**PSY 39x: Research Methods in Psychology**

**Master Syllabus, University Studies Cluster Requirement 1C: Intermediate Writing**

**Course Overview from Course Catalog**: Fundamentals of research methodology in psychological research including literature review, hypothesis generation, design, measurement, statistical analysis, ethics and APA format writing style. Emphasis on the selected cognate content area of developmental (PSY 390), social (PSY 391), cognitive (PSY 392), physiological (PSY 393), or perception (PSY 394) psychology.

**Student Learning Outcomes**

**Course-Specific Learning Outcomes**

Upon completion of this course, students will be able to:

* Read, understand, and critically evaluate psychological literature, including empirical research reports
* Demonstrate knowledge of fundamental concepts in psychological research and the scientific method
* Demonstrate an understanding of ethics in psychological research when designing, conducting, analyzing, and reporting research
* Conduct a literature review in the selected cognate content area of the course
* Describe and apply experimental and non-experimental research designs
* Propose and conduct a research study using methodology appropriate to the cognate content area
* Conduct appropriate statistical analyses for their projects
* Write an APA style research report and other discipline-appropriate documents
* Report research results through an oral presentation

**University Studies Learning Outcomes**

* Read with comprehension and critically interpret and evaluate written work in discipline-specific contexts.
* Demonstrate rhetorically effective, discipline-specific writing for appropriate audiences.
* Demonstrate, at an advanced level of competence, use of discipline-specific control of language, modes of development and formal conventions.
* Demonstrate intermediate information literacy skills by selecting, evaluating, integrating and documenting information gathered from multiple sources into discipline-specific writing.

**Examples of Assigned Readings**

**Research Methods Textbooks**

Dunn, D.S. (2009). *The practical researcher: A student guide to conducting psychological research* (2nd ed.). Malden, MA: Wiley-Blackwell.

Elmes, D.G., Kantowitz, B.H., & Roediger, H.L. (2012). *Research methods in psychology* (9th ed.)*.* Belmont, CA: Thomson Wadsworth.

Goodwin J., (2010). *Research in psychology: Methods and design* (6th ed.). New York: Wiley.

Gravetter, F. J. & Forzano, L.B. (2012). *Research methods for the behavioral sciences* (4th ed.). Belmont, CA: Wadsworth/Cengage.

McBride, D.M. (2010). *The process of research in psychology*. Los Angeles: SAGE.

**Writing and Style Guide Books**

American Psychological Association. (2009). *Publication manual* (6th ed.). Washington, DC: Author.

Cronk, B. C. (2012). *How to use SPSS: A step-by-step guide to analysis and interpretation* (7th ed.). Glendale, CA: Pyrczak Publishing.

Landrum, R. E. (2008). *Undergraduate writing in psychology: Learning to tell the scientific story.* Washington, DC: American Psychological Association.

Schwartz, B. M., Landrum, R. E., & Gurung, R. (2011). *An easy guide to APA style*. Los Angeles: SAGE.

**Content-Specific Books**

Hugdahl, K. (2001). *Psychophysiology: The mind-body perspective*. Cambridge, MA: Harvard University Press.

Lesko, A. W. (2012). *Readings in social psychology: General, classic, and contemporary selections* (8th ed.). New York: Allyn and Bacon.

Stanovich, K.E. (2009). *How to think straight about psychology* (9th ed.). Boston: Pearson.

**Research Articles**

Baltes, P.B. (1987). Theoretical propositions of life-span developmental psychology: On the dynamics between growth and decline. *Developmental Psychology, 23*, 611-626.

Black, S. & Hausman, A. (2008). Adolescents' view of guns in a high-violence community. *Journal of Adolescent Research, 23*, 592-610.

Craik, F.I.M., & Tulving, E. (1975). Depth of processing and the retention of words in episodic memory. *Journal of Experimental Psychology: General, 104*, 268-294.

Daniel, F., & Raney, G.E. (2007). Capturing the effect of a title on multiple levels of comprehension. *Behavior Research Methods, 39*, 892-900.

Hastings, P.D., Nuselovici, J.N., Klimes-Dougan, B., Kendziora, K.T., Usher, B.A., Ho, M-H. R., & Zahn-Waxler, C. (2009). Dysregulated coherence of subjective and cardiac emotional activation in adolescents with internalizing and externalizing problems. *Journal of Child Psychology and Psychiatry, 50*, 1348-1456.

Hazan, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology, 52*, 511-524.

Kramer, A.F., & Willis, S.L. (2002). Enhancing the cognitive vitality of older adults. *Current Directions in Psychological Science, 11*, 173-177.

ter Doest, L., & Semin, G.R. (2005). Retrieval contexts and the concreteness effect: Dissociations in memory for concrete and abstract words. *European Journal of Cognitive Psychology, 17*, 859-881.

van Reekum, C.M., Johnstone, T., Banse, R., Etter, A., Wehrle, T., & Scherer, K.R. (2004). Psychophysiological responses to appraisal dimensions in a computer game. *Cognition and Emotion, 18*, 663-688.

Wang, J., Iannotti, R.J. & Nansel, T.R. (2009). School bullying among adolescents in the United States: Physical, verbal, relational, and cyber. *Journal of Adolescent Health, 45*, 368-375.

**Writing Instruction in PSY 39x**

Learning how to produce discipline-specific writing is an important outcome for courses that meet

the Intermediate Writing criteria for University Studies. Each instructor spends time in class explaining how to write particular sections of the final paper about a week before each section draft is due (see Sample Course Outline at the end of this document). Instruction for these sections varies, as each section of an APA style research paper differs greatly in content and tone. For example, the Introduction section is about building an argument for the importance of the research you have conducted (or want to conduct, in the case of writing a draft). Thus, instruction in how to write arguments is important. In contrast, the Results section is very formal and must include formulaic language about the statistical tests that were conducted and their outcomes. Thus, instruction must include the proper way to write up statistical tests.

Classroom writing instruction takes several forms. PSY 39x instructors use the following techniques:

* Lecture about proper organization, content, and formatting of APA style writing
* Demonstrations of how published research articles follow APA guidelines
* In-class activities about writing, including free writing of drafts and group activities on APA citation style
* "Research roundtable" days where students ask questions about their research projects, including writing questions, to the class
* Peer review of writing assignments as part of an in-class exercise

Writing instruction also occurs outside the classroom via feedback that students receive on writing assignments.

**Example Writing Assignments**

Research methods courses in psychology are tied to a particular cognate content area: Developmental psychology, social psychology, cognitive psychology, physiological psychology, or psychology of perception. Therefore, writing assignments vary greatly depending on the individual course. Some writing assignments, such as lab reports, are more appropriate for some cognate content areas than others. All students must complete an individual final paper based on a research project that is conducted as part of the course. The individual final paper satisfies at least half of the total number of pages needed to satisfy the intermediate writing criteria (so at least 10 pages). Students also complete other brief writing assignments. All example writing assignments are included below.

**Summarizing and Critiquing Research Articles**

* Students write brief (1-3 page) summaries and critiques of research articles, following instructor guidelines. Critiques may be of the entire research article, or may focus on particular sections, such as the Method, or particular research methodology issues, such as ethics.
* Fulfills Cluster 1C1: Read with comprehension and critically interpret and evaluate written work in discipline-specific contexts.

*Example 1*

Read van Reekum et al. (2004). The focus of this article review is to review the method section of an empirical article. Therefore, I would like you to answer to the best of your ability the following questions that summarize and critique the description of participants, materials, research design, and procedure. The purpose of the method section is to describe in detail how you performed the study. Someone should be able to replicate your study based on the information you provide in this section.

1. PROCEDURE: Does the author clearly and completely describe the research procedure?
2. DESIGN: Does the author clearly and completely identify the research design?
3. PARTICIPANTS: Are participants completely described based on what information should be included?
4. MATERIALS: Are all study materials adequately described? Is a description of validity and reliability included?
5. QUESTION: List a question of your own based on the method section.

*Example 2*

Read Wang et al. (2009) in preparation for the Journal Club discussion. The discussion will cover the main points of the article, research design characteristics and flaws, results, and implications. To help with preparing for these in-class discussions, you will write *a written response* to each of these readings. This response will be submitted to me for grading prior to our in-class discussion.

*Example 3*

Every student will select one empirical article reporting the findings of a psychological study. You can pick any topic that you are interested in. You will then give a 5-7 minute presentation on ethical issues in the study. You will also turn in a 1-2 page summary of your findings the day of your presentation. In addition, you will need to turn in the article you reviewed.

For the presentation, you will be expected to address principles 8.1-8.8 of the APA Ethical Principles for Research. If the study is explicit in addressing a certain principle (e.g., stating that the study was approved by the institution's IRB) then you should report that. If it is not clear, then you need to say that it was not clear and explain what they could have done to address the principle (e.g., if the authors do not report a debriefing session, you should say this and provide us with information that should be included in the debriefing statement). You should also point out AT LEAST TWO potential ethical issues and why you think that they are important(e.g., is it possible for people with Alzheimer's to provide informed consent, are there issues of confidentiality, could the study cause psychological harm, etc).

**Lab Reports**

* Students write brief reports (5 pages or less) of psychological research labs that are conducted in class following a specific form or APA style.
* Fulfills Cluster 1C2: Demonstrate rhetorically effective, discipline-specific writing for appropriate audiences.
* Fulfills Cluster 1C3: Demonstrate, at an advanced level of competence, use of discipline-specific control of language, modes of development and formal conventions.

*Example 1*

There will be 3 in-class laboratory exercises. Each lab exercise will be conducted by groups of 5 students. Across the 3 labs, each student will have the experience of performing different roles in data collection (e.g., sensor application, computer supervision, being a participant). Late in the semester, we will analyze example psychophysiological data files and address a set of questions in class through statistical and graphical analyses.

For labs 1-3, each student will submit a brief lab report. You will receive a standard form to complete for these reports. I will evaluate these lab reports for accuracy, completeness, and clarity.

*Example 2*

You will write a 5-page lab report for each experiment we conduct in class (3 lab reports total). Our data will be combined with data that I have previously collected. You will write up an individual report of the experiment, using a provided article as the basis for the introduction. You will explain the method we used in class and how it compares/contrasts to the method from the assigned article. You will then conduct appropriate data analyses and write up the results. You will next compare/contrast our results to the relevant results reported in the article. You will end your report by drawing a conclusion from our data, discussing the limitations of the study, and making suggestions for future research. Lab reports will be graded based on the accuracy of your write-up of the experiment, correct use of APA style, and overall writing style.

**Drafts of Sections of the Final Paper**

* Students write APA-style research reports that include a literature review (Introduction), description of participants and procedure (Method), findings (Results), and conclusions and implications (Discussion). More details about the Final Paper assignment are included below. Students write drafts of each section (Introduction, Method, Results, Discussion), but the writing done for these drafts does not count towards the necessary page count for Intermediate Writing criteria. Draft writing, does, however, a) employ writing as a method for deepening student learning and b) provide a method for students to receive feedback and ongoing guidance in developing their writing skills. Drafts are low stake in that they are worth a small percentage of the class grade, but are highly useful for students in learning how to write an APA style paper.
* Fulfills Cluster 1C2: Demonstrate rhetorically effective, discipline-specific writing for appropriate audiences.
* Fulfills Cluster 1C3: Demonstrate, at an advanced level of competence, use of discipline-specific control of language, modes of development and formal conventions.
* Fulfills Cluster 1C4: Demonstrate intermediate information literacy skills by selecting, evaluating, integrating and documenting information gathered from multiple sources into discipline-specific writing.

*Example 1*

Grading Sheet for DRAFTS of APA Style Empirical Paper - Draft II: Method

|  |  |  |  |
| --- | --- | --- | --- |
| Section | Points Possible | Points Earned | Total Score (out of 10) |
| **Title Page** (APA format and style) | 1 |  |  |
| **Method: Participants** (e.g., adequate description and sample size) | 1 |  |
| **Method: Materials/Measures** (e.g., thorough description and citation for each measure) | 2 |  |
| **Method: Procedure** (e.g., thorough description of administration process) | 2 |  |
| **Method: Planned Analyses** (e.g., thorough and appropriate analytical plan) | 2 |  |
| **References** (APA Style) | 1 |  |
| **Writing** (e.g., grammar, spelling, length requirements, SafeAssign) | 1 |  |

Comments:

*Example 2*

Assignment: Draft of Method

As part of preparing for the final paper, you will write a draft of each of the four major sections of the paper. Each section is worth 2.5% of your grade, such that the four drafts together make up 10% of your grade. The second section that you will write will be the Method. Each project member turns in his/her own draft. Although your group will have designed the methodology for your study together, all writing is done individually.

Your method should be formatted in correct APA style. This includes 1" margins, 12pt Times New Roman font, correct use of headings, and correct in-text citations. In addition, you will turn in a correctly formatted Reference section and a correctly formatted Appendix that includes all your materials. Use information presented in class, examples from your textbook, and the 6th edition APA publication manual to correctly format your paper.

Your method should include the main 3 sections found in most methods: Participants, Materials, and Procedure. If necessary, include the other sections we discussed in class: Apparatus, Design, and Analysis.

1. *Participants*

-describe the number of participants you will use, any relevant demographics, where they are from and how they were recruited, and what, if any, incentive was given

2. *Materials*

-explain exactly what participants were presented with

---if you are using materials from another source, make sure to give a citation and explain any changes you made to the materials

---if you are using your own materials, make sure to explain the guidelines you used to develop them

-give example(s) in text and refer to the Appendix/Appendices

3. *Procedure*

-explain exactly what the participants did, in chronological order, including assignment to conditions, instructions they received, number of trials, timing, etc.

-your procedure should include a brief description of ethical guidelines that were followed

Remember that the Method should include enough detail so that the reader can assess the reliability and validity of your study, and could potentially replicate your study.

Grading rubric for Method draft

*Excellent* (2.5%): Method contains all required information and is written in a clear, understandable manner. The study is explained in enough detail to be replicable. All materials are included in the Appendix. Correct use of APA style.

*Satisfactory* (1.5%): Method generally contains the required information but is lacking detail on a particular element, such as not fully explaining the method or procedure. Because not every element is included, a reader would have a hard time replicating the study. Some APA style mistakes (such as citation) or spelling/grammar errors.

*Unsatisfactory* (.5%): Method is missing sections/information. The procedure is written in a confusing manner or materials are unclear. The Appendix is missing. A reader would not be able to replicate this study. Numerous APA style mistakes, including citation errors, as well as spelling/grammar errors.

*Fail* (0%): A *Fail* is given in cases of plagiarism.

**Final Paper**

* Students write APA-style research reports that include a literature review (Introduction), description of participants and procedure (Method), findings (Results), and conclusions and implications (Discussion). These research reports are the result of either a proposed project or project that was conducted across the course of the semester. Although projects are conducted in a group, all writing assignments are individual. The final paper, which includes many changes from the drafts (see above), counts for a large portion of the writing in the course: at least 10 pages. Although each instructor uses his/her own rubric to grade these final papers, the Psychology Department has also agreed on a common rubric for assessment purposes. The common rubric is included at the end of the final paper section.
* Fulfills Cluster 1C2: Demonstrate rhetorically effective, discipline-specific writing for appropriate audiences.
* Fulfills Cluster 1C3: Demonstrate, at an advanced level of competence, use of discipline-specific control of language, modes of development and formal conventions.
* Fulfills Cluster 1C4: Demonstrate intermediate information literacy skills by selecting, evaluating, integrating and documenting information gathered from multiple sources into discipline-specific writing.

*Example 1*

Your major product for this course will be a research paper that has at least 13 text pages. The paper must include the following sections: Introduction, Methods, and Results/Discussion. A minimum of 15 references must be cited in the paper. You will also need to provide a minimum of 5 additional pages, which will include a title page, tables, figures, and references. The final paper must also include an appendix with the measures that the students used for their study.

**COMPONENTS OF PAPER**

**1. Topic Statement.** This statement should be approximately a half of a page long and submitted electronically by one person from each group on myCourses. Below is a list of possible topics that you can use. Feel free to combine topics (e.g., life satisfaction and stress). All topics must have a human development focus. In the paragraph, describe what you will be researching, what existing published literature this topic is based on, and why you believe it is an important topic. All topics MUST be approved by me. No research can include topics related to sex, personal health conditions (e.g., medications), drug use, or alcohol use.

Potential topics: Stress/coping, internet use, parent-child relationships, attitudes toward aging, birth order, gender roles, positive/negative emotions, identity development, family, caregiving, self-efficacy, relationships, life satisfaction, personality, activities of daily living, health behaviors, leisure activities, quality of life, friendships, cognition, exercise/nutrition

 **2. Introduction.** At least 4 pages of text covering your literature review, hypotheses, goals/objectives of the study, with transitions between paragraphs (no simple listing of studies or block paragraphs on one study followed by another); absolutely no direct quotes, and a References page using APA format of all material cited.

**3. Consent Form, Data Collection Instrument, and Debriefing Form.** Each group is required to submit: a consent form that each participant needs to sign prior to participating in your study, all measures that you will be using to collect data, and a debriefing summary that will be read to all participants in your study following participation. **ALL OF THESE MATERIALS MUST BE APPROVED BY THE INSTRUCTOR BEFORE YOU CAN BEGIN COLLECTING DATA!!**

**4. Method.** At least 4 pages of text covering your methods (Participants, Procedure, Measures/Instruments/Equipment, Data Analysis Plan), with transitions between paragraphs (no simple listing of studies or block paragraphs on one study followed by another); absolutely no direct quotes; a References page using APA format of all material cited, the data collection instruments, and informed consent forms you will be using, which will be included in an Appendix.

**5. Results/Discussion.** At least 2 pages covering your Results section (include statistics and refer to Tables and Figures) and 2 pages covering your Discussion section where you cite additional research not present in the Introduction to support/describe your findings in context of others' studies. Include at least one table and one figure. Use transitions between paragraphs (no simple listing of studies or block paragraphs on one study followed by another); absolutely no direct quotes; and a References page using APA format of all material cited.

*Example 2*

Groups will examine the psychophysiological literature in search of a potential topic for the course research project. Throughout the semester, you will work as a team of 4 students with similar interests in developing a proposal of an experiment that would test a novel hypothesis using psychophysiological measure(s), which will include a short literature review, a specific hypothesis, a description of potential methods to test your hypothesis, anticipated results, and a discussion of anticipated findings and limitations. This proposal will be written as a manuscript for submission to a professional journal(APA format). As noted in the course schedule, there will be many opportunities to work with your team during class periods to work on aspects of the research proposal. Your paper should be approximately 15 pages (not including references and figures/tables) double-spaced in length and formatted using APA standard format. Throughout the semester, you will learn how to conduct a literature review and how to write the four components of the research proposal (Introduction, Method, Results, and Discussion) in APA format.

**Guidelines for final paper**: Here are some guidelines for your paper and what it should include. It should be approximately 15 double-spaced pages in APA format.

Your paper will be graded on the following components:

Title page

Abstract

I. Introduction

In this section, you should summarize the prior research that is of immediate relevance for the topic you will be hypothesizing about and analyzing. The prior research could consist of either a theory and/or of prior empirical findings.

The section should then state the question, hypothesis and/or purpose of the topic of the study you are commenting on and explain, with reference to that prior research, why this study is useful to carry out.

II. Method

In this section, you should produce a complete description of the participants, materials, procedures, and design that will be used in the study you are writing about. Finally, you should mention how the data will be analyzed.

III. Results

In this section you should state expected results in APA format. Because this is a proposal, you should report on expected results given your hypotheses. At least one table or figure should be included to summarize expected results.

IV. Discussion

In this section, you should summarize the findings in light of past research and theory. Note any limitations of the research and provide ideas for future directions.

V. References

All references that were cited in the paper should be listed in APA format in alphabetical order.

Appendices: Include any measures that you propose to use in your project

APA style

Overall quality of writing

*Example 3*

The final paper is the culmination of your final project. All revisions from your drafts must be made in your final paper, and you should also incorporate feedback you were given as part of your oral presentation. Your final paper will include introduction, method, results, and discussion sections. You will also include a title page, reference section, figure(s)/table(s) for your results, and an appendix (or appendices) of all your materials.

Your final paper should be formatted in correct APA style. This includes 1" margins, 12pt Times New Roman font, correct use of headings, and correct in-text citations. Use information presented in class, examples from your textbook, and the 6th edition APA publication manual to correctly format your paper. You will be graded for correct use of APA style and it is your responsibility to format the paper correctly.

Your final paper should be approximately 10-15 pages in length. The main body (intro, method, results, conclusion) should be 6-8 pages. However, the most important thing is that you present a well-written, correctly formatted, representation of your final project. These lengths are simply guidelines; write your paper until everything necessary is included, and avoid redundancy in your writing.

Your final paper will include the following elements:

I. Body of paper

A. **Introduction**: By the time the reader has reached the end of the introduction, it should be obvious that your study is important and worthy of reading. The reader should be prepared for the method section.

1. *intro to the general topic of study*

-describe the topic of interest and what aspects of it are most relevant to your study

2. *discussion of relevant background studies to your topic of interest*

-literature should be integrated in a coherent fashion, and not discussed in a list-like format

-only discuss aspects of the literature that are relevant to your study; do not summarize every single portion of the study

3. *justification of the present study*

-it should be clear what your present study addresses that was not covered in the previous literature

4. *brief and basic description of the current study*

-design should follow from the justification, and prepare the reader for your hypotheses

5. *hypotheses*

-explain briefly why you are making these hypotheses (tie back in w/ lit review)

B. **Method**: Remember that the Method should include enough detail so that the reader can assess the reliability and validity of your study, and could potentially replicate your study.

1. *Participants*

-describe the number of participants you will use, any relevant demographics, where they are from and how they were recruited, and what, if any, incentive was given

2. *Materials*

-explain exactly what participants were presented with

---if you are using materials from another source, make sure to give a citation and explain any changes you made to the materials

---if you are using your own materials, make sure to explain the guidelines you used to develop them

-give example(s) in text and refer to the Appendix/Appendices

3. *Procedure*

-explain exactly what the participants did, in chronological order, including assignment to conditions, instructions they received, number of trials, timing, etc.

-your procedure should include a brief description of ethical guidelines that were followed

C. **Results**: Remember that the Results should describe all the tests you did, even when the outcomes weren't statistically significant. Also remember to NOT include any interpretation of your results -- that comes in the Discussion section.

1. *report descriptive statistics*

-means (M) and either *SD*s, *SE*s, or *CI*s for your continuous DVs

-report frequencies (ex. solution frequencies) for categorical DVs

-you can report descriptive stats in text or in a table

---If you put these in a figure or table, you should not include them in the text. But, you need to

refer to the table or figure, using an expression like “as shown in Table 1”. If the cell sample

sizes are not clear from the Method section, they should be included.

2. *report inferential statistics and explain in plain English what they mean*

Here is an example:

"To investigate the effect of having a title on memory for text, the number of words from the text that participants recalled was compared between the title and no title groups. There was a significant effect of title on recall, *t* (9) = 2.50, *p* = .03. Readers with titles (*M* = 27, *SD* = 3.2) recalled more words from the text than readers who did not receive a title (*M* = 18.5, *SD* = 2.5)."

Inferential test statistics must contain: the value of the test statistic, degrees of freedom, probability of obtaining the statistic (the exact p value, or < the alpha level; do not report *p* = .00 -- instead write *p* = .001) and effect size.

-As an example, for each ANOVA result you need: *F* (1, 20) = 6.77, *p* = .01, ηp2 = .38

-Follow-up tests for ANOVAs do not require effect sizes, so for your follow up t-tests you need:

*t* (19) = 4.5, *p* = .04

-Note that there are SPACES around the statistical terms and that *t*, *F*, and *p* are *italicized*.

**Other statistical tests require different information**. See the examples that I e-mailed you, or published examples from our class readings, or your APA manual.

\*\*It is effective to show inferential statistics in table or figure format. Some statistical techniques (hiearchical regression, logistic regression, etc.) require the use of tables.

D. **Discussion**

1. Summarize your main findings

-in one paragraph, summarize your main findings from the results section

2. Connect your results to your hypotheses

-repeat each hypothesis, noting whether it was supported or not

3. Connect your results to previous literature

-how do your findings connect to the literature you reviewed in your introduction? are they consistent, inconsistent with it?

-you may need to add in additional studies here to explain your findings

4. Discuss any limitations of your research study

-point out relevant limitations of the method chosen, or questions your study does not address

-however, remember you are trying to make an argument that your research contributes to scientific knowledge, so you do **not** want to argue that the study was conducted poorly

5. Make suggestions for future research

-based upon your findings and the current literature, what's the next step?

-one idea for here might come in your previous section, about questions that your research does not address

II. Additional sections

A. **Title page**: you must have a correctly formatted title page that includes the authors' names, affiliation(s), and the title of the paper. See your textbook or the APA manual for examples.

B. **Abstract**: you must have a correctly formatted abstract. You may use the one you wrote for the Psi Chi conference (feel free to update it).

C. **Reference section**: your reference section must include every reference from your paper, and be formatted in correct APA style.

D. **Appendix (Appendices)**: you must include all of your materials in an appendix (or appendices). These must follow correct APA style including 12 pt font for all your materials. Appendices are ordered by letter.

E. **Tables**: if you include any tables for reporting your results, they must be correctly formatted. Tables are ordered by number and each begins on a new page.

F. **Figure**: if you include any figures for reporting your results, they must be correctly formatted. Figures are ordered by number and each begins on a new page. See the APA manual for formatting.

Order of paper sections:

1. Title page

2. Abstract

3. Body (introduction [remember to write your title here instead of the word introduction], method, results, discussion)

4. References

5. Appendix/Appendices

6. Table(s) -- each on a new page

7. Figures -- each on a new page

**Common Grading Rubric for Research Methods Final Papers**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |
| Section  |   | Possible Pts |   | Pts Earned |   |
|  |  |  |  |  |  |  |
| Title Page |  | 3 |  |  |  |
|  |  |  |  |  |  |  |
| Abstract |  | 3 |  |  |  |
|  |  |  |  |  |  |  |
| Introduction |  |  |  |  |  |
|  | Literature Review |  | 15 |  |  |  |
|  | Hypotheses |  | 4 |  |  |  |
|  | Explanation of IV/DV |  | 4 |  |  |  |
|  | Logical Flow/Writing |  | 9 |  |  |  |
|  |  |  |  |  |  |  |
| Method |  |  |  |  |  |
|  | Participants |  | 5 |  |  |  |
|  | Materials/Stimuli |  | 5 |  |  |  |
|  | Procedure |  | 5 |  |  |  |
|  | Ethics  |  | 3 |  |  |  |
| Results |  |  |  |  |  |
|  |   |  |   |  |  |  |
|  | Stat Analysis |  | 10 |  |  |  |
|  | Connection to Hypotheses |  | 5 |  |  |  |
|  | Interpretation |  | 5 |  |  |  |
|  |  |  |  |  |  |  |
| Discussion |  |  |  |  |  |
|  | Connection to hypotheses | 5 |  |  |  |
|  | Connection to Lit review | 5 |  |  |  |
|  | Limitations |  | 2 |  |  |  |
|  | Future Directions |  | 2 |  |  |  |
|  |  |  |  |  |  |  |
| References/APA Style |  | 10 |  |  |  |
|  |  |  |  |  |  |  |
| Tables | (included in Stat) |  |   |  |  |  |
|  |  |  |  |  |  |  |
| Figures (included in stat) |  |   |  |  |  |
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|  | Total |  | 100 |  |  |  |
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**Sample Course Outline**

Research methods courses in psychology are tied to a particular cognate content area: Developmental psychology, social psychology, cognitive psychology, physiological psychology, or psychology of perception. Therefore, individual course plans vary greatly based on the course, as content-specific material is also covered in the class. This list of topics includes issues covered in each course, but each course will also cover additional material concerning research methodology that is appropriate to the individual cognate content.

Week 1: Introduction to the course and overview of research methodology

Week 2: Scientific thinking in psychology

Week 3: Developing research ideas

Week 4: Ethics in research

Week 5: Conducting a literature review in psychology; how to write the Introduction section

Week 6: Defining and measuring variables; Introduction draft due

Week 7: Validity and reliability in psychological research

Week 8: Non-experimental design; how to write the Method section

Week 9: Experimental design; Method draft due

Week 10: Experimental design

Week 11: Summarizing and interpreting data; how to write the Results section

Week 12: Summarizing and interpreting data; how to write the Discussion section; Results draft due

Week 13: Presenting research; Discussion draft due

Week 14: Oral presentations and Final Papers due