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| G:\Teaching\WLU Cog Methods\Materials\pipboy.gif | **Introduction to Research Methods (PSYCH 251)** Spring 2016 – MWF 11:30am-12:20pm – Bailey 105***Instructor:*** Dr. Jason Ozubko***Email:*** ozubko@geneseo.edu***Office:*** Bailey 133***Office Hours:*** Mon 3-5pm, Wed 10-11am |

**Textbooks:**

* Methods in Psychological Research, Evans & Rooney 3rd
* Publication Manual of the American Psychological Association, 6th edition

**Course Overview**

A systematic study of the principles of research design and methods. Topics include scientific methods of descriptive, correlational, basic experimental, quasi-experimental, and single-subject approaches, issues of validity and experimental control, ethical considerations, and skills in accessing and using psychological literature, critical reading, and scientific writing using American Psychological Association style.

**Course Objectives**

* To give you an understanding of the scientific method
* To show you the methodologies and techniques that are used to study cognition
* To expose you to the scientific process and teach you how ideas are developed
* To train you to critically evaluate research and develop your own ideas
* To train you to think critically, objectively, and scientifically

**Prerequisites:** PSYC 100

Evaluation

Exam 1 15% History, Literature, Scientific Writing, Hypotheses, Measurement

Exam 2 15% Participants, Experimental Design, Non-Experimental Designs

Final Exam 15% Single-Subject Designs, Data Collection, Scientific Communication,

Meta-Analysis, Ethics

Assignment 1 15% Introduction

Assignment 2 15% Methods & Results

Final Assignment 15% Complete Paper (including Discussion, Abstract, References)

Presentation 10%

*BONUS 3% Participate in 6 credits worth of experiments on the SONA system*

Exams

There will be three exams in this course, divided equally across the semester. Exams will consist of multiple choice and short answer questions. The first two exams will be written during class time. The final exam will be written in the final exam period at the end of the semester. Make-up exams will be granted only in exceptional circumstances with written documentation. Make-up exams may differ in content and style from the regular exam.

*Accommodations:* SUNY Geneseo will make reasonable accommodations for persons with documented physical, emotional, or cognitive disabilities. Accommodations will be made for medical conditions related to pregnancy or parenting. Students should contact Dean Buggie-Hunt in the Office of Disability Services (tbuggieh@geneseo.edu or 585-245-5112) and their faculty to discuss needed accommodations as early as possible in the semester.

Assignments

One of the goals of this class is to teach you how to write a scientifically structured research paper. Scientific papers are typically comprised of the following sections: Abstract (Summary), Introduction, Methods, Results, Discussion, and References. For Assignment #1 you will write an Introduction. For Assignment #2 you will write a Methods and Results section. Your Final Assignment will be to integrate these sections together into a complete paper, along with an Abstract and Discussion.

Because each writing assignment builds on the next, it is essential that you complete your assignments on time. Late assignments will be docked 10%/day (weekends included), and will not be accepted after 5 days past the deadline.

Another major goal of scientific writing is to be concise and brief, yet informative. Strict page limits are being enforced for each writing assignment. Pay careful attention to these limits because you will only be graded on material that falls within the page limit (e.g., so the 3rd page of an assignment with a 2-page limit will be ignored). To help you keep your writing brief yet informative we will discuss good writing practices and examples of well written sections will be provided to guide you.

Finally, if you have questions or need help with your assignment please come to office hours with specific questions. I will not look at or read over any written assignments to give you general feedback or look for errors. As well, questions that require lengthy responses will only be answered in person. You should be working on all assignments in advance so that if you have questions you can come to office hours to get answers. Do not rely on email for last minute questions.

Grading Policy

This is a college-level course, with high standards for grading. All of your grades will be earned based on the quality of your work. You are responsible for familiarizing yourself with the standards and requirements for each assignment and exam, as discussed in this syllabus and in class. Grading errors (e.g., errors in addition or a significant oversight) are the only time in which a grade will be changed. Individual opportunities for extra credit are not offered in this class, meaning that there are no extra credit activities that are not already listed in the Evaluation section of this syllabus (above). Should you find yourself with grades that do not meet your expectations I encourage you to visit me in person, early in the semester, so we can talk about your grades. Though grades will not be changed, I am happy to help you understand why a specific grade was given, and help advise you on how to improve your study habits to try to perform better in the class.

Groups

On the first day of class you will be assigned to a peer group. You are being assigned to a group to encourage cooperation and collaboration. Your group is intended to be your support network in this course. If you are having trouble understanding materials in the textbook, you missed something in class, or you need feedback on a draft of your paper, you should be turning first to your group. Though the group system offers a clear benefit to the group members who need help, there is also much personal educational value in teaching what you know to others, and so this process will be beneficial to all group members. That said, though the group exists for mutual support, the group is not meant to carry you. Ultimately everyone is responsible for their own performance and participation in this class. Additionally, though everyone will have a group to turn to for basic questions and help, all students are welcomed and encouraged to also attend office hours to obtain extra help from the professor, if needed.

Peer Review Grade

For all three written assignments you are required to read and review the assignments of each of the individuals in your group. You should take this as an opportunity to critically evaluate their work and offer feedback and help. When you evaluate another student’s assignment, consider how their paper would be graded and offer them feedback. For example, is it a clear and well written paper? Does it meet the requirements for that assignment? Are there changes that could be made that would significantly improve the paper?

For each assignment you must submit a report on the quality of your group mates’ work. Specifically, you must submit a ranking to indicate whose written report was best, whose was second best, whose was third best, etc. This ranking will NOT affect the grades of your group mates, however, it will affect your grade. Your ability to critically evaluate the work of others is what is being evaluated for your peer review grade. Note: you do not rank yourself.

I urge groups to work together on this and try to help individuals who are having writing difficulties to improve their work. It is perfectly acceptable to rank all group members as equal if you truly believe the quality of their papers are all about the same. But keep in mind your peer review grade will reflect the degree to which you were able to accurately rank your group’s performance. If you indicate that everyone in your group ranks equally but my ranking of your group shows that some group members produced significantly worse assignments compared to others, your own peer review grade will suffer. Giving your group mates honest and realistic feedback is therefore an essential part of this peer review section of this course.

Experimental Participation (SONA)

You can earn a 3% bonus towards your grade by participating in psychology experiments through the SONA system. The focus of this course in on experimental design and participating in experiments will give you a chance to see, first hand, what experiments are like.

More information can be found online at: http://www.geneseo.edu/psychology/faq

Tentative Schedule (subject to change)

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| Week 1: **Introduction and History** Chapter 1 Week 2: **Research Literature & APA** Chapter 2 Week 3: **Scientific Communication I**Chapter 14*Library Session – Monday 2/1*Week 4: **GROUP MEETINGS** *Mon 2/8, Wed 2/10, Fri 2/12*Week 5: **Hypothesis Testing** Chapter 4 *Assignment #1 Due – Wed 2/17\*\**Week 6: **Measuring Variables** Chapter 5 *EXAM #1 – Fri 2/26* Week 7: **Selecting Participants** Chapter 6Week 8: **Experimental & Non- Experimental Research** Chapter 7 Chapter 8 Chapter 10 | Week 9: BREAK Week 10: **Scientific Communication II** *EXAM #2 – Mon 3/28* *Assignment #2 Due – Fri 4/1* Week 11: **PRESENTATIONS**Week 12: **PRESENTATIONS** Week 13: **PRESENTATIONS**Week 14: **Single-Subject Designs**Chapter 9Week 15: **Data Collection** Chapter 11Week 16: **Meta-Analysis & Ethics**Chapter 3Chapter 12*Final Assignment Due –Mon 5/2* |
| **FINAL EXAM – May 10th, Noon-2:30pm** |

*All readings are from the Research Methods textbook. There are no required readings from your APA Manual.*

Assignment #1 – Introduction (2 page MAX, not including title page or references)

Assignment #1 is to write the Introduction for a paper. Describe a psychological phenomenon using two to three relevant articles. I recommend that you write brief summaries of these articles, for your own use, before you begin writing this assignment. However, your goal in Assignment #1 is not to simply summarize the three articles but instead to tell me about a phenomenon and use the articles and their findings to illustrate, demonstrate, or support your explanation. After describing your phenomenon and citing your three studies, you must propose an interesting next step. Given what we know about this phenomenon so far, what would be the next experiment that should be done? What experiment would further our knowledge in this area, test the current explanation of the phenomenon, or otherwise advance our understanding?

**Grading Key:**

Did you introduce your topic in a clear yet interesting way?

Did you summarize the articles in a way that sets up a coherent overall story or theme?

Did you summarize the articles in enough detail?

Does your “next step” idea logically flow from your introduction?

Did you propose an interesting next step?

Did you use APA formatting?

Did you write clearly? Was your writing style coherent?

Peer review grade

Assignment #2 – Methods and Results (2 page MAX, not including title page, tables/figures, or references)

In Assignment #1 you summarized a phenomenon and proposed a new experiment. In Assignment #2 you will describe the methods that you would use to implement this experiment and you will write a Hypothetical Results section for your experiment. Because this section will be handed in independently of Assignment 1, please include 1 extra short paragraph on a separate page after your title page but before your Methods and Results that describes your experiment and hypothesis. This short paragraph does NOT count towards your page limit.

Include the following sections in your methods section: Participants, Materials, and Procedure. *Briefly* describe who the participants would be and how they would be recruited. Describe the materials that would be used in your experiment. Finally, describe the actual procedure you would implement, and each of the steps of the experiment. Your methods should be detailed enough that anyone could follow them and implement their own version of your experiment, but brief enough that they are quick and easy to read.

For the results section, because you aren’t actually running your experiment, you will have to make this part up. What you should do is think about how your experiment might turn out, were you to carry it out. Your Hypothetical Results should describe how you would analyze the results and at least 2 possible outcomes of the analyses (a “success” and “failure” scenario). You should describe how the data would appear in each scenario. In this section try to be objective and just report the data, but don’t interpret it (save that for the discussion). Report the data and provide statistical tests where relevant. In addition to the written report you must provide at least 1 (but no more than 2) tables or figures to illustrate your hypothetical data.

**Grading Key:**

Did you pick suitable participants and materials?

Did you design appropriate procedures?

Did you propose interesting/reasonably complex results?

Did you accurately summarize and describe the data?

Did you make a table/figure that was accurate and easy to read?

Did you use APA formatting?

Did you write clearly? Was your writing style coherent?

Peer review grade

Final Assignment (6 page MAX, not including Title Page, Abstract, References, or Tables/Figures)

Combine all your previous assignments into a full research paper. The paper should include the following sections: Title Page, Abstract, Introduction, Methods, Results, Discussion, References, Tables/Figures. Grading will emphasize the new sections (Abstract, Discussion, References), however, old sections will still significant weight. Take this opportunity to use the feedback you got from earlier assignments to improve your Introduction, Methods, and Results.

For the Discussion, you need to summarize and interpret your results (without statistics), and then discuss how they relate to the hypothesis that you presented in your Introduction, and what implications this has for the phenomenon at hand. You should include one or two new references in your discussion, which you can relate your hypothetical findings to. Ultimately the Discussion needs to connect your results to the issues that were raised in the Introduction, and then push them forward to consider their meaning in a wider context.

An abstract is a short, 1-paragraph summary of your entire paper (with NO references). It should be no longer than 200 words. It should include at least 1 sentence for each major section of your paper (i.e., Introduction, Methods, Results, Discussion). An abstract should stand alone and provide a complete summary of the major points and findings in your paper. The Abstract will be the first section in your paper (after the Title Page) but I highly recommend waiting and writing this section at the very end, after you have completed writing your Discussion.

Finally, references should be a complete list of the papers cited in your paper. You should not list any papers that you did not cite. All references are expected to be in APA format.

Regarding limits, the Introduction, Methods, and Results combined should not exceed 6 pages. The Discussion should not exceed 3 pages. The abstract should be one short paragraph that does not exceed 200 words. There should not be more than 2 tables/figures.

**Grading Key:**

Quality of your Abstract

Quality of your Introduction

Quality of your Methods & Results

Quality of your Discussion

Did you use APA formatting?

Did you write clearly? Was your writing style coherent?

Peer review grade

Presentation

Each student will give an 8-minute presentation with 2-3 minutes for questions at the end (total time of presentation and questions 10-11 minutes). Your presentation should be a condensed version of your paper, much like an abstract. I recommend no more than 8 slides, which means you should have 1-2 slides for the Introduction, 1 for Methods, 1 for Results, and 1-2 for Discussion, and one or two extra slide to apply to whatever section you see fit. After your presentation you will field questions from other students or myself. The goal is to have a brief but intelligent discussion about your topic.

**Grading Key:**

Did you present a clear and compelling introduction?

Did you prepare easy to comprehend slides that *supplemented* what you were saying?

Did you explain your results clearly and coherently?

Did your discussion put your findings into context and end with a clear and compelling message?

Did you answer questions thoughtfully?