

# LAB SYLLABUS: LINKED SECTIONS OF PSYC 300-001/301-001

Professor: James Sanford, Fall 2010

Lab Meeting Time: Friday 8:30 am-12:20 pm  
Lab Meeting Location: Innovation Hall, Room 330

**Lab Instructor:** Amanda Anderson

**Email:** aander10@gmu.edu (best way to reach me)

**Phone:** (703) 993-3706 x40123

**Office:** Robinson Hall B, Room 213C

**Office Hours:** Mondays 11:00 am-12:00 pm, or by appointment

**Mailbox:** Located on main floor of David King Hall across from the Graduate Psychology Office

## **REQUIRED TEXTS:**

Dunn, S. D. (2008). *A short guide to writing about psychology*. (2<sup>nd</sup> ed.). New York: Pearson.

Gravetter, G. A., & Wallnau, L.B. (2010). *Statistics for the behavioral sciences* (8<sup>th</sup> ed.). Belmont, CA: Wadsworth.

Shaughnessy, J. J., Zechmeister, E. B., & Zechmeister, J. S. (2009). *Research methods in psychology* (8<sup>th</sup> ed.). New York: McGraw-Hill

## **RECOMMENDED TEXTS:**

*Publication Manual of the American Psychological Association* (5<sup>th</sup> ed., 2001). Washington, D.C.: American Psychological Association. (if you are interested in going to graduate school)

Thaiss, C., & Sanford, J. F. (2000). *Writing for psychology*. Needham Heights, MA: Allyn & Bacon.

## **REQUIRED MATERIALS** (always bring to lab):

- ✓ Pen/pencil
- ✓ Calculator (that computes addition, subtraction, multiplication, division, and square root and that can hold simple previous calculations in memory)
- ✓ Jump/flash drive to save any computer work completed in lab
- ✓ Statistics textbook (Gravetter & Wallnau)

## **COURSE GOALS**

- Reinforce statistical concepts covered in lecture and provide hands-on use of the research methods
- Practice statistical calculations and learn to use SPSS statistical software for data analysis.
- Understand the role of experimentation in psychology and learn about research design
- Understand and apply statistical principles in research design
- Learn how to access and use psychological databases (e.g., E-Journal Finder and psycINFO)
- Gain experience proposing and conducting your own psychological research
- Learn how to write a scientific report in APA format

## **EXPECTATIONS:**

I expect you to be respectful of your classmates and of myself. This means I expect for you to attend lab, arrive on time, complete assignments in a timely manner, and contribute to the positive learning environment of the lab. I understand that this material is new and I will be available to you to answer your questions, review topics, and address concerns. Please don't hesitate to e-mail me if you have questions or concerns, but please give me at least 24 hours to respond to any question/issue/inquiry.

## POLICIES

Lab attendance is very important and strongly encouraged. **If a student misses an in-class assignment or experiment, this cannot be made up at a later date.** However, your lowest in-class assignment will be dropped so if you are ill, you are encouraged to stay home and can do so without penalty. Homework *worksheets* will be accepted up to one week late for a 10% max grade reduction per day (1 day late, max possible is 90%, 2 days late 80%, etc). Homework *worksheets* that are more than a week late (30% max credit) will no longer be accepted for credit.

Homework **writing assignments** must be handed in **THE DAY THEY ARE DUE!** If a student cannot attend class and wishes to turn in a homework assignment on time, the assignment must be emailed to me prior to the beginning of the class on which the assignment is due. All homework assignments are due within the first 10 minutes of the lab period. If an illness or other serious issue comes up that will prevent you from submitting on time please email me *as soon as you know before the due date* so we can discuss alternatives.

Writing assignments must be typed and double-spaced, in 12pt font with 1-inch margins. The only acceptable fonts for submitted assignments are Times New Roman or Arial. Since spelling and grammar check is available on word processing systems, any errors of this type will count against the grade. **Save all your corrected assignments;** you will be required to turn in corrected drafts along with final copies of papers.

This semester you will have the option of submitting some assignments electronically in an effort to reduce paper usage. I will provide more detailed information about submission procedures/policies on the first day of class.

## HONOR CODE

All provisions of the GMU Honor Code will be followed in this class. Although student discussion is encouraged, and labs will sometimes involve group work, all writing assignments must be completed individually. Lab papers are expected to be the student's own work. Students may use books, notes, and consult other sources in preparing lab reports. Under no circumstances are you to collectively write papers with another student. This is considered to be plagiarism and **plagiarism of any kind will not be tolerated.** Work such as library references, statistics, and reports of the research studies should be each student's own work. Quotations in lab reports should be minimal and the appropriate citation must be given.

**GRADING: Lab counts for 30% of the total grade in PSYC 300-301.** You are responsible for earning your own grade. I have outlined all assignments and expectations in the most objective way possible, and now you must do the work and put in the effort for the grade you deserve. Your lowest in-class assignment grade will be dropped. This means you can miss one lab during the semester and your grade will not suffer. In order to receive full credit for any statistics assignment **you must show all your work!**

**Homework:** will range from statistics practice problems, to research methods assignments, to research papers. Research paper drafts will be broken up into sections and given separate, varying point values (Introduction worth 25pts, Abstract worth 10pts, etc). Homeworks and in-class assignments will be graded on effort, accuracy, and completion of all requirements (doing all the problems, showing your work, including all the required information).

**In-Class Assignments:** may be statistical calculations, research method worksheets, SPSS assignments, presentations and/or class activities. Most in-class assignments will involve some collaboration with classmates, but each student must turn in his/her own work. Again, your lowest in-class assignment will be dropped.

**Quizzes:** there will be four in-lab quizzes throughout the semester. Quizzes will be graded on accuracy of answers and work shown. Your lowest quiz grade will **not** be dropped (aka you must come to lab on days with a quiz).

**Final Papers:** there will be 2 research methods papers included in your lab grade. You must turn in **2 copies** (1 hard copy, 1 emailed electronic copy) of each final paper as well as all corrected drafts in order to receive full credit. **ABSOLUTELY NO FINAL PAPERS WILL BE ACCEPTED LATE!** If a serious issue has come up (i.e. illness needing medical attention, death in the family) please come speak with me.

**Writing and Technology.** This lab course fulfills the Writing Intensive requirement in the psychology major. It does so through one full APA paper and a research proposal (paper 1 and the final proposal). Each assignment is completed through a draft/feedback/revision process. The schedule of due dates is on the syllabus. **It is required that students successfully complete all written assignments in order to meet the writing intensive requirement. Students who fail to meet the writing intensive requirement will not pass the course.**

The lab will also include an introduction to Statistical Package for the Social Sciences (SPSS) and on-line searches using PsycINFO, and other electronic databases, meeting part of the technology-across the curriculum requirement. Most extra-class communications will be completed by e-mail to George Mason accounts. If you are uncomfortable with any of the technology required in this course, we would suggest going to the STAR center: <http://media.gmu.edu/>.

**Students with Disabilities:** If you are a student with a documented disability and require some academic accommodation, please see me and contact the Office of Disability Services (ODS) at (703) 993-2474. All academic accommodations must be arranged through that office.

**Important Administrative Dates:**

Last Day to Add: 9/14/2010

Last Day to Drop: 10/1/2010

Selective Withdraw Period: 10/4/2010-10/29/2010

**Tentative Schedule\***

Underlined= items to be returned in class

**Bold**= in-class activities

*Italics*= assignments to be turned in at the beginning of the period.

Date	Class	Assignments (Due the following week)
Week 1 9/3	<ul style="list-style-type: none"> <li>• Syllabus</li> <li>• Goals of the lab</li> <li>• APA style overview and intro to research design</li> <li>• Scales of measurement (S-1, R-1,2)</li> <li>• Organizing data</li> <li>• <b>In-class assignment #1</b></li> </ul>	<ul style="list-style-type: none"> <li>• Homework #1</li> </ul>
Week 2 9/10  *Exam #1 9/16	<ul style="list-style-type: none"> <li>• <i>Turn in Homework #1</i></li> <li>• <u>Return in-class assignment #1</u></li> <li>• Frequency distributions, percentiles (S-2)</li> <li>• Ethical issues (R-3)</li> <li>• <b>In-class assignment #2</b></li> </ul>	<ul style="list-style-type: none"> <li>• Homework #2</li> </ul>
Week 3 9/17	<ul style="list-style-type: none"> <li>• <i>Turn in homework #2</i></li> <li>• <u>Return homework #1 and in-class assignment #2</u></li> <li>• Central tendency (S-3)</li> <li>• <b>In-class assignment #3 (SPSS exercise 1)</b></li> </ul>	<ul style="list-style-type: none"> <li>• Homework #3</li> </ul>
Week 4 9/24  *Exam #2 9/30	<ul style="list-style-type: none"> <li>• <i>Turn in homework #3</i></li> <li>• <u>Return homework #2 and in-class assignment #3</u></li> <li>• <b>Quiz #1</b></li> <li>• Variability (S-4)</li> <li>• Z-scores, normal distribution (S-5)</li> <li>• <b>In-class assignment #4 (SPSS exercise 2)</b></li> </ul>	<ul style="list-style-type: none"> <li>• Homework #4</li> </ul>

<p>Week 5 10/1</p>	<ul style="list-style-type: none"> <li>• Turn in homework #4</li> <li>• <u>Return homework #3 and in-class assignment #4</u></li> <li>• Observational research (R-4) w/ and w/o intervention</li> <li>• Operational definitions</li> <li>• Inter-rater reliability</li> <li>• <b>Small group discussion about observational study</b></li> <li>• <b>In-class assignment #5</b></li> </ul>	<ul style="list-style-type: none"> <li>• Homework #5: Conduct observational study: bring in collected data, along with a written summary, including a list of variables, operational definitions and means. Turn one copy in and save a copy for yourself.</li> </ul>
<p>Week 6 10/8</p>	<ul style="list-style-type: none"> <li>• Turn in homework #5: observational study</li> <li>• <u>Return homework #4 and in-class assignment #5</u></li> <li>• Survey Research (R-5)</li> <li>• Different sections of an APA-style paper.</li> <li>• How to write the Method and Results sections of an APA paper</li> <li>• <b>Complete Surveys</b></li> <li>• <b>Entry of survey data into SPSS</b></li> <li>• <b>Writing Workshop</b></li> <li>• <b>In-class assignment #6</b></li> </ul>	<ul style="list-style-type: none"> <li>• Homework #6: Write method and results section of <i>observational</i> study.</li> </ul>
<p>Week 7 10/15  *Exam #3 10/21</p>	<ul style="list-style-type: none"> <li>• Turn in homework #6: observational study Method and Results section</li> <li>• <u>Return homework #5 and in-class assignment #6</u></li> <li>• <b>Quiz #2</b></li> <li>• Correlation/ Regression (S-16, 17)</li> <li>• Discussion of survey results</li> <li>• <b>In-Class Experiment</b></li> <li>• <b>Entry of experiment data into SPSS</b></li> <li>• <b>In-class assignment #7 (SPSS exercise 3)</b></li> </ul>	<ul style="list-style-type: none"> <li>• Homework #7 is as follows: <ol style="list-style-type: none"> <li>1. Write method and results section for <i>correlational</i> study.</li> <li>2. Collect data from 3 people outside of class using experimental study materials</li> </ol> </li> </ul>
<p>Week 8 10/22</p>	<ul style="list-style-type: none"> <li>• Turn in homework #7: Turn in method and results section from correlational study and bring study data to class</li> <li>• <u>Return homework #6 and in-class assignment #7</u></li> <li>• Unobtrusive measures (R-6)</li> <li>• Go over results from in-class experiment</li> <li>• Literature review in APA-style papers</li> <li>• <b>In-class assignment #8</b></li> <li>• <b>Workshop on writing an introduction</b></li> </ul>	<ul style="list-style-type: none"> <li>• Homework #8 is as follows: <ol style="list-style-type: none"> <li>1. Print and read Roediger &amp; McDermott (1995) article.</li> <li>2. Obtain and read 3 pertinent articles.</li> <li>3. Write draft of introduction section for Paper 1</li> </ol> </li> </ul>
<p>Week 9 10/29  *Exam #4 11/4</p>	<ul style="list-style-type: none"> <li>• Turn in homework #8: draft of intro for paper 1</li> <li>• <u>Return homework #7 and in-class assignment #8</u></li> <li>• <b>Quiz #3</b></li> <li>• Probability (S-6)</li> <li>• Sampling distributions (S-7)</li> <li>• Intro to hypothesis testing (S-8)</li> <li>• <b>Workshop on writing a discussion section</b></li> <li>• <b>In-class assignment #9</b></li> </ul>	<ul style="list-style-type: none"> <li>• Homework #9 is to write discussion section for Paper 1</li> </ul>
<p>Week 10 11/5</p>	<ul style="list-style-type: none"> <li>• Turn in homework #9: discussion section of paper 1(<b>bring 2 copies!</b>)</li> <li>• <u>Return homework #8 and in-class assignment #8</u></li> <li>• Independent groups designs ( R-7)</li> <li>• <b>In-class assignment #10: Peer critique of discussion section</b></li> </ul>	<ul style="list-style-type: none"> <li>• Homework #10 is to complete final version of Paper 1 and bring 2 copies to class.</li> </ul>

Week 11 11/12	<ul style="list-style-type: none"> <li>• Turn in homework #10: final version of Paper #1 (2 copies – 1 emailed, 1 hard copy!)</li> <li>• <u>Return homework #9 and in-class assignment #10</u></li> <li>• Independent measures t-test/ANOVA (S-9,10,13)</li> <li>• <b>Discuss ideas for final proposal</b></li> <li>• Discuss outline for final proposal</li> <li>• <b>Workshop on proposal abstracts</b></li> <li>• <b>In-class assignment #11</b></li> </ul>	<ul style="list-style-type: none"> <li>• Homework #11 is as follows: <ol style="list-style-type: none"> <li>1. Begin literature review for final proposal</li> <li>2. Obtain and summarize at least 5 relevant articles for final proposal</li> <li>3. Write an abstract for final proposal</li> </ol> </li> </ul>
Week 12 11/19  *Exam #5 11/23	<ul style="list-style-type: none"> <li>• Turn in homework #11: Turn in articles and summaries for final proposal, and abstract for final proposal</li> <li>• <u>Return in-class assignment #11</u></li> <li>• Repeated measures designs (R-8) &amp; t-test/ANOVA (S-11,14)</li> <li>• <b>Quiz #4</b></li> <li>• <b>In-class assignment #12 (SPSS exercise 4)</b></li> </ul>	<ul style="list-style-type: none"> <li>• Homework #12 worksheet</li> <li>• Rough draft of final proposal</li> <li>• Bring 2 copies of rough draft to class</li> </ul>
Week 13 11/26	<ul style="list-style-type: none"> <li>• THANKSGIVING BREAK!!!</li> </ul>	<ul style="list-style-type: none"> <li>• See homework for Week 12</li> </ul>
Week 14 12/3	<ul style="list-style-type: none"> <li>• Turn in homework #12, bring 2 hard copies of final proposal draft</li> <li>• <u>Return Paper 1, homework #11 (article summaries &amp; abstract) and in-class assignment #12</u></li> <li>• Complex designs (R-9)</li> <li>• Two-factor ANOVA (S-15)</li> <li>• Discuss presentations</li> <li>• <b>In-class assignment #13: Peer review of proposal draft</b></li> </ul>	<ul style="list-style-type: none"> <li>• Correct proposal draft to turn in as final copy</li> <li>• Prepare 5min presentation of final proposal</li> <li>• Bring any questions about Final Exam material for end of class</li> </ul>
Week 15 12/10  *Final Exam 12/16 or 12/20	<ul style="list-style-type: none"> <li>• Estimation/single-case and small n designs (R-10, S-12)</li> <li>• Quasi-experimental designs, non-parametric statistics (R-11, S-18,19,20)</li> <li>• <b>Student presentations of final proposal</b></li> <li>• Turn in final proposal (2 copies – 1 emailed, 1 hard copy!)</li> </ul>	<ul style="list-style-type: none"> <li>• Study for Final Exam</li> <li>• Congrats! You made it!</li> </ul>

**\*Note:** This is a tentative schedule, and topics and assignments are subject to change. Any schedule changes or changes in assignments will be announced ahead of time in class and by e-mail. After an absence, students are responsible for contacting the instructor to obtain accurate information.

#### GRADING CRITERIA:

Assignment type	number of points each	total # of assignments	total possible points
Homework worksheets	10	5	50
In-class assignments	10	11 (drop lowest of 12 )	110
Quizzes (5 questions ea)	10 (2pts per question)	4	40

#### Grading of writing assignments

Observation Data Collection assignment (homework #5)	15 points
Observation Write-up (homework # 6- method & results)	20 points
Survey Write-up (homework #7- method and results section)	20 points

#### **PAPER 1**

Draft of Introduction (homework #8)	25 points
Draft of Discussion (homework #9)	10 points

Data Collection (homework #7 part 2)	10 points
Completed Paper (homework #10)	100 points

**FINAL PROPOSAL** (see page 6 for detailed instructions)

Article Summaries and Draft of Abstract (homework #11)	10 points
Draft of Proposal	Optional (in-class assignment)
Completed Final Proposal (make sure to bring 2 copies!)	100 points
Presentation of Final Proposal to Class	20 points

The total possible points for lab is 530. Your total points earned in the class will be computed as a percentage and then converted into 30% of your total grade for the class.

Points Breakdown:
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Homework Assignments (5 x 10 points each)	50 points
Quizzes (4 x 10 points each)	40 points
In-class assignments (11 x 10 points each)	110 points
Observation assignment data collection	15 points
Observation write-up (Method & Results Sections)	20 points
Survey write-up (Method and Results Sections)	20 points
Introduction Draft (Paper 1)	25 points
Discussion Draft (Paper 1)	10 points
Completed Paper 1	100 points
Abstract Draft & Article Summaries (Final Proposal)	10 points
Final Proposal	100 points
Final Proposal Presentation	20 points
<hr/> Total	<hr/> 530 points

## Final Proposal Guidelines -Psychology 301

The last/second full writing assignment project is to be a proposal for a study that is an original (or a partial replication) study relevant to topics in psychology. The student may “propose” a project from any area of psychology. Correlational or observational studies are acceptable but experimental studies with at least one variable to manipulate are encouraged.

Students are required to write the proposal using APA format. A minimum of **five** references is required. The proposals must be projects that are plausible in that the project could realistically be completed. For example, if I wanted to test 100 amnesic patients, it would not be plausible because it would be extremely unlikely that I would have access to 100 amnesic patients.

Since this is a proposal of research to be conducted in the future, the paper should be written in the **future tense**: Below are a few examples:

- a. “The present project is designed to investigate whether older and younger adults differ in their memory for verbal material”
- b. “The participants will be tested in groups of 6-10 in a laboratory setting.”
- c. Participants will be presented with lists of words from.....”

### The proposals must include the following:

1. An **Introduction** section that states the main area of the proposed research and then includes a review of the relevant literature that is directly related to the proposed research plan. It should also state the research question of interest and then state the hypothesis, usually at the end of the introduction.
2. A **Method** section that includes a *Design* section (e.g., a 2 X 2 mixed factorial), *Participants* section, *Materials* section and *Procedure* section. All of the sections should be written in appropriate APA format.
3. An **Analysis Plan** section should briefly describe how the data would be analyzed and what the expected result might be based on the hypothesis. For example, if a correlational study is done, the student would write something such as “A Pearson-product correlational analysis will be conducted to determine the strength and direction of the correlation between anxiety and depression. It is expected that the correlation between these variables would be..... because.....” This part should have only a few sentences.
  - **Students should not be asked to “make up” findings, but should mention the likely findings/direction of the outcome based on previous findings.**
4. A **Conclusion** section (based on potential/possible outcomes) should include the following:
  - a. What would this research contribute to the literature if the hypothesis were supported?
  - b. A discussion of what would be done next if the hypothesis were supported. In other words, what would be the next step in the research or what would the researcher do next.
  - c. Additional ideas if the hypothesis were not supported could be added. Of course, this would be hypothetical.
  - d. Limitations of the study.
  - e. This should be only a paragraph or two at most.
5. An **Abstract** should be included as well. Students will include an expected outcome rather than a real outcome. Again the text should be written in the future tense. For example, “It is expected that older adults would recall fewer words than younger adults.”  
(Note: This section should be only one or two paragraphs and does not have to be extensive.)

All students must attach the measures/materials to be used (e.g., a survey). An exception will be made if the survey would have to be purchased by the student. However, this is a rare exception.

**Important note for students:**

When the final proposals are turned in to the lab instructor, the following are required to be included with the final paper.

- a. **One paper copy of the students' completed proposal (if you want a hard copy review)**
- b. **A copy of all articles referenced in the report**
- c. **Copies of all measures that are to be used (unless they are surveys that must be purchased) in an appendix.**
- d. **An electronic copy of the proposal sent to the student's TA, which will be stored on a flash drive for future reference paper and kept by Dr. Chrosniak.**
- e. **If all of these materials are not included, there will be an automatic letter grade reduction (e.g., from an A down to a B).**

**Final Presentation**

Each student is required to present the proposal to his/her classmates the last day of lab class. It is an opportunity for you to demonstrate to your classmates what kind of research you are interested in and what you think your study would reveal. This presentation should not be considered "scary." Rather, it is a chance for each student to speak to his/her classmates about the proposed project and to practice speaking in front of others. See the Dunn book (pages 194-195) on presentations.

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All materials will be returned to students at the end of the semester. We keep copies of all papers written in Psychology 301 to help minimize plagiarism and occasionally for use in writing assessments for the university. Finally, one student from each 301 class will be nominated for the "Most Outstanding Paper Award" for submitting an exemplary Final Proposal that includes a thoughtful topic, sound methods, and quality writing.