Psychology 212

Experimental Methods and Data Analysis II

Spring 2008

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Class meets on M and W 8:30am - 10am – in Hurd 112

Office hours: MW 1:30-3pm; F 8:30-10:30am

Scientific method as the means through which knowledge advances in the field of psychology. Developing and researching hypotheses, collecting data, testing hypotheses using appropriate statistical techniques, interpreting and reporting statistical results. Research methodology, descriptive statistics, and inferential statistics, as well as computer software Statistical Packages for the Social Sciences to analyze psychological data. Students will be responsible for researching a topic and creating a research proposal. Writing intensive. *Prerequisites:* Psychology 120 and 211.

Important Course Information: Completion of both Psych 211 and 212 are required in order for a student to major in psychology at Moravian College.

Important Suggestion: Read and work ahead. Always read a chapter in advance of the day we discuss it in class. If you do, issues you are uncertain about will likely become clear during class. If not, you can ask specific questions so I can guide you to understanding the concept. If you do not read ahead and work on assigned problems, you risk becoming lost very quickly while the rest of the class moves ahead. *Read and work ahead.*

Required Books:

Dunn, D. S. (2008). *A Short Guide to Writing about Psychology* (2nd ed.). New York: Pearson Longman.

Green, S. B., & Salkind, N. J. (2005). *Using SPSS for Windows and Macintosh: Analyzing and understanding data.* Upper Saddle River, NJ: Pearson Prentice Hall.

Heiman, G. W. (2001). *Understanding Research Methods and Statistics: An Integrated Introduction for Psychology* (2nd ed.). Boston: Houghton-Mifflin.

Course Matters

Attendance. This class requires constant attendance. Participation, too, matters. I expect that you will attend each and every class, arrive on time, and that you will come prepared to discuss and to ask questions about the course material. I will be passing out a sign-in sheet at the start of every class. Too many missed classes will lower your final grade.

Obtain a calculator. Please purchase an inexpensive ($5 - $10), basic calculator for this class, one that has some memory functions and a square root key. Do **not** purchase a sophisticated, statistical or "scientific" calculator for this class. You will be doing simple, straightforward, hand calculations with the aid of the calculator. Programmed analyses will be performed as we learn to use SPSS (Statistical Package for the Social Sciences).

Course assignments. There will be some in-class and some take-home assignments due over the term. All take-home assignments—except for calculations—should be typed, proofread for clarity and grammar, spell-checked, etc. Unless otherwise noted, all take-home assignments will be due at the start of class. Late assignments will not be accepted (there are no exceptions to this rule—please don't ask). If you miss an in-class assignment due to an unexcused absence, you cannot make it up. Excused absences will be considered on a case-by-case basis.

SPSS. We will spend some class time learning to use SPSS to analyze data. Please note that you need to read the G&S book units and lessons in advance of class. You will find that the authors' instructions are quite simple and straightforward. Indeed, you can practice doing analyses ahead of the class if you wish—in fact, I encourage you to do so, as that will help you to prepare to analyze the results from your experiment. Please note that we will not be spending class time going over some analyses from last semester (i.e., correlation, regression), however, we don't need to do so—you have a user-friendly SPSS manual that will help you to quickly learn to do those analyses. And, of course, I am always happy to help you if you have difficulty understanding the directions in G&S.

Late policy for course work. Late homework assignments and ungraded portions of the proposal will *not* be accepted. There are no exceptions to this rule. Late papers (i.e., graded portions of the proposal or the proposal itself) will be accepted for no more than three days after the due date. The penalty for a late paper is 1 complete letter grade reduction for each day a paper is late (the first drop in a grade occurs once I collect the assignment, usually at the start of class). After the three days are over, a grade of "0"will be given for the missed assignments. No exceptions will be made to this rule, even in the case of legitimate and documented excuses, technical difficulties (e.g., computer or car), weather issues, and personal problems. *You should be working on your project on an on-going basis so that you will always have something to submit.* You may *not* email an assignment to me unless we discuss it and I inform you that I will accept it. I want hard copies of all work to be submitted by you in class. For example, I will not accept an assignment that is emailed to me while the class is meeting.

Plagiarism and cheating. Your work must be your own. The College has a detailed plagiarism policy. I assume you are already familiar with it. I am happy to discuss it with you if you have questions. I will follow it to the letter. Please visit: http://www.moravian.edu/studentLife/handbook/academic2.htm to view the policy.

Exams. There will be two in-class exams and a final exam. The exams will contain short answer questions, essay questions, and problems. Exams can contain material from our texts (including material *not* discussed in class), lecture, and class discussion.

Make-up exams. **There are no make-up exams**. If you miss an exam for an extraordinary and documented reason (e.g., serious illness) *and* I know in advance *and* I accept the reason, I will assign you a grade based on the average of the other exam and the final (e.g., $75 + 83 = 158/2 = 79$). If your reason is not an adequate one, then you will receive a score of zero (0) for the missed exam.

Research project. Across the semester, you will continue working on your research project—this term you will refine your design, collect and analyze your data, and complete the write-up of your APA-style research report. As you know, the report has multiple parts, each building upon the other. This term, you will refine the Method, and work primarily on the Results and Discussion sections (of course, some revision to your introduction is apt to happen, as well). Your research report, which is due toward this semester's end, will have a title page, an abstract page, an introduction, a Method section, a Results section, a Discussion section, a References section (containing *at least* 8 references), an Author Notes page (refer to Dunn [2008], especially chapter 5), and possibly a table(s) and/or a figure(s) (see chapter 8 in Dunn). We will again have in-class writing workshops where you will bring drafts of your developing paper to share with your classmates and with me. If you fail to submit a given part of the proposal when it is due, your final grade will be affected.

Suggestion. Be sure to use the Writing Center staff to review the sections of your project paper, as well as other, shorter assignments (e.g., HSIRB form, Informed Consent form). I am always happy to meet with you to discuss or read a rough draft of your work.

Help with course material. Doing well in this course is not difficult if you are diligent and organized, and if you spend a reasonable amount of time outside of class reading, doing homework, etc. I will be delighted to discuss the course material with you, but you must seek me out during my office hours or schedule an appointment. It is your responsibility to let me know if you are having difficulty with the material. As much as I would like to, I cannot read your mind—you must ask for help or let me know how I can help you. *Don't wait.*

Grading. Your class grade will be based on the following items and percentage weights:

Exam 1	15%
Exam 2	15%
Final Exam	15%
Data Analysis Plan	5%
HSIRB Proposal and Informed Consent Form	5%
Results Draft	5%
Discussion Draft	5%
End of term presentation on your project	5%
Research Project Final Paper	20%
Attendance, participation, homework, lab work	10%

I will use the following grading scale for course work:

Letter	*Score*	*Grade Range*
A	100	95-100
A-	92	90-94
B+	88	87-89
B	85	83-86
B-	81	80-82
C+	78	77-79
C	75	73-76
C-	71	70-72
D+	68	67-69
D	65	63-66
D-	61	60-62
F	0	0-59

Office hours. My office hours at Moravian for Spring 2008 are:

Monday	1:30pm – 3pm
Wednesday	1:30pm - 3pm
Friday	8:30am - 10:30am

When necessary appointments for other times may be scheduled.

Note about the syllabus. Readings should be completed before class on the dates noted herein. I reserve the right to alter the syllabus should the need arise.

Homework Assignments in Heiman Text

Each chapter in the Heiman text ends with (1) *Review Questions* and (2) *Practice Problems*. I strongly urge you to read and do the questions and problems when you finish reading a chapter and when you review for a given exam. *Note well: Questions and problems on exams will be very, very similar to the Review Questions and Practice Problems.*

I will not be assigning specific Practice Problems until we reach chapter 6—when we begin to learn about calculating statistics and doing data analyses. Will I be collecting homework regularly? No. I will collect homework problems at random in class—if you have done them and can submit them that day, you will earn extra points tacked on to your final course grade. If you have nothing to submit that day, then you will receive no points. *You may not submit homework after I collect it at random.* Please don't ask to do so.

I am happy to discuss homework problems in class or during my office hours. Let me be very clear: Doing the Practice Problems (answers to the odd-numbered questions appear at the back of the text) is the single best way to learn the material. If you do not practice using the formulas, then you will not learn the underlying concepts. You need to have both skills in order to complete the problems given during in-class exams.

Assigned Homework:

Chapter 12 – 3, 5, 7, 9, 11, 13, 17, 23, 25

Chapter 13 – 5, 9, 11, 13, 15, 17, 23

Chapter 14 – 3, 13, 15, 19, 22

Chapter 15 – 3, 5, 7, 9, 22

Chapter 16 – 3, 9, 11, 15, 19, 23, 15

Chapter 17 – 9, 11, 15, 21, 23

Chapter 18 – 5, 13, 15, 23, 25

Chapter 19 - 5, 17, 19 (use SPSS for this one), 27 (use SPSS for this one)

Chapter 21 – 9, 11, 13, 15, 17

D = Dunn text
H = Heiman text
G&S = Green & Salkind text
*** = Homework Problems Assigned (see page 5 of this syllabus) – Homework will be
collected at random (if at all) – thus, you should have the problems completed on or after
the date noted on the syllabus.

I anticipate following this schedule, however, I reserve the right to change it if the need
arises (e.g., inclement weather).

Class Schedule for Spring 2008

M Jan 14	Organizational Meeting/Course Overview	
W Jan 16	Discuss HSIRB Proposals *See the last pages of this syllabus; all forms are also available in the HSIRB folder on the Public (p) drive on the College's Intranet.*	G&S Units 1 & 2
M Jan 21	*Martin Luther King Jr. Day – No Class Meeting*	
(T Jan 22)	Last Day for Class Changes	
W Jan 23	SPSS Lab *bring a draft of your HSIRB and Informed Consent Form to class*	G&S Units 3 & 5 *(4A is optional)*
M Jan 28	Probability *Completed HSIRB Proposal due & Informed Consent Form due*	H ch. 12
W Jan 30	Hypothesis Testing	H ch. 13
M Feb 4	Writing about Hypotheses revisited *Bring 5 copies of your hypothesis (1 sentence, no more than one paragraph to class)*	
W Feb 6	Single Sample Studies *1-page report on the status of your project paper revision due today*	H ch. 14 G&S Unit 6 - les 22
M Feb 11	Independent Samples *t*-test	H ch. 15 G&S Unit 6 – les 24

W Feb 13	***EXAM 1***	
M Feb 18	Dependent Samples *t*-test	H ch. 16 G&S Unit 6 – les 24
W Feb 20	Planning Analyses: In Class Workshop	
M Feb 25	Writing Up Results using Words	D ch. 6
W Feb 27	Data Collection Planning **Data analysis plan due*	
F Feb 29	***Midterm Point of the Semester***	
Sa Mar 1 – Su Mar 9	***Spring Break***	
M Mar 10	One-way Analysis of Variance **Your data collection should be underway by this point*	H ch. 17 G&S Unit 7 - les 25
W Mar 12	One-way Analysis of Variance con't **DRAFT of your **revised** Introduction and Method due in class- bring 5 copies*	
M Mar 17	***EXAM 2***	
W Mar 19	Two-Way ANOVA	H ch. 18 G&S Unit 7, les 26
F Mar 21 – M Mar 24	***Easter Break***	
(T Mar 25)	Classes Resume	
W Mar 26	Plotting Main Effects and Interactions: Two-Way ANOVA con't; Data display **Your project data should be collected by now*	D. ch. 8
(F Mar 28)	Last Day for Class Withdrawal with a W	
M Mar 31	Within-Subjects ANOVA **Your data analyses should be underway by now*	H ch. 19 G&S Unit 7 – les 29
W Apr 2	Non-Parametric Tests: The Chi-Square	H ch. 21 G&S Unit 10 – les 40 & 41

M Apr 7	Writing Workshop: Results Draft due *Bring 5 copies to class*	D. ch. 9
W Apr 9	Writing Workshop: Discussion Draft due *Bring 5 copies to class*	
M Apr 14	Giving a Presentation: The Talk ***Final Project Paper Due***	D. ch. 10
W Apr 16	Presentations	
M Apr 21	Presentations	
W Apr 23	Finish Presentations/Review for Final Exam	
Sa Apr 26	Classes End	

M Apr 28 – Sa May 3 ***Final Exam Period*********

M May 5	May Term 2008 Begins

*** Date and Time of Our Final TBA

Have a relaxing summer . . .