



# Psychology 212: Research Methods & Statistics II

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Location Science Hall 109  
Loras College MWF 1:30-2:20  
W 2:30 - 4:20

**Psychology Program** Spring 2018

**Instructor:** Jake Kurczek, PhD  
Assistant Professor of Neuroscience and Psychology  
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**Office Hours:** By appointment

**Textbook:** *Publication Manual of the American Psychological Association* (6<sup>th</sup> ed).  
(2009). Washington D.C.: American Psychological Association.

Morling, B. (2018). *Research methods in psychology*. New York, NY:  
W.W. Norton, & Company.

Additional journal articles and materials will be assigned as needed and  
posted to the course website

**Software:** RStudio (R)

**Class Website:** You will be able to find PDFs of the lectures and discussions  
posted to the course website

## Course Goals and Overview

This course continues instruction in psychological research by reviewing the basics of the scientific method, ethics, and APA style. Experimental research will then be introduced, along with more advanced inferential statistics. If time allows, more complex designs, such as meta-analysis or factor analysis, will be discussed. Students will again be expected to create elementary research studies, produce APA style research papers, and evaluate research literature.

Prerequisite: Successful completion of PSY 211 (with C- or better) or equivalent.

## Course Objectives

This course is designed to assist students in the accomplishing the objectives listed below. Each objective is followed by the learning outcomes that will be used to demonstrate student proficiency in that objective.

**1. Understand the general principles of behavioral research**

Students will be able to:

- Develop hypotheses based on their research ideas
- Create operational definitions of behaviors
- Describe and apply ethical research principles for research.
- Differentiate between experimental and non-experimental research designs.
- Design a proposal for an original study.

**2. Critically evaluate and synthesize previous research**

Students will be able to:

- Navigate through published resources using the PsycInfo database
- Locate and retrieve resources from the library or on-line, as appropriate
- Evaluate sources, and choose those that will inform their own research
- Identify common errors in research
- Analyze examples of previous research
- Write literature reviews for their correlational and experimental studies.

**3. Understand the basic principles of correlational and experimental research**

Students will be able to:

- Conduct a correlational study
- Differentiate between between-subjects and repeated-measures designs
- Identify and suggest corrections for basic errors of experimental validity
- Interpret main effects and interactions in factorial design
- Create an IRB application and get it approved
- Conduct a between-subjects experimental study

**4. Analyze descriptive, predictive, and experimental data**

Students will be able to:

- Use SPSS to produce simple graphs and tables
- Use SPSS to produce basic descriptive statistics
- Produce and interpret  $r$ -correlations
- Produce and interpret  $t$ -tests and ANOVAs
- Interpret tables & statistics related to factor analysis, path analysis, and correlation matrices

**5. Use professional reporting styles and formats**

Students will be able to:

- Use APA style citations and references correctly
- Write in APA-style for report of research and research proposal
- Give a poster presentation of their work, in style suitable for a professional conference
- Critique peer-reviewed articles and poster presentations

## Course Requirements, Policies and Assignments

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Course information and assignment details are found in the Syllabi Appendices on the Course Onboarding document called Course Information and Assignment Details (with Assignment Rubrics).

Labs	25
Exams	30
Correlational Study	10
Group Experiment	15
Research Proposal	10
Engagement	10
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<b>Total</b>	<b>100</b>

**Examinations.** There will be five exams. The exam questions may include the following question formats: multiple-choice; fill-in-the-blank; matching; true/false; and short-answer sections.

**Labs.** Students will complete short assignments either as homework or during labs. Lab assignments are due by the next class day (9:00PM Friday), unless otherwise indicated on the lab.

**Comprehension Checks.** The comprehension checks may include questions that may include the following question formats: multiple-choice; fill-in-the-blank; matching; true/false; and short-answer sections. These are due by 9:00PM on Sunday.

**Correlational Study.** Each student will be required to complete one piece of simple correlational research, including writing up results.

**Group Experiment.** Students will conduct a between-subjects experiment, working in groups of 3-4 students, including a presentation of the completed study. Topics for study must be cleared with the instructor before proceeding with the research. All members of the group are required to participate in the poster session during the finals time. Group members will also evaluate each other's contribution to the project. Posters will be judged by division faculty and senior psychology students. You are also required to fill out peer evaluations before your presentation during finals

**Research Proposal.** Each student will complete an original research proposal. This paper will be written in APA style, and contain a proposal for an original piece of research. The paper will include a literature review citing at least 10 references (if supporting your hypothesis the PSY 211 Lit Review can count for this portion), hypothesis, a proposed design, appropriate data analytical techniques and expected conclusions.

This proposal will be completed in stages. Students will receive credit for drafts submitted at three stages of the process, but the majority of the points will be earned with the final draft.

## Engagement

*In-Class Participation/Activities/Discussion/Critical Thinking Journal*

Out of class engagement

## Schedule\*

### Important Dates

1/29 – First day of classes

2/16 - Last day to drop classes without “W”

10/27 - Last day to drop without receiving an “F”

3/26-4/2 – Spring Break

5/11 – Last Day of Class

5/14-5/17 – Final Exams

View the checklist at this link and track your semester.

\*Tentative schedule subject to change without notice as instructor deems necessary