

Psychology 211
Experimental Methods & Data Analysis I
Spring 2009

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Office Hours: **9:00 – 10:00 (Mondays – Thursdays)**
 Fridays by appointment only

Class Time: **Tuesday & Thursday 6c**

Course Overview:

This first course in a two-course sequence is designed to introduce you to the scientific method as the means through which knowledge advances in psychology. In it you will learn how to develop and test hypotheses, collect reliable data, use some basic statistical techniques, and to interpret and report the results of statistical tests. You will also begin to learn the skills and tools used by psychologists in their work, including descriptive and inferential statistics, spreadsheets and graphing, the Statistical Package for the Social Sciences (SPSS), and writing in American Psychological Association (APA) format. All students will complete a research proposal for a research project they will conduct during the second course in the sequence. This course is a writing and computing intensive course for the major in Psychology. Prerequisite: PS 120.

Course Objectives:

Students who successfully complete this course, should be able to:

1. Appreciate the strengths and weaknesses of scientific method as a way of knowing
2. Understand and apply the APA Principles of Ethical Conduct to the research process
3. Think critically about all phases of the research process in order to critique their own research and the research of others, as well as to become better consumers of information
4. Use appropriate on-line and library resources in the research process
5. Design a study to answer a question of the student's interest
6. Understand the connection between research design and statistical analysis
7. Use SPSS (Statistical Package for the Social Sciences) to summarize and analyze data
8. Write a research proposal in APA format

Required texts:

[**Note:** You will use these same texts in Fall 2008 for the second part of the PS 211/212 course sequence. You *must* purchase all four texts as they will be used for open-book portions of exams and in classroom activities. Please also be sure to bring a calculator with a square root function to class each day as well.]

American Psychological Association. (2001). Publication manual of the American Psychological Association (4th Ed.). Washington, DC: APA. [In class schedule as: **APA**]

Heiman, G. W. (2001). Understanding research methods and statistics (2nd Ed.). New York: Houghton Mifflin Company. [In class schedule as: **H**]

Green, S. B., & Salkind, N. J. (2005). Using SPSS for Windows and Macintosh: Analyzing and understanding data (4th Ed.). Upper Saddle River, NJ: Prentice-Hall. [In class schedule as: **SPSS**]

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

Note: You should bring the Heiman text to class every day. I will announce in advance the days on which you will need to bring your other books to class.

Course Requirements and Grading:

In Class and Final Exams

There will be three exams over the course of the semester, as noted in the class schedule below. The exams may have both open and closed book portions, and may consist of question formats such as multiple choice, short answer, short essay and computational problems. The exact format of a particular test will be announced in advance of the test date. The first three exams will be administered in class and the final exam will be administered during the final exam period. The final exam will be a cumulative exam and will also cover chapters. Makeup exams will not be administered. If you miss an exam your final exam will count twice – once for the final exam and second for the missed exam grade, provided you had extraordinary and documented excuse for missing the exam, as determined on a case by case basis.

Attendance and Class Participation

You are expected to attend all classes. If you must miss a class, it is still your responsibility to submit any assignments that are due that day *on that day*. (See policy on late assignments. You will also need to get notes and handouts. Excessive absences will be dealt with on an individual basis. If special circumstances arise that will cause you to miss more than one or two classes, you should contact the Learning Services Office. Participation, too, matters. I expect that you will come to class prepared to discuss and to ask questions about the course material.

HW & Lab Assignments

Assignments will be announced on a day-by-day basis. The sheet at the end of the syllabus has been provided so you can track the assignment due dates and your performance on them. Assignments will include-both in-class and out-of-class SPSS laboratories, short reaction papers, and problems assigned from the end of the chapters in Heiman. Answers to all odd-numbered problems in Heiman can be found in the back of the book. You should get in the habit of testing yourself by completing these problems even if I do not assign them. There is no way to know if you understand the material well enough to test well unless you do the problems.

The APA Research Proposal

Across the semester, you will be working on a research proposal – design for an experiment-for a project that you will conduct from start to finish in the fall semester. The proposal has multiple parts, each building upon the other. Details for each component of the paper can be found on the Research Proposal – Required Components handout to be distributed in class.

Grading Rubric:**Exams:**

In-Class Exams (3 x 10% each)	30%
Cumulative Final	10%

APA Paper:

Possible Research Topics	5%
Annotated Bibliography	5%
Research Proposal Draft	5%
THE Research Proposal	20%

Other:

HW & Lab Assignments	15%
Attendance & Class Participation	10%

Note: Failure to turn in any of the above assignments on time will result in a half a letter grade deduction.

Extra Credit:

Students may earn up to 3 points extra credit applied to your final exam grade by participating in research projects through the department's subject pool. One point may be earned for each ½ hour of participation.

Grading Standards:

Grades will be assigned using the standards listed in the Student Handbook:

A = “achievement of the highest caliber” reflecting “independent work, original thinking, and the ability to acquire and effectively use knowledge.”

B = “higher than average achievement” which evidences “independent work and original thinking.”

C = average work for which “the student has devoted a reasonable amount of time, effort, and attention to the work of the course and has satisfies the following criteria: familiarity with the content of the course, familiarity with the methods of study of the course, and active participation in the work of the class.”

D = “unsatisfactory work, below the standard expected by the College” which indicates “work which in one or more important aspects falls below the average expected of students for graduation. The work is, however, sufficient to be credited for graduation.”

F = failure.

Calculating your Grade:

A grade of C (72.6) or better in this course is required in order to declare a psychology major (yes, we do check).

To calculate your final grade, I first add any extra credit points earned and then weight each grade according to the percentages given above. For example, if an exam is worth 15% and you score an 80 on it, I multiply (.15) (80) for a point total of 12. Adding these points together for all the grading components listed above will give you your final grade for the course (out of 100 points). These points are then converted to a letter grade as follows:

92.6-100	=	A
89.6 – 92.5	=	A-
86.6– 89.5	=	B+
82.6 – 86.5	=	B
79.6 – 82.5	=	B-
76.6 – 79.5	=	C+
72.6 – 76.5	=	C
69.6 – 72.5	=	C-
66.6 – 69.5	=	D+
62.6 – 66.5	=	D
59.6 – 62.5	=	D-
less than 59.6	=	F

Students Please Note: It is within the instructor’s purview to apply qualitative judgment in determining grades in the course.

Expectations for the Course

Preparation and Commitment

You **MUST** have basic math skills. If you have difficulty with math, you may need to rethink whether you want to take this course right now. Help is available through Learning Services (see below).

Since this is a rigorous course that serves as a prerequisite for upper level courses in psychology, you must be willing to give preparation for it a high priority. You must allocate a time and place to study for this course. Your studying will not be successful if done in 10 or 15 minute segments, late at night or at the last minute. I recommend several study sessions of one hour per week, although what is needed may vary from individual to individual. This time is in addition to the time required to complete assignments, independent research work, and group study sessions. I do recommend that you form study groups and meet on a regular basis in order to review homework problems and to capitalize on different perspectives and examples.

I assume that all of you have had a basic writing course (WR100 or equivalent). Therefore, I expect strong writing to be displayed in your assignments and projects. Spelling, grammar, and structure are always relevant, and will therefore be an important factor in my grading of your work. *Use the Writing Center* to develop added confidence in your writing skills!

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.

Academic Integrity

Academic integrity is a core value of the college and is expected. Cheating and plagiarism will not be tolerated. It is **my contractual agreement** with the college to report all **suspected** cases of plagiarism and cheating. Plagiarism is the misrepresentation of someone else's work as your own. This includes but is not limited to transcribing sentences or paragraphs belonging to another author directly from another written source giving the impression that they are your own words, quoting directly from a published work without giving the author credit (i.e. proper citation), using or "borrowing" another student's work, or buying a paper from a professional service. Students must keep all notes and rough drafts until given a grade for the course. See your Student Handbook (pp. 50-56) for a more complete description. Please see me for any needed clarification.

Other Important Information

Access to Files/Computing Resources

CIT Help Desk is located in Memorial Hall, phone CIT at 610-625-7929, or e-mail the Help Desk at help@moravian.edu.

You can access **PsycINFO** from off campus from College web page. Instructions for off campus access will be available at our in-class library workshop.

We will work with SPSS files that will be saved for class use on the **p drive** in the Psychology folder in the file named "PS211Zaremba". The p drive cannot be accessed from off campus.

Learning Services

Students with learning disabilities who need special accommodations for this course should contact Ms. Laurie Roth, Director of Learning Services at 1307 Main Street (ext. 1510). Accommodations cannot be provided until authorization is received from Learning Services based upon proper documentation of the conditions and needed accommodations.

I will be working with Learning Services to arrange tutoring services for this class. Please see me if you believe you are in need of such assistance.

Students Please Note: The class schedule that follows is subject to change at my discretion in order to make the class flow more smoothly. Except for extreme circumstances (e.g. multiple class cancellations due to severe weather) I will not change the due dates for major assignments.

Class Schedule

Topics and Major Assignments

Readings

Week 1: 1/20 & 1/22

Introduction and course overview
The Scientific Method

H Ch 1

Week 2: 1/27 & 1/29

Design and Interpretation
Reliability and Validity

H Ch 2
H Ch 3

Week 3: 2/3 & 2/5

Writing in Psychology
Psychology Literature Workshop (2/5)

D Ch 1, 2, &3

Week 4: 2/10 & 2/12

Design Issues I & Ethics in Experiments

H Ch 4

Topics of interest in Psychology List (Due 2/12)

Week 5: 2/17 & 2/19

Design Issues II & Ethics in Descriptive Research

H Ch 5

Week 6: 2/24 & 2/26

Catch-up
Exam 1 (2/26)

Week 7: 3/3 & 3/5

Recess – No classes

Week 8: 3/10 & 3/12

APA Style
Reading and Critiquing Research

APA Manual
D Ch 4, 5 & 7

Annotated Bibliography (Due 3/10)**Week 9: 3/17 & 3/19**

Introduction to Statistics: Frequency Distributions
Central Tendency

H Ch. 6
H Ch. 7

Week 10: 3/24 & 3/26

Central Tendency/Variability

H Ch 7 & 8

Week 11: 3/31 & 4/2

Exam II (3/31)
In-class Proposal Workday (4/2)

Week 12: 4/7 & 4/9

z-scores
In-class Proposal Peer Review

H Ch 9

Week 13: 4/14 & 4/16

Correlation

H Ch 10

Draft of the Methods and Proposal (Due 4/14)**Week 14 4/21 & 4/23**

Exam III (4/21)
Regression

H Ch 11

Week 15 4/28 & 4/30

Regression
Evaluations and looking ahead to PS 212

H Ch 11

Final Proposal (Due 4/30)

Finals Week

Final Exam: Cumulative Exam & Ch 11 (Scheduled by the Registrar).

