PLNU *forward*

Department of Psychology
PSY 391 Section 1
Research Methods and Statistics II
4 Units

Fall, 2018

Meeting days: MWF	**Instructor:** Dr. Ross Oakes Mueller
Meeting times: 10:55am-12:05pm	**Phone:** (619) 849-2905
Meeting location: Cabrillo Hall 102	**E-mail:** RossOakesMueller@pointloma.edu
Credit Hours: 4 Units	**Office hours: Click Here to Schedule**
Final Exam: Wednesday, December 12th at 4:30pm	**Office Location:** Culbertson 213

PLNU Mission
To Teach ~ To Shape ~ To Send

Point Loma Nazarene University exists to provide higher education in a vital Christian community where minds are engaged and challenged, character is modeled and formed, and service becomes an expression of faith. Being of Wesleyan heritage, we aspire to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.

COURSE DESCRIPTION
Study of design and of research in psychology and the use of statistics. Practice in the integration of design and statistics is included. Students finish a significant research project.

COURSE GOALS/OBJECTIVES
Overview – The field of psychology requires a unique blend of competence both a) in practicing therapeutic **techniques** and b) in understanding and conducting **research**. This course aims to develop your language, logic, and skills related to the latter. Specifically, you will not only learn to **identify the basic tenets of research psychology**, but will learn to *locate, critique, synthesize, conduct, statistically analyze, and present* **psychological research**.

Locating Psychological Research – With the vast mountain of human knowledge becoming ever more accessible on the internet, most people simply trust in a global search engine (e.g., Google) to locate the answers to their questions. In fact, in a typical search, only 10% of people look past the first 10 search results to find the best answer for their question (Hearne, 2006). As you will soon see, these search results are often not the best source of quality information, and finding the best answer to your question usually requires a more careful "search" process. This course will provide you with the skills and opportunity to search through the vast field of psychological research to find *quality* articles and theories that relate to a topic that is of interest

to *you*.

Critiquing Psychological Research – How often have you found two different articles or individuals making competing claims about reality? A thorough "literature review" will reveal multiple competing theories and ideas, each of which claim to be "valid." Such confusion becomes especially important in a field such as psychology, in which we are trying to relieve suffering and promote growth. This course will help you to identify specific "criteria of validity," and use them to understand and evaluate the published articles of others who have conducted research. In the current "Age of Information," the ability to critically analyze competing truth claims and separate the so-called "wheat" from the "chaff" is absolutely necessary to navigate the flood of data available to you.

Synthesizing Psychological Research – So you've become a search-wizard, and have now located dozens of different articles on your topic of interest. But what do they all mean? How do they fit together? And, perhaps most importantly, What is missing? The flood of search results are like millions of puzzle pieces (many of which don't even belong to your puzzle!). This course will help you in the process of becoming a modern "puzzle master," learning to first sort relevant from irrelevant information, and then learning to put the pieces together into a "literature review" that makes sense of many different pieces of data. Finally, this course will help you to identify important missing pieces, and to develop research questions that could help fill in the blanks.

Conducting Psychological Research – Once you've figured out the important questions to ask, how do you go about answering them? In particular, how do you avoid the pitfalls of other "less valid" articles and researchers? In the previous course, you learned to develop and construct a small study of your own. This semester will involve using the skills you learned in PSY 390 to develop an empirically sound experimental study. A successful experiment typically involves implementing your surveys and manipulation(s) with a critical eye to details you might have missed when you first designed them, so, after initially constructing your study, you will pilot test it, and then revise it. It will also likely involve problem-solving, as you face obstacles to collecting your data that you might not have anticipated. Finally, as with the previous course, conducting psychological research will involve (continued) learning to work well within the context of a group. In fact, students in the past have found that the ability to work well with others is often the make-it-or-break-it factor that can create a successful research study.

Statistically Analyzing Psychological Research – "Statistics." Before entering class last semester, you likely had little exposure to statistical analysis. After our introduction to statistics last semester, we will spend a portion of this semester reviewing what you have learned, and then practicing using statistics to analyze your data. My hope is that you leave the class feeling more enthusiastic about and competent in statistics than you are today. In fact, I will make it my thrice-weekly mission in life to convince you that not only research, but STATISTICS IS FUN! Like learning a second language, though, mastering statistics will take patience, persistence, courage, and time. Also like a second language, the mastery of

these skills can be invaluable in making sense of the tremendous amount of information (both valid and bogus) with which we are presented daily. In our current "Age of Information," the ability to critically analyze competing truth claims and separate the so-called "wheat" from the "chaff" is absolutely necessary to navigate the flood of data available to you. Statistics is a tremendously powerful tool in this process.

Presenting Psychological Research – As students of psychology, you are studying to become relative experts in this field of knowledge. You have been blessed with tremendous academic and technological privilege; and with this privilege comes a great responsibility to wield this information conscientiously. In a world that equates information with power, you now possess the power to either hurt or harm the world in profound ways. In short, the world needs the information you possess. Families need it. Churches need it. Suburban schools, inner-city programs, homeless shelters, all need what you have. And the only way that they can get it is if you learn to communicate it lovingly and coherently. This course will continue to provide you with the opportunity both to present your research, and to critically (and lovingly) analyze the research of your peers.

<u>STUDENT LEARNING OUTCOMES</u>

1) You will increase your ability to appropriately select, understand, interpret, and critically evaluate relevant published articles of others who have conducted research.

2) You will learn and practice the implementation of an experimental research design, including troubleshooting problems that arise during your experiment.

3) You will develop skills in "annotating" and organizing information from articles that they have read, so as to accurately understand the theories, findings, and "lingering questions" in the current "literature" on a given psychological topic.

4) You will increase your ability to accurately and effectively synthesize existing research into a formal "review of the literature" (or "Introduction" section).

5) You will develop a working understanding of the concepts of research ethics, validity, and reliability, and apply them to the process of developing an appropriate research question and testable hypotheses.

6) You will learn to critically evaluate, select, "pilot test," and revise empirical measures of psychological constructs.

7) You will develop a proficiency in writing in APA format by memorizing common formatting requirements, by practicing your application, and by identifying and editing your own formatting errors.

8) You will develop skills in collecting and "preparing" the data from online survey tools.

9) You will develop a working understanding of statistical analyses, including an understanding of the basic nature of statistical analyses, and the conditions under which each type of analysis is used.

10) You will learn to calculate, interpret, and write-up the results from a variety of statistical

analyses, including: regression, chi-square, t-tests, and multiple types of ANOVAs.

11) You will continue to develop a proficiency in writing-up your study in a scholarly manner by receiving in-depth feedback regarding your writing, and by identifying and editing your own formatting errors.

12) You will gain experience and proficiency in conducting oral presentations of your work, and in providing helpful critical feedback to other students regarding their presentations.

The objectives will be achieved through in-class exercises, through your reading of the written materials, through the completion of quizzes and learning modules, through the lectures given and discussions led by the instructor, and (most importantly) through active participation by you in the production of your own experimental project.

Whether these objectives have been achieved or not will be measured by your scores on homework, quizzes, exams, class participation, and both oral and written versions of your research project.

COURSE CREDIT HOUR INFORMATION

In the interest of providing sufficient time to accomplish the stated Course Learning Outcomes, this class meets the PLNU credit hour policy for a 4-unit class delivered over 15 weeks. Specific details about how the class meets the credit hour requirement can be provided upon request.

CANVAS (Course Management System)

We will be using Canvas this semester. Canvas can be accessed via http://canvas.pointloma.edu. You will see the welcome screen and a login button. You will need your username/password before you can proceed to log in. If you don't know your username/password, please contact the help desk for assistance. Select the login button to proceed to the login screen. At the login screen, enter your username/password.

REQUIRED TEXTS/MATERIALS

American Psychological Association. (2009). *Publication Manual of the American*

Psychological Association. (6th ed.). Washington, D.C.: Author. (**spiral bound**)

Recommended: Field, A. (2013/2017). Discovering Statistics Using (IBM) SPSS (4th/5th ed.).

London: Sage Publications.

GRADING

Group Participation	10%
In-Class Participation	35%
Homework & Quizzes	20%
Research Paper	25%

       Outline of Introduction/Lit Review (2%)
       Outline of Discussion (2%)
       Outline of Method (2%)

        Outline of Results (2%)
        Final Paper (17%)
            Abstract, Introduction, Method, Results, Discussion, Tables, Figures

Final Exam (Poster – Caf Lane)	10%
Total	**100%**

Grading will be in accordance with the Department of Psychology's grading procedures for upper division courses (i.e., the use of z-scores). Your grade will be based on your overall percentage or your z-score: <u>whichever is higher</u>.

DEPARTMENT FACULTY NORMAL CURVE GUIDES

<table>
<tr><th colspan="5">Z Score</th><th colspan="2">Percentage Score</th></tr>
<tr><td>A</td><td>1.33</td><td>0.0918</td><td>9.2%</td><td></td><td>A =</td><td>93-100%</td></tr>
<tr><td>A-</td><td>1</td><td>0.1587</td><td>6.7%</td><td>15.9%</td><td>A -</td><td>90-92%</td></tr>
<tr><td>B+</td><td>0.67</td><td>0.2514</td><td>9.3%</td><td></td><td>B +</td><td>88-89%</td></tr>
<tr><td>B</td><td>0.33</td><td>0.3707</td><td>11.9%</td><td></td><td>B</td><td>84-87%</td></tr>
<tr><td>B-</td><td>0</td><td>0.5</td><td>12.9%</td><td>34.1%</td><td>B -</td><td>80-83%</td></tr>
<tr><td>C+</td><td>-0.33</td><td>0.6293</td><td>12.9%</td><td></td><td>C +</td><td>77-79%</td></tr>
<tr><td>C</td><td>-1</td><td>0.8413</td><td>21.2%</td><td></td><td>C</td><td>70-76%</td></tr>
<tr><td>C-</td><td>-1.33</td><td>0.9082</td><td>6.7%</td><td>40.8%</td><td>C -</td><td>65-69%</td></tr>
<tr><td>D+</td><td>-1.67</td><td>0.9525</td><td>4.4%</td><td></td><td>D +</td><td>62-64%</td></tr>
<tr><td>D</td><td>-2</td><td>0.9772</td><td>2.5%</td><td></td><td>D</td><td>55-61%</td></tr>
<tr><td>D-</td><td>-2.33</td><td>0.9901</td><td>1.3%</td><td></td><td>D -</td><td>50-54%</td></tr>
<tr><td>F</td><td><-2.33</td><td>1</td><td>1.0%</td><td>9.2%</td><td>F</td><td>49% or below</td></tr>
</table>

A minimum of 50 % is needed to pass the course.

<u>**ATTENDANCE/MAKE-UPS/OTHER POLICIES**</u>
* Perhaps more than any other course in the psychology major, your attendance in this class is paramount to your success and your group's success. Outside of your academic achievement, your group work is the most important part of this course. It is not fair to your group or your academic development if you miss class without good cause. That is why the PLNU attendance policy will be strictly followed. This attendance policy is specified in the University Catalog. Please note the following key points and elaborations of the attendance policy.

- PLNU Attendance and Participation Policy: "Regular and punctual attendance at all classes is considered essential to optimum academic achievement. If the student is absent from more than 10 percent of class meetings, the faculty member can file a written report which may result in de-enrollment. If the absences exceed 20 percent, the student may be de-enrolled without notice until the university drop date or, after that date, receive the appropriate grade for their work and participation. See Academic Policies in the Undergraduate Academic Catalog."
- "There are no allowed or excused absences except when absences are necessitated by certain University-sponsored activities and are approved in writing by the Provost."

- o You are not excused for being ill. Illness does not comprise an excused absence. You are not excused from class if you have a Doctor's appointment. You are not excused from class if you have a Doctor's excuse. The University allows you four absences for these (and other) situations outside your control.
- o University-sponsored activities that are approved in writing by the Provost usually are for NAIA events for student athletes and occasionally field trips for other PLNU courses.

- When you are **absent** in this class **four times** (for any cause), a Notice of Deenrollment will be sent to the Vice Provost for Academic Administration. Your fifth absence will result in deenrollment.

- Save your absences for situations that are outside of your control. Do not consider your allowable absences as the number of times that you can miss class without being deenrolled. If you become ill after you used your allowable absences you will be deenrolled from the course.

- If you need to miss a test for any reason, you will need to notify the professor **prior** to the examination for consideration to be administered a make-up test (if you fail to do so you may receive a 0% on the test). If a make-up test is administered there will be a 10% penalty (unless the absence is associated with a University-sponsored activity that is approved in writing by the Academic Provost)

- Part of good paper-writing is effective time-management strategies. We could all write better papers if we had unlimited time to do so. However, there are certainly life situations that may prevent you from turning in your paper on time. How to balance these two conflicting issues? In order to provide you with some flexibility, and nevertheless to ensure that all of your papers are evaluated on an "even playing field," I have created a tiered grading system for late work. **If you miss a deadline to turn in a paper, for any reason, you will have until midnight on the next day to turn in the paper for a 5% deduction. After midnight, you then have up to midnight on the following day to turn it in for a 10% deduction. Following that, you will receive a 20% deduction. <u>No papers will be accepted after the date on which the professor sends grades/feedback to the class for that paper.</u>**

*PLNU Final Examination Policy: Successful completion of this class requires taking the final examination on its scheduled day. **<u>The final examination for this class will occur on December 12th, 2018, from 4:30-7:30pm.</u>** No requests for early examinations or alternative days will be approved.

*PLNU Copyright Policy: Point Loma Nazarene University, as a non-profit educational institution, is entitled by law to use materials protected by the US Copyright Act for classroom education. Any use of those materials outside the class may violate the law.

* **PLNU Academic Honesty Policy:** Students should demonstrate academic honesty by doing original work and by giving appropriate credit to the ideas of others. Academic <u>dis</u>honesty is the act of presenting information, ideas, and/or concepts as one's own when in reality they are the results of another person's creativity and effort. A faculty member who believes a situation involving academic dishonesty has been detected may assign a failing grade for that assignment or examination, or, depending on the seriousness of the offense, for the course. Faculty should follow and students may appeal using the procedure in the university Catalog. See Academic Policies for definitions of kinds of academic dishonesty and for further policy information.

*PLNU **Academic Accommodations Policy:** If you have a diagnosed disability, please contact PLNU's Disability Resource Center (DRC) within the first two weeks of class to demonstrate need and to register for accommodation by phone at 619-849-2486 or by e-mail at DRC@pointloma.edu. See Disability Resource Center for additional information.

*FERPA **Policy:** In compliance with federal law, neither PLNU student ID nor social security number should be used in publicly posted grades or returned sets of assignments without student written permission. This class will meet the federal requirements by (Note: each faculty member should choose one strategy to use: distributing all grades and papers individually; requesting and filing written student permission; or assigning each student a unique class ID number not identifiable on the alphabetic roster.). Also in compliance with FERPA, you will be the only person given information about your progress in this class unless you have designated others to receive it in the "Information Release" section of the student portal. See Policy Statements in the (undergrad/ graduate as appropriate) academic catalog.

RESEARCH PAPER
The research paper will be completed in the parts listed below. **Please note that, while each section of the paper will be completed as a group, each of you will be responsible for writing (designated) sub-sections of the paper on a common GoogleDoc.**

1. Rough draft of outline of "No-Source" Literature Review.
   a. This is like an expanded version of last semester's "Mini Paper." You are putting together an argument for why your study is important. However, for this version, you are creating an argument without reference to the existing literature. Instead, you are simply trying to frame your argument in a logical manner. This outline should include:
      i. Justification for the importance of your study (you can use a combination of statistics about its prevalance, as well as discuss ways in which it affects you or PLNU students personally)
      ii. A review of (possible) previous theories and (possible) studies that pertain to your experiment This is very important. Here you are suggesting that these theories exist, and in the next assignment you will see if they actually do. Be sure to discuss the nature of these (possible) theories, and the ways that they pertain to your topic of interest (this should build up to your own study and hypotheses).

       iii. Using these (possible) theories (and you must make this part explicit) how do these theories fit together, and what questions are left open?

       iv. A brief description of your study (save the details for the method section). What do you plan to study? You can give a little more detail here about your proposed methodology. Be sure to include how you plan to divide up your subjects, what your manipulation will be, and what specifically you want to measure.

       v. A discussion of your hypotheses, including justifications (e.g., "Based on previous research that suggests … it is predicted that …" or "Based on the theory of … it is predicted that…" What are your specific, testable hypotheses? Be sure that you include all of them (e.g., main effects as well as interaction effects), and be sure that you specifically explain how these hypotheses stem from the research you have read.

2. Expanded Rough Draft Outline of "Sourced" Literature Review.
   a. Now that you have outlined what you HOPE previous research has shown, you get to see if it actually DOES. Specifically, in your "No-Source" Literature Review, you have made specific claims. Now is your chance to see if there are any studies (and/or theoretical papers) that back up your claims.
   b. For this outline, you will make a copy of your No-Source Literature Review, and then use a combination of mere citation, summary-of-findings, and quotations to provide evidence for your claim. Be sure to do this using APA Style.
   c. This outline should **include at least 7 sources (including at least 5 empirical articles).**

3. Outline of Method & Results Sections
   a. Once you have solidified your methodology, you will create an **Outline for your Method Section (2% of Final Grade)**. This outline should include
      i. Population:Who will be your subjects? (be sure to note demographics) How will you recruit them? How (do you expect) will they be compensated for their efforts? How will you select who receives which treatment? What (do you imagine) will be their demographic characteristics?
      ii. Method: Once you have your subjects, what will you do with them? What will they be told?
         1. What measures will they be given? Give a one-paragraph description of each measure, including sample questions, information on validity (why should we believe that your measure measures what it claims to measure?), and reliability data (if known).
         2. Describe the manipulation that is to occur? How was it developed? Why is it a valid way of describing your Independent Variable (e.g., why is showing someone a violent film a manipulation of anxiety/fear/aggression/etc)? Give your measures and manipulations appropriate names (if they do not already have established names)
         3. How will you ensure that participants are treated ethically? What if

they experience discomfort? (be sure to organize in the chronological order in which participants will receive treatments/measures/etc).

    b. After the data has been collected and analyzed, you will **Outline the Results section (2% of final grade).** This outline should include full-sentence descriptions of statistical findings, in APA style), include tables and graphs directly from SPSS/JASP, and turn it in to the professor.

        i. This is the section designed to provide all of the hard "facts" of your analyses. In particular, this is where you will display tables (e.g., ANOVA tables) and graphs (e.g., plots of your data).

        ii. You want to have a **short paragraph for each of your major hypotheses** (you can group sub-hypotheses into the same paragraph). Specifically, write one paragraph for the impact of your manipulation on one of your outcome variables. If there is no significant interaction, then state so in the same paragraph. If there *is* an interaction, then specify how the groups within a single condition differed, and put a graph of the data in your paper.

        iii. If you find no significant main effects, then you must report this, as well (along with F values, etc.)

        iv. Remember, in this section, you are only stating your findings, **you are not interpreting them** … leave that to the discussion section.

4. Final Outline of Literature Review (Introduction) and Discussion (with APA Citations)

    a. Using the professor's feedback from our Rough Draft of the "Sourced" Literature Review, you will write the **Final Outline of the Literature Review (Introduction; 2% of Final Grade)**, including APA style citations and quotations. This Final Outline will likely incorporate more "sources" than your rough draft, and **should have a minimum of 10 references (including at least 7 empirical articles).**

        i. At the end of your outline, you should include a (non-outline) **list of your references**, formatted using APA style.

    b. Once you have interpreted the data in light of your literature review, you will write the **Outline of the Discussion section (2% of final grade).**

        i. This is the section you will use to make sense of (interpret) your statistical findings in every-day language. Begin this section by restating (not just cutting and pasting) each hypothesis in a separate paragraph. The remainder of each paragraph should involve describing whether each hypothesis was confirmed by the data. If so, what does this mean?

        ii. After discussing each hypothesis, discuss the implications of your findings for the broader community.

        iii. Next, be sure to discuss the limitations of your study (e.g., limited sample size, lack of random sampling, non-validated measures, imperfect manipulations, and issues of internal, external, and construct validity), and describe how each of them might have impacted your results.

        iv. Next, discuss future potential areas of study that may help clarify or expand your results.

          v.   Finally, end with general statements that link your area of study with broader concerns/applications.

5. Final Paper (17% of Final Grade). This paper will include:
   a. Abstract
      i. This is a short, but comprehensive, summary of your entire paper. The purpose of an Abstract is for your reader to quickly get an idea of your study and its results, without having to skim through the entire article.
      ii. The abstract should be between 150-250 words, and should include (from APA Manual):
          1. "The problem under investigation, in one sentence if possible;
          2. The participants, specifying pertinent characteristics such as age, sex, and ethnic and/or racial group; in animal research, specifying genus and species;
          3. The essential features of the study method—you have a limited number of words so restrict your description to essential and interesting features of the study methodology—particularly those likely to be used in electronic searches;
          4. The basic findings, including effect sizes and confidence intervals and/or statistical significance levels; and
          5. The conclusions and the implications or applications."
   b. Final Draft of Results, Tables, and Figures
      i. Using the feedback provided by the professor on your Outline of Results, re-arrange as necessary, add any missing information, and put into full paragraphs, ensuring that the paper (including all tables and figures) complies with all APA Style guidelines.
      ii. The written portion of the Results section should be 1-3 pages long, depending on the number of analyses (not including tables, figures, and other appendices).
   c. Final Draft of Method Section
      i. Using the feedback provided by the professor on your Outline of Method, re-arrange as necessary, add any missing information or section headings, and put into full paragraphs, ensuring that the paper (including all headings, measure descriptions, and citations) complies with all APA Style guidelines.
      ii. The Method Section should be 3-5 pages (depending on the number of measures and manipulations).
   d. Final Draft of Discussion Section
      i. Using the feedback provided by the professor on your Outline of Discussion, re-arrange as necessary, add any missing information or analysis, and put into full paragraphs, ensuring that the paper (including all summaries, quotations, and citations) complies with all APA Style guidelines.
      ii. This Discussion section should be at least 4-5 pages long (depending on the number of hypotheses).
   e. Final Draft of Introduction Section

             i. Using the feedback provided by the professor on your Outline of Introduction, re-arrange as necessary, add any missing information, theories, or syntheses/analyses of the literature, and put into full paragraphs, ensuring that the paper (including all summaries, quotations, and citations) complies with all APA Style guidelines

            ii. The Introduction Section should be at least 4-6 pages long.

In an attempted act of environmental compassion, my goal is to minimize the amount of paper used for this class. Therefore, **all assignments should be <u>saved as a PDF with both a) the name of the assignment, and b) your name in the title</u> and uploaded to Canvas.** All papers will then be returned to you electronically via Canvas. If you do not know how to save a document as a PDF, ask me in the first week of class. Furthermore, **for group assignments created using GoogleDocs, GoogleSheets, GoogleSlides, etc., you should both a) <u>share the document with me (rmueller@pointloma.edu), and b) provide a link to the original GoogleDoc in your Canvas submission/comments</u>** (this allows me to see who contributed what in the construction of the assignment). Be sure to **<u>always work on these Google Doc assignments using your PLNU Login information</u>**.

<u>PRESENTATION</u>
Groups will be required to deliver a 20-minute oral presentation on their paper. There will be 5-10 minutes of questions after the presentation. Presentations will occur at the end of the semester, and will use PowerPoint. A more detailed schedule will be determined later in the course. You will receive a group grade for your presentation.

<u>POSTERS</u>
Groups will also present their paper in a poster format at the end of the semester. More instruction of the specific format will be presented in class at a later time. You will receive a group grade for your poster which will count as part of your final exam.

<u>GROUP PARTICIPATION</u>
Once again, 10% of your final grade will depend upon your group participation throughout the semester. This will be determined COMPLETELY by the reports of your group members. This grade is just an added incentive for you to be a courteous and responsible group member. So be sure to attend all group meetings, and to take on an equal share of the data collection and analysis tasks this semester.

<u>A Bit of Grace…in Exchange for Works…</u>
Some of the best learning opportunities occur during in-class discussions. Participating in these discussions can be immensely valuable to your learning. To acknowledge this importance, I have given substantial weight to the activities you complete during classtime. However, for those who go above-and-beyond in their in-class participation, I will give some added weight in your final grade to your classroom participation. **In the event a student's final grade is within <u>one percentage point</u> of the next highest grade, exceptional classroom participation will be considered in assigning the final grade**.

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SCHEDULE
(subject to minor changes throughout the semester)

Week	Day	Date	Topic/Readings
Week 1	T	8/28/18	Form groups & narrow research topic
	W	8/29/18	Research questions, hypotheses, IVs & DVs
	F	8/31/18	Computer Lab: IRB Process (& feedback)
Week 2	M	9/3/18	**No Class – Labor Day!!!**
	W	9/5/18	Informed Consent
	F	9/7/18	Computer Lab: Qualtrics workday
Week 3	M	9/10/18	Preparation for Presentations (Reproducibility Project, P-Hacking, Publication Bias)
	W	9/12/18	Presentations & Quizzes
	F	9/14/18	Computer Lab: Finalize First-Draft of Experiment & IRB Proposals
Week 4	M	9/17/18	Preparation for Presentations (Contested Research ???3 Topics???)
	W	9/19/18	Presentations & Quizzes
	F	9/21/18	Computer Lab: Create an OSF account
Week 5	M	9/24/18	Correlation Review; Quiz
	W	9/26/18	Correlation Write-Up
	F	9/28/18	Computer Lab: Finding Correlations via OSF or GSS
Week 6	M	10/1/18	DVs, Correlates, Manipulations
	W	10/3/18	Pilot Test Survey
	F	10/5/18	Analysis & Write-Up
Week 7	M	10/8/18	Regression
	W	10/10/18	Using JASP for Regression
	F	10/12/18	Creating a Poster
Week 8	M	10/15/18	Poster Presentation; Outlining a Lit Review
	W	10/17/18	Writing a "No-Source" Lit Review
	F	10/19/18	**No Class - Fall Break!!! (assignment: Find Literature)**
Week 9	M	10/22/18	Finalize Study; Data Collection
	W	10/24/18	Data Collection/Lit Review
	F	10/26/18	Data Collection
Week 10	M	10/29/18	Data Analysis
	W	10/31/18	Data Analysis

	F	11/2/18	Outline Method & Results
Week 11	M	11/5/18	Feedback for Method & Results
	W	11/7/18	Outline Intro & Discussion
	F	11/9/18	Feedback for Intro & Discussion
Week 12	M	11/12/18	Finalize Outline/Abstract (with APA Citations)
	W	11/14/18	Write Results, Tables, Figures
	F	11/16/18	Write Method Section
Week 13	M	11/19/18	Write Discussion Section
	W	11/21/18	No Class - Thanksgiving Break!!!
	F	11/23/18	No Class - Thanksgiving Break!!!
Week 14	M	11/26/18	Write Introduction Section
	W	11/28/18	Continue Paper Writing; Start Poster (Tables & Figures)
	F	11/30/18	Poster (Visuals & Placement)
Week 15	M	12/3/18	Practice Poster Presentations
	W	12/5/18	Practice Poster Presentations; Paper Presentations (PowerPoint)
	F	12/7/18	Paper Presentations (PowerPoint)
Finals Week		12/12/18	FINAL POSTER PRESENTATION 4:30-7:00pm {10%} NOTE: THIS IS THE WEDNESDAY OF FINALS WEEK … DO NOT PURCHASE A TICKET HOME BEFORE THIS DATE. THIS IS THE ONLY TIME YOU CAN PRESENT.

Rubric Results Section 2% (first draft) and 4% (second draft) of Final Grade

Criteria	Perfect (100%)	Nearly Perfect (95%)	Excellent (90%)	Great! (85%)	Good job, but missing a few key elements (80%)	Missing some key elements (75%)	Needs improvement (70%)	Needs significant improvement (65%)	Missing many key elements (60%)	Needs large-scale improvement (55%)	Complete Re-write (50%)	Missing/Incomplete (0%)
Statistical Report (4)	No errors in accuracy or formatting. All necessary statistics included.	One or two minor errors (which may be repeated). (Examples: restating same F-value, rounding, italicizing, spacing, etc.)	2-3 errors in formatting (which may be repeated).	4-5 errors in formatting (may repeat); and/or one or two incorrect statistics.	6-7 errors in formatting; and/or missing elements and/or two or three incorrect statistics	8-9 errors in formatting; and/or multiple missing elements; and/or 3-4 incorrect statistics; and/or incorrect interpretations of p-values	Larger number of errors and/or missing an analysis.	Many formatting or accuracy errors; and/or missing one or more sections.	Missing multiple sections and/or significant errors throughout the entire section.	Almost no accurate statistics reporting; errors and omissions make the section almost illegible.	Nearly every piece of information is either incorrect or presented incorrectly and/or almost all analyses are missing.	Missing your statistical report.
Table Headings & Tables (4)	No errors in accuracy or formatting. All necessary tables have been included, and headings are perfect.	One error in formatting or interpretation (not repeated). Otherwise, great!	One or two errors in formatting or interpretation (can be repeated); and/or headings could use some minor improvement.	Two to three errors in formatting or accuracy (can repeat); and/or repeated tables; and/or need moderate improvements in headings	Larger error in formatting (e.g., one table per page, out of order, etc.); 3-4 errors in formatting or accuracy (can repeat); and/or repeated tables; and/or need notable improvements in headings	Either 5+ formatting errors; and/or significant changes needed to headings; and/or incorrect tables.	Multiple formatting errors and significant changes needed; and/or missing table	Multiple formatting errors and significant changes needed; and/or missing tables	Many formatting errors and re-write of headings; and/or multiple errors and omissions throughout the section.	Almost no accurate tables; errors and omissions make the section almost illegible.	Nearly every piece of information is either incorrect or presented incorrectly and/or almost all tables are missing.	Missing all of your tables.
Figure Captions & Figures (4)	No errors in accuracy or formatting. All necessary figures have been included, and headings are perfect.	One error in formatting or interpretation (not repeated). Otherwise, great!	One or two errors in formatting or interpretation (can be repeated); and/or headings could use some minor improvement.	Two to three errors in formatting or accuracy (can repeat); and/or repeated figures; and/or need moderate improvements in headings	Larger error in formatting (e.g., one table per page, out of order, etc.); 3-4 errors in formatting or accuracy (can repeat); and/or repeated figures; and/or need notable improvements in headings	Either 5+ formatting errors; and/or significant changes needed to headings; and/or incorrect figures.	Multiple formatting errors and significant changes needed; and/or missing figure	Multiple formatting errors and significant changes needed; and/or missing figures	Many formatting errors and re-write of headings; and/or multiple errors and omissions throughout the section.	Almost no accurate tables; errors and omissions make the section almost illegible.	Nearly every piece of information is either incorrect or presented incorrectly and/or almost all figures are missing.	Missing all of your figures.
Readability /Style (4)	Fantastic organization and perfect writing.	One or two confusing sentences/passages. Otherwise, great!	A few confusing or awkwardly phrased sentences, or one dis-ordering. Otherwise, good!	4-5 confusing or awkwardly phrased sentences (or fewer, depending on the length); and/or slight disorganization.	A number of confusing or awkwardly phrased sentences; and/or more significant disorganization.	A significant number of confusing or awkwardly phrased sentences; and/or significant disorganization.	A large number of confusing or awkwardly phrased sentences; and/or pervasive disorganization.	Majority of sentences are confusing or poorly phrased and the overall structure is disorganized.	The poor quality of most sentences and/or the significant disorganization makes your meaning difficult to understand	Most sentences are difficult to read, and your statements are quite unclear.	Sentences are nearly illegible, and almost no meaning is clear.	Missing or completely illegible.
Precision (4)	Perfect! Every statistic is correct, and every phrase is perfectly accurate and clear.	One or two sentences that could be just a little clearer. Otherwise, great!	One or two imprecise sentences; and/or a handful of slightly unclear sentences; and/or 1-2 inaccurate statistics.	2-3 imprecise sentences; and/or a number of slightly unclear sentences; and/or 2-3 inaccurate statistics.	4-5 imprecise sentences; and/or a significant number of slightly unclear sentences; and/or 4+ inaccurate statistics.	5+ imprecise sentences and/or a large number of unclear sentences; and/or 5+ inaccurate statistics. Although your meaning is still relatively clear, many of your sentences have grammatical and spelling errors.	Nearly half of the sentences and reported statistics are imprecise or inaccurate. Grammar and spelling errors are beginning to make it difficult to understand the meaning of your sentences.	About half of the reported statistics and interpretations are imprecise or inaccurate. A large number of grammatical and spelling errors, which make your text difficult to understand.	The large majority of statements and reported statistics are inaccurate/imprecise. Most of your sentences include spelling and grammar errors, and make your text difficult to understand.	The large majority of statements and reported statistics are inaccurate/imprecise. Most of your sentences include spelling and grammar errors, and make your text quite difficult to understand.	Every or nearly every statement or reported statistic is inaccurate.	Missing or completely illegible.
Spelling/Grammar (2)	Perfect! No spelling or grammar errors.	One or two spelling/grammatical errors. Otherwise, great!	2-3 spelling or grammatical errors. Otherwise, good!	3-5 spelling or grammatical errors.	5+ spelling or grammatical errors, beginning to affect readability.						Nearly every sentence has errors in it, which make your text nearly illegible.	Missing or completely illegible.
APA Style (5)	Perfect! No errors in APA style.	One or two stylistic errors (not repeated).	3-4 errors in style (depending on length) or 1-2 errors repeated a couple of times.	4-5 errors in style (depending on length) or 1-2 errors repeated consistently.	Multiple stylistic errors repeated multiple times.	Many stylistic errors, both repeated and unique.	Almost half of your paper is written with formatting errors.	About half of your paper has formatting errors.	Over half of your paper has formatting errors.	The significant majority of your paper includes formatting errors.	Nearly every sentence or statistic has a formatting error.	Not a single correct formatting choice.

Rubric   Discussion Section   4% (first draft) and 8.5% (second draft) of Final Grade

Criteria	Perfect (100%)	Nearly Perfect (95%)	Excellent (90%)	Great! (85%)	Good job, but missing a few key elements (80%)	Missing some key elements (75%)	Needs improvement (70%)	Needs significant improvement (65%)	Missing many key elements (60%)	Needs large-scale improvement (55%)	Complete Re-write (50%)	Missing/Incomplete (0%)
Statement of Support/Nonsupport for Hypotheses (4)	Strong, well-crafted, accurate statements of support/nonsupport for every hypothesis, as well as for every post-hoc analysis. Significant (and marginally significant) planned comparisons/analyses are listed first, followed by significant post-hoc analyses, followed by non-significant planned comparisons, followed by non-significant post-hoc analyses. Marginally significant differences (non-significant trends) are described appropriately. Non-significant differences are not described in terms of their mean scores.	Nearly perfect! Just a few minor corrections on phrasing of your hypotheses.	Excellent! Just a few corrections on phrasing or order of presentation.	Great! You've made a few errors on phrasing and/or on interpretation of marginally significant or non-significant findings; and/or a few errors in ordering.	Good job, but your statements of findings are either missing some significant elements (e.g., variable names, words describing significance, etc.); and/or have placed multiple paragraphs out of order; and/or have inappropriately combined multiple hypotheses in the same paragraph; and/or have made multiple errors in statements of support/nonsupport.	You have one or more significant errors in your statements of findings; and/or have excluded one or more necessary hypotheses; and/or have a number of errors in phrasing, order, or differentiating hypotheses.	You have two or more significant errors in your statements of findings; and/or have excluded two or more necessary hypotheses; and/or have a significant number of errors in phrasing, order, or differentiating hypotheses.	You are missing or have misphrased NEARLY HALF of your statements of support/nonsupport for your hypotheses (as described in previous grading categories).	You are missing or have misphrased HALF of your statements of support/nonsupport for your hypotheses (as described in previous grading categories).	You are missing or have misphrased OVER HALF of your statements of support/nonsupport for your hypotheses (as described in previous grading categories).	You are missing or have misphrased nearly all of your statements of support/nonsupport for your hypotheses (as described in previous grading categories).	Missing or completely illegible.
Interpretation (4)	Perfect! Every finding has been thoroughly and accurately discussed with respect to its meaning. Significant and marginally significant findings have been integrated into well-crafted arguments regarding their meaning. Non-significant results have been accurately described as "failing to support" relevant concepts/conclusions, and the possibility of Type II error (power issues) has been accurately mentioned.	Nearly perfect! Just a few minor corrections on phrasing of your interpretations.	Excellent! Just one or two corrections on the organization of each paragraph; and/or one or two minor errors in interpretation and/or slightly more specificity needed.	Great! You've made a few errors in the organization of each paragraph; and/or one or two notable errors in interpretation and/or more specificity needed.	Good job, but your interpretations include multiple errors (e.g., lack of tentative language, inappropriate interpretation of null results; inaccurate interpretations of one or more findings, etc.)	You have two or more significant errors in your interpretations of findings; and/or you are lacking significant information in your interpretation of two or more of your findings.	You have multiple significant errors (of commission or omission) in your interpretations.	You are missing or have made major errors in NEARLY HALF of your interpretations of findings (see previous grading categories for details).	You are missing or have made major errors in HALF of your interpretations of findings (see previous grading categories for details).	You are missing or have made major errors in OVER HALF of your interpretations of findings (see previous grading categories for details).	You are missing or have made major errors in all or nearly all of your interpretations of findings (see previous grading categories for details).	Missing or completely illegible.
Relate to Theory (4)	Perfect! You have thoroughly and accurately related each finding back to articles either mentioned in your introduction or gathered in outside research. Significant (or marginally significant) findings have been discussed as supporting or contradicting previous theories/findings. Such theories/findings are briefly and accurately described. Nonsignificant findings have been discussed as "failing to support" specific theories or "failing to replicate" previous findings. All such theories/findings are appropriately cited.	Nearly perfect! Just a few minor corrections on the description and/or integration of previous theories.	Excellent! Just one or two minor errors in the description/integration of previous research; and/or slightly more specificity needed.	Great! You've just made a few errors in the description/integration of previous research; and/or more specificity needed in your descriptions/integration of these theories. 4-5 confusing or awkwardly phrased sentences (not more than 10%) (or fewer, depending on the length); and/or slight disorganization.	Good job, but your discussion includes multiple errors in the description/integration of previous research; and/or significantly more specificity needed in your descriptions/integration of these theories/findings; and/or omissions of citations.	You have two or more significant errors in your description/integration of previous research; and/or much more specificity needed in your descriptions/integration of these theories/findings; and/or multiple omissions of citations.	You have multiple significant errors (of commission or omission) in your description/integration of previous research; and/or a great deal more specificity needed in your descriptions/integration of these theories/findings; and/or have failed to cite many studies.	You are missing relevant theories/findings or have made major errors in discussing theories/findings for NEARLY HALF of your findings; and/or your errors in this section make it difficult to understand.	You are missing relevant theories/findings or have made major errors in discussing theories/findings for HALF of your findings; and/or your errors in this section make it QUITE difficult to understand. The poor quality of most sentences and/or the significant disorganization makes your meaning difficult to understand	You are missing or have made major errors in discussing theories/findings for OVER HALF of your and/or your errors in this section make it VERY difficult to understand.	You are missing or have made major errors in discussing theories/findings for NEARLY ALL of your and/or your errors in this section make it NEARLY IMPOSSIBLE to understand.	Missing or completely illegible.
Readability/Style (4)	Fantastic organization and perfect writing. Arguments are structured well, sentences are clear, and everything is written in the past tense (except for future studies and implications).	One or two confusing sentences/passages. Otherwise, great!	A few (not more than 5%) confusing or awkwardly phrased sentences, or one dis-ordering. Otherwise, good!		A number (about 10-20%) of confusing or awkwardly phrased sentences; and/or more significant disorganization.	A significant number (about 20%-30%) of confusing or awkwardly phrased sentences; and/or significant disorganization.	A large number (about 30%-50%) of confusing or awkwardly phrased sentences; and/or pervasive disorganization.	Over 50% of sentences are confusing or poorly phrased and the overall structure is disorganized.		Most sentences are difficult to read, and your statements are quite unclear.	Sentences are nearly illegible, and almost no meaning is clear.	Missing or completely illegible.

Rubric — Discussion Section — 4% (first draft) and 8.5% (second draft) of Final Grade

Precision (4)

Level	Description
Best	Perfect! Every finding and interpretation is correct, and statements about theories and findings are perfectly accurate and clear.
	One or two sentences that could be just a little clearer. Otherwise, great!
	A few (not more than 5%) imprecise sentences; and/or a handful of slightly unclear sentences; and/or 2-3 inaccurate statements about your findings or previous theories/findings.
	2-4 imprecise sentences (not more than 10%); and/or a number of slightly unclear sentences; and/or 2-3 inaccurate statements about your findings or previous theories/findings.
	5-7 imprecise sentences (or 10-20%); and/or a significant number of slightly unclear sentences; and/or 4+ inaccurate statements about your findings or previous theories/findings.
	8+ imprecise sentences (or 20-30%) and/or a large number of unclear sentences; and/or 5+ inaccurate statements about your findings or previous theories/findings.
	Nearly half (30-50 %) of the sentences and descriptions about your and/or others' findings and theories are imprecise or inaccurate.
	About half of the sentences and descriptions of your and/or others' findings and theories are imprecise or inaccurate.
	Over half of sentences and descriptions of your and/or others' findings and theories are imprecise or inaccurate.
	The large majority of sentences and descriptions of your and/or others' findings and theories are imprecise or inaccurate.
	Every or nearly every sentence and description of your and/or others' findings and theories is imprecise or inaccurate.
Worst	Missing or completely illegible.

Spelling/Grammar (2)

Level	Description
Best	Perfect! No spelling or grammar errors.
	One or two spelling/grammatical errors. Otherwise, great!
	2-3 spelling or grammatical errors. Otherwise, good!
	4-6 spelling or grammatical errors.
	7+ spelling or grammatical errors, beginning to affect readability.
	Although your meaning is still relatively clear, many of your sentences have grammatical and spelling errors.
	Grammar and spelling errors are beginning to make it difficult to understand the meaning of your sentences.
	A large number of grammatical and spelling errors, which make your text difficult to understand.
	Most of your sentences include spelling and grammar errors, and make your text difficult to understand.
	Most of your sentences include spelling and grammar errors, and make your text quite difficult to understand.
	Nearly every sentence has errors in it, which make your text nearly illegible.
Worst	Missing or completely illegible.

APA Style (5)

Level	Description
Best	Perfect! No errors in APA style.
	One or two stylistic errors (not repeated).
	3-4 errors in style (depending on length) or 1-2 errors repeated a couple of times.
	4-5 errors in style (depending on length) or 1-2 errors repeated consistently.
	Multiple stylistic errors repeated multiple times.
	Many stylistic errors, both repeated and unique.
	Almost half of your paper is written with formatting errors.
	About half of your paper has formatting errors.
	Over half of your paper has formatting errors.
	The significant majority of your paper includes formatting errors.
	Nearly every sentence or statistic has a formatting error.
Worst	Not a single correct formatting choice.

Limitations/Summary (see pp. 35-36 in APA Manual) (4)

Level	Description
Best	Perfect! You have thoroughly and accurately described all of the limitations of your study, making sure to describe the possible ways in which each one could have influenced your findings. You have also used these limitations well to make a number of recommendations for future studies, which would enable them to improve on your research. Further, you have suggested a number of interesting (and related) questions for future research to investigate. Finally, you have taken each significant (or marginally significant) finding and accurately and creatively applied it to the larger world, describing ways in which your findings can be used by individuals and/or institutions to shape the ways in which they make decisions.
	Nearly perfect! Just a few minor corrections or additions needed in your descriptions of limitations, future studies, and/or the application of your findings.
	Excellent! Just one or two minor errors in your descriptions of limitations, future studies, and/or the application of your findings.
	Great! You've just made a few errors in your descriptions of limitations, future studies, and/or the application of your findings; and/or more specificity needed in your discussion of limitations and implications.
	Good job, but your discussion includes multiple errors in your descriptions of limitations, future studies, and/or the application of your findings; and/or significantly more specificity and details are needed in your discussion of limitations and implications.
	You have two or more significant errors in your descriptions of limitations, future studies, and/or the application of your findings; and/or much more specificity are needed in your discussion of limitations and implications.; and/or multiple omissions of relevant limitations and implications.
	You have multiple significant errors (of commission or omission) in your descriptions of limitations, future studies, and/or the application of your findings; and/or a great deal more specificity needed in your descriptions of limitations, future studies, and/or the application of your findings; and/or a large number of omissions of relevant limitations and implications.
	You are missing relevant limitations/implications and/or have made major errors in discussing NEARLY HALF of your limitations and the application of your findings; and/or your errors in this section make it difficult to understand.
	You are missing relevant limitations/implications and/or have made major errors in discussing HALF of your limitations and implications; and/or your errors in this section make it QUITE difficult to understand.
	You are missing relevant limitations/implications and/or have made major errors in discussing OVER HALF of your limitations and implications; and/or your errors in this section make it VERY difficult to understand.
	You are missing relevant limitations/implications and/or have made major errors in discussing NEARLY ALL of your limitations and implications; and/or your errors in this section make it NEARLY IMPOSSIBLE to understand.
Worst	Missing or completely illegible.

References (5)

Level	Description
Best	Perfect! Every citation has a reference, and every reference is used in a citation. Further, every reference is written exactly corresponding to APA Style. There are no errors in capitalization (note book vs. journal article), italics, indenting, use of periods and spaces in names, inclusion and proper formatting of journal numbers/volumes, use of "&," use of "et al.", consistent font use, commma vs. semi-colon use, inclusion of all pieces of information (note: different for journals than for books)
	One or two stylistic errors (not repeated); and/or you are missing one of your references and/or citations.
	3-4 errors in style (depending on length) or 1-2 errors repeated a couple of times; and/or you are missing one or two of your references and/or citations.
	4-5 errors in style (depending on length) or 1-2 errors repeated consistently; and/or you are missing a few of your references and/or citations.
	Multiple stylistic errors repeated multiple times; and/or you are missing a number of your references and/or citations.
	Many stylistic errors, both repeated and unique; and/or you are missing the a number of your references and/or citations.
	Almost half of your reference section's formatting is incorrect; and/or you are missing almost half of your references and/or citations.
	About half of your reference section's formatting is incorrect; and/or you are missing about half of your references and/or citations.
	Over half of your reference section's formatting is incorrect; and/or you are missing over half of your references and/or citations.
	The significant majority of your reference section's formatting is incorrect; and/or you are missing the significant majority of your references and/or citations.
	Nearly every possible formatting requirement has been violated on most of your references; and/or you are missing nearly all of your references and/or citations.
Worst	Missing or completely illegible