

Psychology 212A: Experimental Methods and Data Analysis II  
Spring 2009

<b>Instructor:</b>	Dr. Sarah Johnson	<b>When:</b>	T/R 2:20-4:00pm
<b>Phone:</b>	610-625-7013	<b>Where:</b>	113 PPHAC
<b>Office:</b>	224 PPHAC	<b>Office hours:</b>	M 2-3:30pm
<b>Email:</b>	<a href="mailto:skjohnson@moravian.edu">skjohnson@moravian.edu</a>		W 9-10:30am
<b>Website:</b>	<a href="http://blackboard.moravian.edu/">http://blackboard.moravian.edu/</a>		R 1-2pm, 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 (2001). *Publication Manual of the American Psychological Association* (5<sup>th</sup> ed.). Washington, DC: APA.

Heiman, G. W. (2001). *Understanding Research Methods and Statistics* (2<sup>nd</sup> 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. 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.
7. Present your research results to a group of your peers.

## 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 1/3<sup>rd</sup> 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 reserve the right to *adjust* final grades based on the quality of participation, as follows:

- + 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 1/3<sup>rd</sup> 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 1/3<sup>rd</sup> 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, of course, 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 (excluding Ch. 12) 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 as each exam approaches. 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 12 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 of *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. In addition, I will only accept work turned in by email if you have arranged with me to do so for that particular assignment.

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.).

**Overall grades- Breakdown:**

Assignments/Labs (total)	15%
Online quizzes (total)	10%
Exams (3 @ 10% each)	30%
Final exam	10%
Analysis of sources	5%
List of hypotheses/analyses	5%
Class journal project	10%
<u>Final APA paper</u>	<u>15%</u>
Total	100%

Unless otherwise noted, I will use the same scale for calculating grades as last semester.

### 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. Any exam for which a prohibited calculator is used will receive a grade of 0.
- 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.

### 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 Mrs. Laurie Roth in the Office of Learning Services (for learning disabilities and/or ADD/ADHD) or Dr. Ronald Kline in the Counseling Center (for all other disabilities). Accommodations cannot be offered until I have received authorization from one of these centers based on documentation of your disability. 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). **Any disabilities for which accommodations were made last semester need to be re-documented this semester.** Don't simply assume that accommodations from last semester will still hold.

I am always happy to meet with you if you have any questions or concerns about class in general or about your performance in this class. Don't let things snowball—that will be particularly dangerous in 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! I am happy to meet regularly to help you with material, but you must come and let me know you need my help. The longer you wait, the less I can help you!

**Class Schedule** (This schedule is tentative. I reserve the right to make announced changes, including adding readings with sufficient notice.):

<b>Week:</b>	<b>Class topic/activities:</b>	<b>Text Chs/Assignments:</b>
<b>1</b>	Jan 20 T Introduction; Discuss HSIRB proposals	
	Jan 22 R Individual project meetings	
<b>2</b>	Jan 27 T Probability & SPSS intro	Ch. 12; <i>Assignment 1</i> (review of previous concepts)
	Jan 29 R Hypothesis testing	Ch. 13
<b>3</b>	Feb 3 T Hypothesis testing cont'd	
	Feb 5 R Project preparation	<i>Assignment 2</i> (probability/hypo testing)
<b>4</b>	Feb 10 T Single-sample study/ <i>t</i> -test	Ch. 14
	Feb 12 R Cont'd	<i>Lab 1</i> (single-sample <i>t</i> -test)
<b>5</b>	Feb 17 T <b>Exam 1</b>	
	Feb 19 R More project prep/HSIRB proposals	F: <i>HSIRB Proposals due</i>
<b>6</b>	Feb 24 T <i>Source analysis discussion</i> /More SPSS basics	
	Feb 26 R Two-sample study (independent-samples)	Ch. 15; <i>Analysis of Sources due</i>
<b>7</b>	Mar 2-6 <b>NO CLASSES – SPRING BREAK</b>	
<b>8</b>	Mar 10 T Cont'd	<i>Lab 2</i> (indep-samples <i>t</i> -test)
	Mar 12 R Two-sample study (dependent-samples); <b>START DATA COLLECTION</b>	Ch. 16
<b>9</b>	Mar 17 T Cont'd	<i>Lab 3</i> (dep-samples <i>t</i> -test)
	Mar 19 R One-way ANOVA	Ch. 17; <i>List of Hypotheses/Analyses due Friday</i>
<b>10</b>	Mar 24 T One-way ANOVA cont'd	<i>Lab 4</i> (one-way ANOVA calc & SPSS)
	Mar 26 R <b>Exam 2</b>	
<b>11</b>	Mar 31 T Chi-square	Ch. 21; <i>Optional introduction draft</i>
	Apr 2 R Cont'd	<i>Lab 5</i> (chi-square)

<b>Week:</b>	<b>Class topic/activities:</b>	<b>Text Chs/Assignments:</b>
<b>12</b>		
Apr 7 T	Two-way ANOVA; <b>DATA COLLECTION COMPLETED</b>	Ch. 18
Apr 9 R	Two-way ANOVA cont'd	<i>Paper Draft Due (Methods &amp; Results)</i>
<b>13</b>		
Apr 14 T	Cont'd	<i>Lab 6 (two-way ANOVA)</i>
Apr 16 R	Start Class Journal Project	
<b>14</b>		
Apr 21 T	<b>Exam 3</b>	
Apr 23 R	Finish Class Journal Project; Writing center conferences required by end of this week	<i>Journal project- Reviews due at start of class</i>
<b>15</b>		
Apr 28 T	Work on presentations; Final exam review	<i>Final APA Papers Due</i>
Apr 30 R	Presentations; Course evals	
<b>Finals Wk</b>	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