PSYCHOLOGY 205

# Research Methods in Psychology

Winter 2016

Monday/Wednesday 2:00-3:20

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| **Professors:** Ryan Lei, M.A.Office: Swift Hall 421E-mail: ryanlei2017@u.northwestern.eduOffice Hours: T: 2-3 or by appointment | Grace Larson, M.A.Office: Swift Hall 403AE-mail: gracelarson2017@u.northwestern.eduOffice Hours: W: 3:45-5 or by appointment |

## Description & Goals

Psychology 205 is a hands-on approach to data collection and to enhance your critical thinking skills regarding empirical research. This course also seeks to familiarize you with current research in psychology and to bolster your writing skills.

## Required Reading

Pelham & Blanton: Pelham, B.W., & Blanton, H. (2013). Conducting Research in Psychology: Measuring the Weight of Smoke (4th ed.). Belmont, CA: Wadsworth.

*There will also be additional required reading made available on Canvas and/or in class.*

**Attendance**

Class attendance and participation are required. Much of the work for the class will take place during in-class discussions and group working sessions, hence it is essential that all students take the course seriously and commit fully. If for any reason you anticipate needing to miss several days of class (you have a conference or you will be interviewing for jobs), you should consider not enrolling this term.

## Requirements

*Writing Assignments*. Over the quarter you will submit **three** research reports and **two** short study proposals, which collectively count 60% towards your course grade.

The complexity of the assignments will increase as the quarter progresses and you get more familiar with research methods and scientific writing. All of your written assignments should conform to the standards of the American Psychological Association’s Publication Manual, Sixth Edition.

For Paper 1, you will draft an APA-style methods and results sections based on a survey you will take in class. This assignment is due at 5:00pm on Friday, January 22 and counts 10% towards your course grade.

For the first Research Proposal, you and a partner will outline the variables you plan to use and hypotheses you plan to test using data from a large correlational dataset, the General Social Survey (GSS). Your group will then conduct the planned statistical analyses for your Paper 2. This assignment is due at 5:00pm on Friday, January 29 and counts 5% towards your course grade.

For Paper 2, you and your partner will draft introduction, methods, and results sections based on your planned research questions using data from the GSS. This assignment is due at 5:00pm on Friday, February 12 and counts 15% towards your course grade.

For the second Research Proposal, your group will outline an experimental study that will extend your research question from Paper 2. Your group will conduct this experiment for your final course project. This assignment is due at 5:00pm on Friday, February 26 and counts 10% towards your course grade.

For Paper 3, you will draft a complete scientific manuscript, which will expand on your Paper 2 and report the outcomes of both your analyses from the GSS and your results from your experiment. This means an Abstract, Introduction, Methods, Results, Discussion, References, Figures and Tables, etc., that relate to both your correlational project (study 2) and your experimental project (study 3).

Each student will submit his/her own paper. Even though you designed and conducted your study with a partner, each of you is required to submit a separate, independently written, manuscript. This assignment is due by 5:00pm on Wednesday, March 16 and counts 20% towards your course grade.

**\*\*\*In an effort to keep the grading process as objective as possible, we ask that you include only your student ID number (and not your name) on all submitted assignments. \*\***

All written assignments must be submitted on Blackboard by 5:00 pm on the due date. After that point, late submissions will be penalized 10 percent daily without exception. No excuses will be accepted. No extensions will be granted for assignments in this course.

*Exams.* There is one exam, on February 3rd. It will be administered in class and will cover the content of lectures *and* the readings. The exam will be a mix of multiple choice, short answer, and short essay. You are invited to contribute questions for possible inclusion on the exam. The exam accounts for 25% of your grade.

*Homework.* You will occasionally complete homework assignments (mostly related to SPSS) that are geared toward helping you understand how statistics are integrally related to research methods. These are not meant to cause you anxiety, but rather help you understand the content in a hands-on manner (and prepare for other assignments). You should work independently, but feel free to ask us and your classmates for help. They will collectively count toward 5% of your grade.

**Grading**

Your final grade will be calculated as follows:

Attendance/Participation 10%

Exam 25%

Research Reports 60%

Homework 5%

## Administrative Details

 Policy on absences. If you are going to miss an exam, for whatever reason, notify me by emailing me or by calling the psychology office (1-5190) and having them put a note in my box before the time of the exam. If you have legitimate health-related or personal problems, you MUST make appropriate arrangements BEFORE the date of the examination. For instance, if you feel ill the night before or the day of an exam, please go to the health services and have them document that you were seen. Absences due to other reasons must also be documented (e.g., by a Dean) prior to the exam. Every reasonable effort will be made to accommodate athletes who must miss exams for away games. There will be no make-up midterm exams, however. Individuals with predictable, yet acceptable reasons for missing the midterm exam should make arrangements as soon as possible to take it at another time. If you miss an exam for an illegitimate reason, you will receive a zero.

Policy on plagiarism. Students are expected to be familiar with Northwestern’s policies on plagiarism and academic dishonesty. For this course, you should **not** produce identical project reports. Furthermore, all homework assignments and exams should be completed independently.

Policy on late assignments. All assignments are due before class on the date due, as they will be discussed in class. Please note that the data for each project are due **by noon the day before** the data analysis class for that project. Late assignments will not be accepted.

Policy on accommodations for academic disabilities. I encourage students with disabilities, including "invisible" disabilities like chronic diseases or learning disabilities, to identify themselves to me after class or during my office hours, prior to the 3rd week of the term.

 Important note. Like a good mattress, these policies are firm but not rock-hard. I realize that individual cases may involve extenuating circumstances that would allow for changing some of these procedures. I encourage you to contact me if you have any questions about how your particular case should be treated.

**\*\*We reserve the right to change aspects of the syllabus as needed. This may include adding additional readings in the form of research articles and blog posts, and adding additional short homework assignments not currently on the syllabus.\*\***

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|  | Week Begins | Monday Session | Wednesday Session | Assessments Due |
| 1 | 01/04 | Scientific method*Reading*: Chapter 1, pp. 9-23Chapter 2, pp. 29-38 | Principles of survey design Validity*Reading*: Chapter 3, allChapter 4, all | Online survey |
| 2 | 01/11 | Principles of inferential statisticsSPSS: Creating scales & reliability*Reading*: Chapter 10, all | SPSS: Regression and correlationWriting the method & results*Reading*: Chap 11, pp. 336-356Appendix 3, pp. 429-438 | HW due Friday |
| 3 | 01/18 | **Martin Luther King, Jr. Day(no class)** | Principles of experimental designIVs and DVs*Reading*: Chapter 7, all | **Paper 1 due Friday** |
| 4 | 01/25 | Threats to validityIncremental research*Reading*: Chapter 5, allChapter 6, pp. 181-191 | Going from correlational designs to experiments Explore GSS*Reading*: Chap 12, pp. 363-371; 379-383 | HW due Wednesday**Paper 2 proposal due Friday** |
| 5 | 02/01 | Writing introductionsSPSS: Covariates | **MIDTERM EXAM** |  |
| 6 | 02/08 | Factorial designs: Between and within Quasi-experimental designs*Reading*: Chapter 9, all | Longitudinal designsChoosing the right design*Reading:* Chapter 8, all | **Paper 2 due Friday** |
| 7 | 02/15 | How to write a discussionSPSS: ANOVA & ANCOVA | Reproducibility*Reading:* http://bit.ly/1UivsUzAdditional posts, TBA | HW due Friday |
| 8 | 02/22 | *Scientific misconductEthics debate activity**Reading:* Chapter 2, pp. 57-66 | Final project meetings | **Paper 3 proposal due Friday** |
| 9 | 02/29 | Final project workshop | Final project workshop |  |
| 10 | 03/07 | Overview/summary | Catch-up day  |  |
| 11 | 03/14 | Finals Week | -- | **Paper 3 due Wednesday** |