

Psychology 212A: Experimental Methods and Data Analysis II Spring 2010

Instructor: Dr. Sarah Johnson

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When: T/R 7:30-9:45am

Where: PPHAC 113

Office hours: M & W 2:30-4:00pm

T 3:30-5:00pm

or by appt.

Overall Course Goal: This course will further your understanding of how researchers in psychology go about studying the way individuals think, feel, act, etc. In this second course in the 2-part series of 211-212, you will be conducting your own research based on the design you created in 211. Our focus will be on learning the pragmatics of conducting research, the formulation of specific hypotheses, the selection and use of more advanced statistical techniques, and on completing a full APA-style report.

Required Textbooks: Same as last semester

American Psychological Association (2010). *Publication Manual of the American Psychological Association* (6th ed., second printing). Washington, DC: APA.

Heiman, G. W. (2001). *Understanding Research Methods and Statistics* (2nd ed.). New York: Houghton Mifflin Company.

Specific Course Objectives: By the end of this course, you should be able to:

1. Understand the Moravian College Human Subjects Policy as it pertains to psychological research such that you are able to write a proposal for approval by the Moravian College Human Subjects Institutional Review Board (HSIRB).
2. Evaluate a study in terms of the potential flaws in its design and suggest appropriate improvements where necessary.
3. Use basic *and advanced* statistical procedures appropriately in conjunction with specific designs, apply such statistical procedures using SPSS (Statistical Package for the Social Sciences), and graph the data using either SPSS or Excel.
4. Research a topic in an area of psychology using various electronic databases, such as PsycInfo, organize your findings into an appropriately formatted reference list, *evaluate sources to determine their appropriateness for inclusion in a review of psychological literature, and make well-informed decisions about what sources are optimal to include based on their credibility and their content.*
5. Plan *AND CARRY OUT* a study, using a design that minimizes flaws and maximizes your ability to obtain data that accurately address your research question.
6. Understand and interpret research findings.
7. Write a research paper following the guidelines set forth by the American Psychological Association Publication Manual, further developing of your writing skills, both in general and with respect to scientific writing specifically.
8. Present your research results to others in an appropriate and professional manner.

Expectations for the Course: Preparation and Commitment – All of the same points from last semester still apply, but here are a few that I think are appropriate to reiterate:

- As a prerequisite for upper level courses and due to its rigor of combining both statistics and methodology – you must be willing to give preparation for this course a high priority in terms of your time management. Appropriate time management is crucial to your success this semester.
- Allocate a time and place to study for this course. I recommend several study sessions of one hour per week, although what is needed may vary from person to person. This time is **in addition to** the time required to complete assignments, quizzes, independent research work, and group study sessions.
- You must read before class or you will not fully comprehend the lectures. Your reading and studying goal should go beyond comprehending – you must eventually be able to speak the language of research.
- **USE THE APA MANUAL AND WRITING CENTER AS VALUABLE RESOURCES!**
- Commit to the policies, procedures, and spirit of the syllabus. Consult the relevant parts of the syllabus when necessary before discussing concerns with me. The syllabus is always available on Blackboard.

In the spirit of fairness to ALL students I must be consistent with the policies laid out in this syllabus and ask you to be familiar with and respectful of them.

Pre-Stats: As with last semester, our class will start at 8am on most days, but occasionally I may require us to start at the scheduled time of 7:30—these days will always be announced in class and on blackboard. **Exam days we will always start at 7:30am.** On the late-start days, I will always be in the classroom starting at 7:30. These days are good days to come in for extra help, work on practice stats problems with me there to help if you get stuck, or to go over aspects of your project with you. Coming to the Pre-Stats sessions is one way to get the full time and help you need, without feeling like you are slowing anyone else down.

Secondarily, this time is also available if you need to take a make-up quiz, or if you are taking a Blackboard quiz and have some kind of technical difficulties. I will have hard copies of the quizzes that you can take under the same rules as the on-line quiz, but you must let me know ahead of time so that I will have the appropriate quiz with me.

I reserve the right to change this aspect of the schedule if it is not working out.

Course Evaluation:

Class Participation: The attendance requirement is necessary for two reasons: 1) The coursework is extremely layered and missing one day can put you behind for future meetings and assignments and especially in your project timeline; 2) Your fellow students rely on your presence, for providing feedback or participating in group activities. Each student can have up to **2 allowed absences** (exceptions for absences beyond the allowed 2 will be made, on a case-by-case basis, only in cases of documentable emergencies). ***For each unexcused absence or absence beyond the 2 excused ones, your final course grade will be reduced by 1/3rd letter (e.g., B+ → B).*** If you have special circumstances that will result in missing more than one or two classes, you should contact the Learning Services Office. In addition, I will adjust final grades based on the quality of participation, following the same rubric as last semester:

- + A student who arrives on time and prepared for *every* class, participates in discussion frequently, but without overly dominating, is highly active in all group activities, and who generally contributes high quality ideas during class, may receive a boost of 1/3rd letter grade to his/her final course grade.

- No adj. A student who arrives on time and prepared for most classes, answers questions in class sufficiently and occasionally adds his/her own comments or questions, and participates sufficiently in group activities but does not seem especially engaged or provide frequent high-quality contributions, will not receive any adjustment to his/her final course grade. I expect the majority of the class to fall in this category.
- A student who shows up late to class several times, adds little to class discussions or group activities or shows evidence of poor preparation, or who repeatedly fails to follow instructions for an in-class activity may receive a reduction of 1/3rd letter grade to his/her final course grade. If a reduction of grade is warranted, a warning note will be given to the student privately prior to the end of the semester.

1. Assignments/Labs: Where possible, assignments should be typed—computational problems may be written by hand—and proofread for clarity, spelling and grammar, etc, as appropriate. Unless otherwise noted, take-home assignments are due at the beginning of class, and in-class labs are due before leaving class. Late assignments will not be accepted (no exceptions). If you miss an in-class lab due to absence and cannot document the reason for the absence, you will not be permitted to make it up. If you miss an in-class lab due to an excused absence, we will, if possible, arrange an extension in proportion with the excuse, as determined on a case-by-case basis. However, some in-class activities may not be possible to make up.

2. Chapter quizzes: Like last semester. There will be a quiz for every chapter of the course that we cover given via Blackboard. The quizzes will be timed (15 min) and will be entirely multiple-choice (12 questions). You may use your notes and textbook. Your lowest quiz score will be dropped, and additionally you have the option of retaking one quiz immediately after we have covered the chapter in class. Re-takes must be arranged through me.

3. Exams: There will be three exams given throughout the semester and one cumulative exam given during finals period. Exam format may include multiple choice, short answer/identification, short essay, and/or computational problems. Exams can include questions on anything in the assigned text chapters and handouts even if not discussed in lecture. Study guides will be posted on Blackboard. The study guides will include important terms to know for the exam as well as sample exam questions. You will be allowed to use the grade on the cumulative final to replace a lower score from the earlier exams or to substitute for a missed exam provided you had an *extraordinary* and *documentable* excuse for missing the exam, as determined on a case-by-case basis. If you use the final exam to substitute for another exam, the final itself will then count twice in determining your final course grade.

Missed exams: If you have an extraordinary and documentable excuse for missing an exam, contact me as soon as possible and we will arrange to either administer a make-up exam or have you skip that exam and use the cumulative final to substitute for it. If you know in advance that you will be absent during an exam (e.g., travel for a sports team or an interview) then you need to let me know as soon as possible before the exam. You may not use the cumulative final to replace a missed exam if you skipped the exam without legitimate reason.

4. Project/APA Paper: You will be working throughout the semester on various aspects of the project you began designing last term. This project has multiple components that will build on each other, culminating in a final APA-style research paper, with at least 10 references, written in APA style. Some portions of the project will be ungraded (e.g., HSIRB proposal, results/methods draft); ungraded portions must be turned in on time or a reduction will be applied to the graded portion of the proposal. Further information regarding the expectations for and grading of homework/labs, and proposal components will be given in separate handouts.

Late Policy: Except in *extreme* cases, assignments, labs, and ungraded portions of the proposal will not be accepted late. Late papers will be accepted for up to four days after the due date and, unless otherwise noted, will result in a **reduction in points equivalent to 1 letter grade for every calendar day late** beginning at 5pm on the day the assignment is due. After the four-day period, a paper will not be accepted and a grade of 0 will be applied. Exceptions to this policy will only be made under truly extenuating circumstances (determined by me on a case-by-case basis), and NO exceptions will be made for technical difficulties. **I will accept work turned in by email only if you have arranged with me to do so for that particular assignment.**

Overall grades- Breakdown:	Points	% of total
Assignments/Labs (8 @ 20 pts each)	160	15%
Online quizzes (7 @ 12 pts each)	85	8%
Exams (3 @ 110 pts each)	330	30%
Final exam	110	10%
Analysis of sources	70	6%
List of hypotheses/analyses	60	5%
Class journal project	100	9%
Project preparation	25	2%
Final APA paper	160	15%
Total	1100	100%

I'm using a **point system** this semester to try and make it easier for you to follow your own grade, but I'm including the approximate percentages on here as well, just FYI. I will use the same scale for calculating letter grades as last semester, and where necessary I will give you a description of how to turn letter grades into points or vice versa on assignment handouts.

Note that it is within my purview to use qualitative judgment in assigning grades for various components of the course (e.g., participation, homework assignments, exam essays, papers, etc.).

Quick notes:

- As I did last semester, I will provide lecture notes via Blackboard.
- Once again, you should have a calculator with a square root button. Calculators that allow you to save new equations or that automatically calculate the statistical tests we will be learning are not permitted during exams and will result in an exam grade of 0, unless approved by me.
- I will announce ahead of time any changes from the syllabus to readings, assignments, or projects. I may occasionally make minor changes in topic without announcement.
- I am happy to meet with you if you have any questions or concerns. Don't let things snowball—that will be esp. dangerous this semester, with the APA project running concurrently with learning new forms of statistics. If you are having trouble, come and see me as soon as possible!
- **Extra credit** opportunities will be available throughout the semester. Credit for experiment participation: 3% added to lowest exam grade for each ½ of extra credit, with a 1 ½ hour maximum.
 - An additional extra credit opportunity will be provided in conjunction with the LVAIC Undergraduate Psychology Conference. Students who submit their projects for presentation will earn extra credit. More info will be made available as the submission deadline gets closer.

Plagiarism and cheating: Any work that you turn in for this class must be entirely your own work. Any sources used must be properly documented, and I will ask you not to use any direct quotes in assignments or papers. For more information on plagiarism and cheating, refer to the Student Handbook and the following website regarding academic responsibility at Moravian College: <http://www.moravian.edu/studentLife/handbook/academic2.htm>. As this site clearly explains, the consequences for cheating or plagiarism can range from failing the assignment to receiving an F for the final course grade to expulsion, depending on the severity of the case and prior history of offenses. Although I am not generally opposed to your discussing assignments with fellow students from the class, all of the work you submit to me must be entirely your own, and in some cases I may ask you not to collaborate with fellow students. It is your responsibility to come see me if you have any questions about your use of sources or when/in what way it is okay to collaborate with other students in the class.

Disabilities: The Americans with Disabilities Act (ADA) provides for some accommodations to be made for students with certain disabilities. If you have such a disability and are willing to disclose it, you may take advantage of such accommodations. In order to do so, you are required to meet with Mr. Joseph Kempfer in the Office of Learning Services. Accommodations cannot be provided until I have received authorization from Mr. Kempfer. You should also consider taking advantage of the Learning Services Office if you are having difficulty academically in this (or any other) class. The office is located at 1307 Main St. (phone: 610-861-1510). They coordinate Statistics tutors. **Any disabilities for which accommodations were made last semester need to be re-documented this semester.** Don't assume that accommodations from last semester will still hold.

Class Schedule (This schedule is tentative. I reserve the right to make announced changes.):

Week:	Class topic/activities:	Text Chs/Assignments:
1	Jan 19 T Introduction; Discuss HSIRB proposals	
	Jan 21 R Individual project meetings	
2	Jan 26 T Probability review	Ch. 12; <i>Assignment 1</i> (review)
	Jan 28 R Hypothesis testing	Ch. 13
3	Feb 2 T Hypothesis testing cont'd	
	Feb 4 R Project preparation	<i>Assignment 2</i> (probability/hypo testing)
4	Feb 9 T Single-sample study/ <i>t</i> -test	Ch. 14
	Feb 11 R Cont'd	<i>Lab 1</i> (single-sample <i>t</i> -test)
5	Feb 16 T Exam 1	
	Feb 18 R <i>Source analysis discussion/SPSS</i>	Fri: <i>HSIRB Proposals due</i>
6	Feb 23 T Two-sample study (independent-samples)	Ch. 15; <i>Analysis of Sources due</i>
	Feb 25 R Cont'd	<i>Lab 2</i> (indep-samples <i>t</i> -test)

Week:	Class topic/activities:	Text Chs/Assignments:
7	Mar 2 T Two-sample study (dependent-samples)	Ch. 16
	Mar 4 R Cont'd	<i>Lab 3 (dep-samples t-test)</i>
8	Mar 8-12 NO CLASSES – SPRING BREAK	
9	Mar 16 T One-way ANOVA	Ch. 17; <i>List of Hypotheses/Analyses due</i>
	Mar 18 R One-way ANOVA cont'd; START DATA COLLECTION	<i>Lab 4 (one-way ANOVA)</i>
10	Mar 23 T Exam 2	
	Mar 25 R Chi-square	Ch. 21
11	Mar 30 T Cont'd	<i>Lab 5 (chi-square); Optional intro draft</i>
	Apr 1 R Two-way ANOVA	Ch. 18
12	Apr 6 T Two-way ANOVA cont'd	
	Apr 8 R Cont'd; DATA COLLECTION COMPLETED	<i>Lab 6 (two-way ANOVA)</i>
13	Apr 13 T Start Class Journal Project; Work on data analysis	<i>Paper Draft Due (Methods & Results)</i>
	Apr 15 R Class Journal Project cont'd	
Sat, April 17 – LVAIC Undergraduate Psychology Conference		
14	Apr 20 T Class Journal Project cont'd	<i>MS Reviews Due</i>
	Apr 22 R Exam 3	
15	Apr 27 T Finish Journal Project if nec.	<i>Final APA Papers Due</i>
	Apr 29 R Presentations; Course evals	
Finals Wk	Final exam schedule TBA	

Exam 1: Chs. 12-14 & some concepts carried over from last semester

Exam 2: Chs. 15-17

Exam 3: Chs. 18, 21

Final exam: Cumulative