Psychology 212B: Experimental Methods and Data Analysis II
Fall 2014

Instructor: Dr. Sarah Johnson   **When:** TR 1:10-3:25pm
Phone: 610-625-7013   **Where:** PPHAC 112
Office: 224 PPHAC   **Office hours:** M & W 1-3pm
Email: skjohnson@moravian.edu   and by appt.
Website: http://blackboard.moravian.edu/

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 two-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., <u>second printing</u>). 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!

  The Writing Center is located in a building that is not accessible to persons with mobility impairments. If you need the services of the Writing Center, please call 610-861-1392.

- 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.

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 **3 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 absence beyond the 3 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 frequently, is highly active in all group activities, etc., 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 repeatedly, adds little to discussions or group activities, is poorly prepared, repeatedly fails to follow instructions, etc. may receive a reduction of 1/3rd letter grade to his/her final course grade. 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—calculations 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. Except in cases of documentable emergencies, late assignments will not be accepted. 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. I will give a quiz at the end of class a quiz for every chapter of the course that we cover (including Ch. 12). The quizzes will happen on the day when the chapter is listed on the class schedule (see end of syllabus). The quizzes will be timed (15 min) and will be entirely multiple-choice/short-answer (10 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. Once the exam for that chapter has occurred, you cannot retake that quiz

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 and can include questions on anything in the assigned text chapters and handouts even if not discussed in lecture. Study guides containing important terms and sample questions will be posted on Blackboard. You will be allowed to use the grade on the 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 it, as determined on a case-by-case basis. If you use the final to substitute for another exam, the final itself will then count twice in your overall 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 or have you use the 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 8 references, written in APA style. Ungraded portions (methods/results draft) 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 accept work by email only if you have arranged it with me for *that particular* assignment.**

Overall grades- Breakdown:

	Points	% of course grade
Assignments/Labs (8 @ ~19 pts each)	150	15%
Chapter quizzes (7 @ 10 pts each)	70	7%
Exams (3 @ 100 pts each)	300	30%
Final exam	120	12%
Analysis of sources	50	5%
List of hypotheses/analyses	40	4%
Class journal project	100	10%
Project preparation (HSIRB/script)	20	2%
Final APA paper	150	15%
Total	1000	

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 pts for each ½ of extra credit, with a 2 hour (12 pt) maximum.

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 require that you <u>not use</u> <u>any</u> direct quotes in assignments or papers***. That means paraphrasing **<u>ALL</u>** information in your own words. 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 <u>your responsibility</u> 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. Students who wish to request accommodations in this class for a disability must contact Ms. Elaine Mara, assistant director of academic support services for academic and disability support, at the lower level of Monocacy Hall, or by calling 610-861-1401. Accommodations cannot be provided until authorization is received from the Academic Support Center. You should also consider taking advantage of the Academic Support Center if you are having difficulty academically in this (or any other) class. 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		
Aug 26 T	Introduction; Start HSIRB proposals	
Aug 28 R	Individual project meetings	
2		
Sept 2 T	Probability review	Ch. 12; *Assignment 1* (review)
Sept 4 R	Hypothesis testing	Ch. 13
3		
Sept 9 T	Hypothesis testing cont'd	
Sept 11 R	In-class project work	*Assignment 2* (probability/hypo testing)
4		
Sept 16 T	Single-sample study/*t*-test	Ch. 14
Sept 18 R	In-class project work	*HSIRB Proposals due*
5		
Sept 23 T	Single-sample t-test cont'd	*Lab 1* (single-sample t-test)
Sept 25 R	**Exam 1**	
6		
Sept 30 T	SPSS/Source analysis discussion	
Oct 2 R	Two-sample study (independent-samples)	Ch. 15; *Analysis of Sources due*
7		
Oct 7 T	Cont'd	*Lab 2* (indep-samples t-test)
Oct 9 R	**No class (Dr. J out of town)**	
8		
Oct 14 T	**No class – Fall break**	
Oct 16 R	Two-sample study (dependent-samples)	Ch. 16; *Experimenter scripts due*
	START DATA COLLECTION THIS WEEK	
9		
Oct 21 T	Cont'd	*Lab 3* (dep-samples t-test)
Oct 23 R	One-way ANOVA	Ch. 17; *List of Hypotheses/Analyses due*

Week:	Class topic/activities:	Text Chs/Assignments:
10		
Oct 28 T	One-way ANOVA cont'd	*Lab 4* (one-way ANOVA)
Oct 30 R	**Exam 2**	
11		
Nov 4 T	Chi-square	Ch. 21; *Optional intro draft*
Nov 6 R	Cont'd	*Lab 5* (chi-square)
12		
Nov 11 T	Start class journal project	
Nov 13 R	Two-way ANOVA	Ch. 18
	DATA COLLECTION COMPLETED	
13		
Nov 18 T	Journal project/Data analysis	
Nov 20 R	Two-way ANOVA Cont'd	*Lab 6* (two-way ANOVA); *Revised Methods & Results draft*
14		
Nov 25 T	**Exam 3**	
Nov 27 R	**No class – Thanksgiving break**	
15		
Dec 2 T	Finish class journal project	*MS Reviews Due; Action letters completed in class*
Dec 4 R	Class presentations & Course evals	*Final APA Papers Due Friday Dec 5th*
Finals Wk	**Thurs. Dec 11ᵗʰ @ 1:30pm**	

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