Style Writing                      | Ch16 |      |
| 12/11 | Lab Activity (TBA)                             |      |      |

**Note: The Final Exam is tentatively scheduled during the exam week (12/14 – 18).**