

Psychology 212
Experimental Methods & Data Analysis II
Moravian College
Spring 2006

Instructor: Dr. Michelle Schmidt

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Class Time: TR 2:20-4:00

Office Hours: M 2:00-3:00; TR 11:00-12:30

Course Overview

This course represents the second course in a two-course sequence. Both courses focus on the scientific method as the means through which knowledge advances in the field of psychology. In the first course, students were given an in-depth review of research methods and some of the statistical analyses used in psychological science. In this second course, students will be exposed to the process of developing and researching hypotheses, collecting data, testing hypotheses using appropriate statistical techniques, and interpreting and reporting statistical results. Descriptive and inferential statistics are the tools through which students learn this research process. The result of this second course will be knowledge of both descriptive and inferential statistical techniques and a full research paper reporting on the results of an independent research project.

Course Objectives

1. To instill an understanding of the scientific process, research methodologies, and statistical tools used to summarize and interpret data.
2. To promote an appreciation of the connections between research design and statistical analysis for both basic and applied areas of inquiry.
3. To stimulate and challenge you to think critically and independently about the course material and to effectively critique others' work, so that you may become better consumers of information.
4. To encourage appropriate and effective written, verbal, and listening skills for both formal and informal communication.
5. To demonstrate the basics of SPSS (Statistical Package for Social Scientists).
6. To teach the process of writing a research paper according to the guidelines set out by the American Psychological Association.

Required Reading:

American Psychological Association. (2001). Publication manual of the American Psychological Association (4th ed.). Washington, DC: APA.

Heiman, G. W. (2001). Understanding research methods and statistics (2nd ed.). New York: Houghton Mifflin Company.

Course Requirements and Grading

Note: You should expect to spend, on average, 8 hours per week doing work for this class.

Section Exams (x3)	100 points each
Comprehensive Final Exam	120 points

Threaded Discussions	5 points each
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Lab Assignments	10 points each
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APA Research Paper

HSIRB proposal	20 points
Successful on-time data collection	20 points
List of hypotheses w/ analyses	10 points
Draft (complete w/ Appendices and Figures)	ungraded*
Final APA paper (title page, abstract, Intro, Method, Results, Discussion, Reference page, Appendices, Figures)	100 points

Note: Failure to complete data collection and a final APA paper will result in a failing grade for the course. These are departmentally required components of this course.

Moravian 1st Annual Student Scholars Day

Submit a proposal for a poster	10 points
Attend & present research @ conference (April 27)	20 points

*Note: Failure to turn in the ungraded assignment on time or failure to turn in a serious complete draft of the paper will result in a forfeiture of ungraded feedback and a 10-point deduction on the final paper. This is your chance to get feedback without grade penalties; you should take advantage of this opportunity.

Another note: You are expected to participate in the All College Service Day on April 4. You will need to provide me with a 1-page write-up of what you did that day. If you need help figuring out what to do that day, I can help you. Failure to serve on April 4 will result in a 3-point deduction on the final course grade.

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 satisfied 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.

Elaboration of Requirements

1. Exams

There will be three equally weighted exams over the course of the semester. In addition, there will be a cumulative final exam during the scheduled final exam period (this may include information about descriptive statistics covered in PS211, anything from PS212, and an SPSS & APA style competency check). Exams may include, but are not limited to, multiple choice items, identifications, short answer items, and computational problems. The specific format of each exam will be discussed during the class period prior to the scheduled exam period.

Make-up exams, with the exception of the final exam which cannot be made up under any circumstances, will be given only under extraordinary, documented circumstances, to be determined on a case-by-case basis by the instructor. If a student must miss an exam due to a medical reason or some other unavoidable and unforeseen reason, the student must notify the instructor before the class period for which the exam is scheduled. Again, a make-up exam will be administered on a case-by-case basis with appropriate documentation ONLY (e.g., doctor's note, accident report). If a make-up exam is granted, the exam will be individually designed and will be administered on the next available day. By college policy, no make-up finals will be permitted.

2. Threaded Discussions

As we did in PS211, students will join in a threaded discussion for each of our chapters. You must log on and contribute a relevant question, meaningful response, or intellectual thought about each assigned chapters/topics. The purpose of this assignment is to prompt you to think about and react to the course material prior to coming to class and to encourage the creation of the intellectual property that belongs to the entire community. These discussions also serve to inform the instructor of areas of confusion or interest that should receive extra time in class. You may choose to miss one threaded discussion post. Please try to make these discussion oriented with sufficient detail so that I know where confusions lie and your classmates also might help with your confusion. The idea behind this online communication tool is to promote an ongoing culture of inquiry. You will not get 5 points if your post only says that you understood the material or liked/disliked the chapter; there must be substance!

Discussions will take place by 1 a.m. on the night before we begin a new chapter on a scheduled class period. Anything posted after 1 a.m. will not be given credit. Even if you post late, you will not get credit.

3. Assignments

We will hold a “lab session” using the computers in the classroom after we finish most of our chapters. Assignments will be given during each lab session or, on occasion, may be given as take home assignments. The majority of assignments will focus on learning SPSS to run analyses and learning APA style to write papers. Lab assignments should be finished during the designated class time, unless an exception is made for longer lab assignments. Although students are free to discuss assignments with each other in lab, each student is required to turn in his or her own lab report.

4. APA Research Paper

There will be a series of assignments, continued from last semester and spread out over the course of this semester, leading up to a final research paper. Students will begin with their proposals from last semester, submit a proposal to the HSIRB, collect data using their proposed study (you may not use another topic—appropriate notes of caution were given last semester), analyze their data, modify the proposal so that the language is appropriate for a final manuscript, and complete the remaining sections of the paper.

5. Moravian College Student Scholars Day

This year Moravian College will hold a student research day. Students will be required to submit a proposal for the research they conduct this semester, attend the conference, and present their research in the form of a poster. Failure to present research at the conference will result in a zero for that portion of the course requirements and a 20 point deduction on the final research paper. Mark the date now. There will be no exceptions to your attendance unless you tell me during the first week of classes that you have an already scheduled event that you can document.

Class Policies

1. Attendance

Moravian College Academic Standards Policy states, “[s]tudents are expected to attend classes regularly” (Student Handbook). Class attendance is mandatory. Statistics is cumulative by nature and missing a class will interfere with a student’s ability to grasp the material. If a student must miss a class, he or she is responsible for getting missed notes or any information on revised schedules from a classmate. Excessive absences (2 or more) will be dealt with on an individual basis and may result in a 2-point deduction per absence on the final course grade. If a lab assignment is given on a missed class day, students will NOT be permitted to make up the lab. The lab assignment will receive a grade of 0. No make-up exams will be permitted. In the event of any exceptions due to documented and approved emergencies, the exam may be given and will be different than the one taken by the rest of the class. If special circumstances arise that cause a student to miss an excessive number of classes, he or she should contact the Learning Services Office.

2. Late Assignments

Late assignments and threaded discussions will not be accepted. The APA research paper assignments will be accepted late with a 10-point deduction for each partial or full day late beginning at the start of class on the due date (for the research paper, late papers will be accepted until 4 partial or full days late accumulate. The draft of the research paper will not be accepted late.

3. Academic Integrity & Honesty

The Policy on Academic Honesty (Student Handbook) states, “Moravian College expects its students to perform their academic work honestly and fairly.” Therefore, students are expected to be honest in all matters pertaining to this class, without exception.

All work submitted for evaluation in this course must be original work. It may not be “borrowed” from another student or any other source without proper credit as outlined by the APA Manual. Please note that no part of your assignments may be shared with other students in this class or with students in future classes, and you may not refer to papers from previous classes. All papers submitted for this class must be original work completed to meet the requirements of this class.

Students may not plagiarize. The Moravian College Student Handbook states, “[w]hen students use the specific thoughts, ideas, writings, or expressions of another person, they must accompany each instance of use with some form of attribution to the source. Failure to do so is plagiarism, a major form of dishonesty.” Specific procedures for attribution for this course are outlined in the APA Publication Manual. Students must turn in copies of all sources used for papers (APA Research Paper) and are expected to “keep all notes, drafts, and materials used in preparing assignments until a final course grade is given.” A student judged to have violated the policy on academic honesty will receive a grade of zero for the relevant assignment or a failing grade for the course, at the discretion of the instructor. Any such violation will be reported in writing to the office of the academic dean.

4. Civility

There is an expectation in this course that students will be respectful of one another. So, please do not do things that interrupt with the learning process. If your cellular phone rings, I will answer it; if you pop your gum, I will confiscate it! So, please do us all a favor and either leave your cell phone at home or turn it off when you get to class.

5. Blackboard

All students will need access to a computer with an internet connection in order to get into BlackBoard (<http://blackboard.moravian.edu>). You may access Blackboard with a computer off-campus. For those students who do not own a personal computer, computers are available on campus in PPHAC, Memorial Hall, and Reeves Library.

In order to access Blackboard, you will need to register for Blackboard at <http://blackboard.moravian.edu>. The password for the class is stats.

6. Calculator

Please bring a calculator to all class meetings. You need not have a sophisticated calculator. The most advanced key that you will need is a square root button. **You can purchase an appropriate calculator for \$5.00-\$10.00. You may not use calculators that store equations or automatically solve for any of the statistical tests that we are learning this semester.** If you use any prohibited calculators for an exam, your exam will receive a grade of zero. If you are unsure whether your calculator is appropriate, please have the calculator approved by the instructor.

7. Learning Services Office

The Learning Services Office “provides assistance to students who are experiencing academic difficulties” (Student Handbook). If you feel you need special services through this office, you may call 610-861-1510 or visit their offices.

SCHEDULE*

Date	Topic	Readings
Week 1: January 17, 19	Introduction to the course HSIRB proposals	
Week 2: January 24, 26	Probability (review and Lab 1) Hypothesis Testing HSIRB PROPOSALS DUE (1/26)	Ch 12 Ch 13
Week 3: January 31, February 2	Lab 2 (hypothesis testing) Organizing for data collection YOU SHOULD HAVE YOUR PLAN FIRMED UP BY NOW FOR DATA COLLECTION—MEASURES, PROCEDURES, ETC...READY TO GO. THIS WEEK'S LAB TIME AND NEXT WEEK'S LAB TIME ARE GOOD OPPORTUNITIES TO ASK ME LINGERING QUESTIONS AND CONFIRM YOUR PLAN WITH ME.	
Week 4: February 7, 9	Single Sample Study (t-test) Lab 3 (t-test) Final preparation for data collection	Ch 14
Week 5: February 14, 16	Exam 1 (chapters 12-14; 2/14) Two Samples Between Subjects t-test Recruiting for studies Scholars Day Proposals Due (2/16)	Ch 15
Week 6: February 21, 23	(DATA COLLECTION WEEK 1) Chapter 15 conclusion Lab 4 (two samples b/s t-test)	
Week 7: February 28, March 2	(DATA COLLECTION WEEK 2) Two Sample Within Subjects t-test Lab 5 (two samples w/i t-test) LIST OF HYPOTHESES W/ ANALYSES DUE (3/2)	Ch 16

Week 8: March 14, 16

One-way Between Subjects ANOVA

Ch 17

Week 9: March 21, 23 (lab only)

Lab 6 (1-way BS ANOVA)

Work on draft of paper in class.

Week 10: March 28, 30

Review and catch-up

DRAFT OF PAPER DUE (3/28)

Exam 2 (chapters 15-17; 3/30)

Week 11: April 4 (no class—all campus service day), 6

Two-way Between Subjects ANOVA

Ch 18

Week 12: April 11, 13

Lab 7 (2-way ANOVA)

Chi-square

Ch 21

Week 13: April 18, 20

Lab 8 (chi-square)

Exam 3 (4/20) Chapters 18, 21

FINAL APA PAPERS DUE (4/21 by 3pm)

Week 14: April 25, 27

Overview of final exam

April 27—participation in Scholars Day

Note: I will be away at a conference on 3/23. You will, however, have a lab assignment to work on that day in class and you can also work on your APA paper draft.

FINAL EXAM: Date TBD

*This schedule is subject to change by the instructor. This may affect the dates of assignments, quizzes, and exams. Changes will be announced in class. It is your responsibility to talk to a classmate when you are absent.