

Psychology 250: Research Design and Analysis Fall 2014

Professors

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Teaching Assistants

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Why this is the most important psychology course you will take

There is a reason why this course is required of all psychology majors -- the material covered in this course is essential to the understanding of all psychology. The theories you read about in your psychology books are based on analyzed data from controlled studies. So, statistics are tools that we psychologists use to help support or disconfirm theories. You, as a budding psychologist, need to be familiar with these tools so that you can evaluate the studies of others and determine whether their conclusions are valid given their data analyses.

There are 2 main learning objectives for this course:

1) To teach you how do statistical analyses and know when to use the appropriate analysis. And yes, it's true -- you will work really hard in this course. We have a lot of assignments for this course because you can only learn stats by doing stats. You can't afford to get behind at any time. The assignments are one way to make sure you don't get behind. If you do find yourself getting lost, don't wait around thinking that you'll "get it" eventually -- come see us.

2) To teach you the scientific method. This involves coming up with a question, designing an empirical study to answer your question, collecting data, analyzing that data, and coming to some conclusion. To this end, you will design your own empirical study addressing your question and will collect and analyze the data.

Required Texts

Aron, A., Coups, E. J., & Aron, E. (2013). *Statistics for psychology* (6th ed.). Upper Saddle River, NJ: Prentice Hall. (AAC)

American Psychological Association. (2009). *Publication manual of the American Psychological Association* (6th ed.). Washington, DC. (APA)

Additional readings will be e-mailed to you throughout the term. All readings should be completed on the day that it is posted on the schedule.

Weekly Schedule

Each week will usually look like this:

Monday	Lecture on analytic procedures (statistics); journal report due
Tuesday	More on analytic procedures
Wednesday	Discussion on research methods
Thursday	Laboratory concerned with the statistical analysis of data
Friday	Quiz and discussion of quiz

Evaluation Summary

25% Quizzes

Weekly Friday quizzes will be based on the material covered both in class and the reading assigned for that week.

20% Lab Reports

The lab focuses on building practical skills that are necessary to consume and contribute to psychological science. A lab report is due each Thursday.

15% Journal Reports

Journal Reports will help you think critically about research and familiarize you with the primary literature for your research project

25% Research Project

You and a partner will conduct an original empirical study and analyze the data. Together you will write an APA formatted paper describing your research. Your grade will be based mostly on your final paper, but also on how you conducted yourself throughout the research process.

5% IRB Proposal

Before submitting your IRB proposal to the IRB committee, you will turn in a copy of the proposal to be graded. To receive a good grade on this assignment, you must address each point on the IRB proposal.

10% Attendance/Participation/Collaboration Skills

Regular attendance is expected and is mandatory on lab days. We expect you to prepare for each class and participate liberally. Also, we expect you to be cooperative and contribute equally to all aspects of your research project.

Assignments

At the beginning of class you will choose a secret code number. Your assignments should be identified with this code number, and not your name. The 4-digit code can be any number that you will reliably remember and utilize (many students choose to use the last 4 digits of their social security number).

Assignments are due at the BEGINNING of class on their due dates. Assignments received after this point will receive a 10-point deduction. An additional 10-point deduction will go into effect at 9am on each subsequent day. An assignment will not be accepted more than one week past its deadline.

PSYC 250 Lab Objectives

The Research Design and Analysis Lab focuses on building practical skills that are necessary to consume and contribute to psychological science. Through lab meetings, Journal Reports and Lab Reports you will learn to:

- Write concise and accurate summaries and well-defended critiques of psychological studies.
- Master the use of APA format.
- Use SPSS to manage data and conduct data analyses.
- Present empirical results visually and in writing.
- Be resourceful. Search for the answers to your questions and *then* use personal supports that are available to you (i.e., Professor Murdock, Lindsey, and Rachel).

Lab Meetings and Reports

Lab meetings will focus on applying the concepts you have learned in class to actual data. You will use SPSS (a statistical software package for data analysis) to analyze data and complete a written Lab Report. SPSS activities will progress from basic skills in data entry and management to the selection and use of specific statistical tools in order to test research questions.

Please purchase a 3-ring binder with pockets and one package of post-it page markers for lab materials. Bring these materials and your APA manual to every lab meeting.

Attendance at lab meetings is mandatory. Lab Reports should be completed during the 3-block lab session. If you need an extension until 8pm to complete a Lab Report, please contact your lab TA to make arrangements to turn it in. If you need to miss a lab for an excused absence, contact Professor Murdock and your TA ahead of time to make arrangements to get the assignment. It must be completed before the next lab.

If you find yourself needing to turn in any lab assignment (including Journal Reports) late, **correspond directly with your lab TA to make arrangements to turn it in.** TAs do not set the late assignment policy and should never be asked to relax it.

Journal Reports

In order to become an effective researcher and consumer of research, it is necessary to practice reviewing and critiquing others' work. JRs target the learning objectives in each phase of the course.

Phase I (Fundamental Ideas): JRs 1 and 2

- Efficiently and accurately **comprehend** the design and conclusions of a study
- Critically **analyze** the methodology of a study
- **Write** a succinct summary of the characteristics, strengths, and weaknesses of a study
- Use correct **APA format**

All students will critique pre-assigned empirical articles that correspond to two types of empirical inquiry: experimental and predictive.

JR1 is an Experimental Study:

North, A. & Hargreaves, D. (2005). Brief report: Labelling effects on the perceived deleterious consequences of pop music listening. *Journal of Adolescence*, 28, 433-440.

JR2 is a Predictive Study:

Werner, N. & Crick, N. (1999). Relational aggression and social-psychological adjustment in a college sample. *Journal of Abnormal Psychology, 108* (4), 615-623.

Refer to the **Suggested Structure for Journal Reports** handout for JR organization. Remember, in order to effectively summarize the main points of a study, you must understand the study. If you are not clear on some aspect of the design, it is your responsibility to ask questions of the instructor and TAs until you fully comprehend it.

The focus in Phase I grading will be placed on correct format and objective reporting of the most important facts about the research. You also will be asked to integrate increasingly sophisticated methodological critiques of the research in Journal Reports 1 and 2.

During Phase I, you will be assigned a topic and partner for your research project. You should begin searching the literature for articles that are relevant to your topic.

Phase II (Specific Tools): JRs 3 and 4

- Conduct an efficient and effective **literature review** on a focused topic

At this point you will be fully engaged in the literature search that will inform the development of your research project. Thus, you will begin writing JRs about articles that you have identified as being relevant to your project.

For each of JRs 3 and 4, identify three articles that relevant to your project. Choose the most promising of these three articles and write a full JR about that study. Turn in a hard copy of the article you have critiqued with your JR. In a subsection of your reference page, provide the references for the other two relevant studies. Partners should critique different articles for JRs 3 and 4.

This approach will help you to conduct a meaningful literature search over time and will also provide ample opportunity to perfect APA referencing format. Finally, it will provide you with necessary background for constructing your Parents' Weekend poster (see instructions below).

Parent/Family Weekend Poster Session

On Friday, October 10th, PSYC 250 students will present research posters in the Science Center Great Hall during our regular class meeting time. You and your partner will create a poster summarizing the empirical literature on your topic, your preliminary hypotheses, and your initial choices of measures / methods.