Research Methods
Psychology 312
Spring 2009

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- The website contains information regarding preparation for graduate school in clinical/counseling psychology and related fields. Syllabi for other courses taught by Dr. Spielmans and information regarding his research are also available on the site.
- The above website is **not** for official class business – D2L will be used for the online component of the course (see below)

Class Time: 1-4:50 W
Classroom: Midway 104
Required Text: Leary, M. R. (2007). *Introduction to Behavioral Research Methods* (5th edition). Boston, MA. Allyn and Bacon.
Recommended Text: American Psychological Association. (2001). *Publication Manual of the American Psychological Association* (5th edition). Washington, DC: American Psychological Association.

Course Objectives

The purpose of this course is to learn the basics of scientific thinking and to become familiar with the major research methods used in psychology, education, and other related disciplines. Students will understand (but their learning will not be limited to) the following major components of research:

1. the scientific method, including research hypotheses, operational definitions, and evaluating evidence
2. variability including systematic and error variance
3. reliability and validity of measurement
4. methods for assessing behavior: observational; physiological; questionnaires, and interviews
5. descriptive research, including sampling techniques and measures of central tendency
6. correlational research, including correlation coefficients and regression
7. major experimental designs and hypothesis testing (t-test and ANOVA)
8. quasi-experimental designs
9. basic understanding of meta-analysis
10. research ethics

11. the use of SPSS software to enter and analyze data
12. the appropriate writing of research findings
13. how to present research visually in an appropriate manner
14. how commercial/economic and other nonscientific factors affect the conduct and dissemination of research

This course aims to provide knowledge and skills regarding making decisions based on data rather than other factors, such as advertising, gossip, rumor, and "expert" opinion. Because many of us have made questionable decisions based on the advice of friends, family, Larry King, Bill O' Reilly, Deepak Chopra, or Dr. Laura, the main point of this course is to teach students to think scientifically, so that they can better evaluate the wide variety of choices that they will face in their lives.

It is a well established psychological principle that many students initially think that taking research methods will be roughly as pleasurable as receiving a lobotomy, tracheotomy, or other painful procedure that ends in "tomy." However, when students actively participate, prepare for class, and realize that the information in this class is actually applicable to their lives, they typically find the class to be at least somewhat enjoyable and enlightening.

Competency Statement
Students will display the ability to understand the basic findings of many published studies in psychology and related fields. In addition, they will understand the strengths and limitations associated with various research designs, as well as how nonscientific elements (especially economic factors) relate to research findings. These competencies will be assessed through examinations and several written assignments that are directly related to the above competencies.

Background Knowledge
This course involves statistical analysis of data. One does not need to have taken a statistics course in order to succeed in this class, but such a background is certainly helpful. If your mathematics skills are poor, expect to spend extra time as you learn to understand the statistics utilized in research. Logical thinking is also an important part of research methods.

Course Structure
Discussions and activities are an integral part of this course. A research methods course that relies solely on lectures is very likely to be B-O-R-I-N-G! Students do not learn best by passively absorbing information, especially when the information is not particularly exciting.

While lectures are a necessary portion of the course, students who participate actively in group and individual activities are much more likely to both learn course material and enjoy the course.

An integral part of student learning is the completion of assignments and projects in which students apply course knowledge. If students fail to complete assignments, they are likely to learn much less in the course.

Preparing For Class
The applied nature of this course requires regular class attendance and participation. You are expected to read assigned chapters and any assigned readings before each class session in order to be prepared for classroom activities and discussion. Students should not miss class lectures or activities/discussions, as material covered in class will often not be covered in the text.

Students typically report that this class is quite challenging. In order to prepare for the difficult nature of the material, students will need to regularly read the text and any additional readings, attend class regularly, and actively participate in class activities. Students who keep up on assigned readings, attend class regularly, and turn in their assignments in a timely manner nearly always perform reasonably well in the class.

Failure to complete assigned readings will show itself in poor contributions to group activities as well as inadequate responses on questions posed by the instructor during class time. Should a student show an inability to contribute to class discussions and activities, this may be reflected in the student's final grade.

Extra Credit
Extra credit is not given in this class. Please do not ask if an exception can be made, because an exception will **not** be granted.

COURSE REQUIREMENTS

Examinations
There will be five in-class exams for this course including a non-cumulative final examination. The format of most exams will be multiple-choice and each exam will cover information from approximately two to three text chapters, class lecture information, and additional readings that may be assigned during the semester. Short answer essay questions may also be included. Information covered during class time and in assigned readings overlaps, but students cannot adequately prepare if they miss class or fail to keep up with assigned reading.

Please do not miss examinations! In the event of an illness or an emergency, students need to contact the professor **before** the exam. Otherwise, a makeup will not be granted. Makeup exams will consist entirely of essay questions and are likely to be significantly more difficult than regular course exams. Cheating of any kind will result in failure for the course.

Classroom Activities and Discussions
Small group activities will be conducted occasionally during the semester. These activities will involve participation points that will be included in the overall point total for course.

The professor will occasionally ask questions to students during class. Displaying knowledge through thoughtful responses will be positively reflected in students' grades while a lack of knowledge or lack of effort may be reflected by a reduction in students' grades.

Written Assignments
In-class/homework assignments are opportunities for students to demonstrate their understanding of various research designs. For two assignments, students will identify a topic to study, design hypotheses, enter their data (which will be fictitious), analyze the data, and provide a brief summary of their results, along with an interpretation of the study's importance and implications. Another assignment regarding students' understanding of the relevance of research in their potential careers will also be given. In addition, students will be expected to apply their knowledge of research design via two graded exercises.

Late Assignments
In order to keep up with course material, it is important to turn in assignments on or before their due date. Students are allowed a grace period of up to one week on one assignment, which can be used for one of the following assignments:

- Relevance of research
- SPSS assignments (correlation/regression or experiment/quasi-experiment)
- Study design exercises

Each student can only use the free grace period of one week for one assignment. Late penalties are assessed as follows:

- 10% off for the 1st two days late.
- Additional 10% off for days 3 – 7 late.
- Additional 10% off for every 7 days late afterwards.

For the poster presentation, late work will receive no credit. For the final draft of the research project, late work will be only accepted up to two days late and will be docked 10% per day late.

Final Project and Presentation
Students will conduct a research project and present their results in a poster-like format during the last portion of the semester. Grading of this project will be based on students' description of the relevant background literature and data presentation, as well as the quality of the hypotheses and write-up of the results and related discussion section. A section of the course website is devoted to the final project; it includes examples and other helpful information.

Paper Formatting
Regarding formatting, students should have no more than a one inch margin around their papers, and should use 12-point, Times New Roman font or a very similar font. It is each student's responsibility to check with the professor regarding the appropriateness of using any font other than TNR 12 point font. Double space the text. Include a cover sheet for each paper (preferably in APA style). Do not start the first page of text any lower than one inch from the top of the page. Be sure to meet all page minimums for paper assignments. The paper grade may be reduced substantially (at least 1-2 letter grades) if a paper is short. Stated page minimums refer to *pages of text.* A cover page or reference page does *not* count as a page. For example, a 10-15 page paper should have at least ten full pages of text.

COURSE SCHEDULE

Note that the topics covered in class below are based on an estimation of what will occur during the semester. This estimate is not guaranteed to be fully accurate; thus, the dates listed to correspond with certain topics may be inaccurate at times. Due dates for assignments, however, are very unlikely to change.

Date	Covered in Class Chapter #'s are in parentheses Other readings are italicized	Due
01.14.09	Syllabus Sources of Information Usefulness of Science *Plagiarism: A Brief Guide* *Saving Paper When Printing Notes*	
01.21.09	Intro (1) Operational Definitions	Relevance of Research

01.28.09	Behavioral Variability (2) Measurement of Behavior (3) *Basic Guide to PsycInfo Searches* *Using Google Scholar*	
02.04.09	Literature Review Exercise Types of Measurement (4) Scientific Writing (15) *APA Style Guide* *Writing Guidelines for Research Methods*	EXAM 1 Research Project Topics
02.11.09	Measurement Exercise Types of Measurement (4) Descriptive Research (5)	
02.18.09	Descriptive Research (5) Correlational Research (6) *Iraq Mortality Study (Burnham)* *Iraq Mortality (IFHS)*	Research Topics Returned
02.25.09	Regression (7) Experiments: Basics (8) SPSS Correlation/Regression *Intro to SPSS* *SPSS Correlation/Regression Assignment* *SPSS Guide: Correlation/Regression*	EXAM 2
03.04.09	SPSS Correlation/Regression Experiments: Basics (8)	Lit Review/Proposals
03.11.09	NO CLASS (Spring Break)	
03.18.09	Experiments: Basic (8)	Study Design Exercise 1
03.25.09	Experimental Design (9) Analyzing Experiments (10)	EXAM 3 SPSS Correlation/Regression Lit Review/Proposals Returned
04.01.09	Analyzing Experiments (10) SPSS Project Setup SPSS (Quasi) Experimental *SPSS Guide: Experimental* *SPSS Experimental Assignment*	
04.08.09	ANOVA (11) SPSS Project Setup SPSS (Quasi) Experimental	
04.15.09	Ethics (14)	EXAM 4

	Corporate Influence: Tobacco SPSS Final Project *Muggli et al. (ETS)* *Ong & Glantz (ETS)* *Morgan (Think tanks)*	Data for final project submitted via email Study Design Exercise 2
04.22.09	Nonscientific Factors Work on Final Project and/or Presentations *Rennie (Thyroid Storm)* *Blumsohn (Actonel)* *Safer (Research Mis–Design)* *Burton & Rowell*	SPSS (Quasi) Experimental SPSS Correlation/Regression Revisions Data for final project returned by Wednesday prior to class
04.29.09	Final Project Presentations	EXAM 5 Final Project

GRADES

Letter grades will be assigned based upon the number of points earned in class based upon the following breakdown: 93%=A, 90%=A-, 88%=B+, 83%=B, 80%=B-, 78%=C+, 73%=C, 68%=C-, 62%=D, and below 62%=F.

Assignment	Point Value
Study Design Exercises	20 (10 each)
Exams	200 (40 each)
Research Project	100 total 15 for topic 35 for proposal* 50 for final draft*
Poster Presentation	25
Participation (In class)	40
Relevance of Research Assignment	15
In-class/Homework Assignments •Correlation/Regression •Experimental/Quasi-Experimental	60 (30 each)*
Total	460 points

NOTE: Assignments marked with an asterisk in the right column *must* be turned in both as a hard copy and via turnitin.com (see below).

Incomplete Grades

Students whose performance is below 68% (C-) at the withdrawal deadline should consider withdrawing from the course with a grade of "W." Students **must** withdraw by the deadline; University Policy permits NO withdrawals after the deadline. If a student is in this situation the week prior to the deadline,

he/she should discuss the advantages and disadvantages of withdrawing with the course instructor. Remember, it is important to do well in all courses and to stay in good academic standing. Grades of "I," Incomplete, are reserved for students who are doing reasonably well (i.e., performance above 68%) but encounter emergency situations very close to the end of the course. Incomplete grades will not be given if the student misses more than one exam or two exercises/homework assignments. Also, students whose performance is below 68% will not be eligible for an incomplete grade.

Quality Control
Research places a heavy emphasis on writing. As such, it is expected that all written work will meet at least minimal standards of decency. Misspelled words, poor grammar, and sloppiness are reflective of work that does not meet standards for this course. Points may be docked should work not meet standards for this caliber of class. Further, the APA Publication Manual (listed under recommended texts) is a guide for formatting much of the written work in this class. It is thus highly advisable to purchase a copy.

Students who are caught plagiarizing (passing off another person's work as their own), will be penalized with course failure. Note that every student must read the handout entitled "Plagiarism and Citing Sources: A Brief Guide." All assignments must be typed, double-spaced, and submitted via hard copy. In addition, students must submit all assignments marked with an asterisk above (in the table of assignments on page 6) through turnitin.com, a service that checks student papers for plagiarism.

In order to enroll for turnitin.com for this class, students must do the following:
1. Go to the following link (copy and paste into your browser's address bar): https://www.turnitin.com/newuser_join.asp
2. Register for this class, as a student, using the following information:
    Course ID: 2549867
    Password: sp09rmspiel
3. If a student does not submit required assignments through turnitin.com, the assignments will receive a score of zero.

Disability
The Disability Services Office helps students with disabilities receive appropriate accommodations from the university and their professors. Students need to register with the DSO in order to receive such services. For information, call 651-793-1525 or 651-793-1540.

Online Component
This is a web-enhanced course. Thus, all students **must** sign up for Desire to Learn (D2L) for this course. This can be done at

http://www.metrostate.edu/col. Through D2L, students may access lecture notes, sample papers, course announcements, grades and other course-related information. **It is the responsibility of each student to regularly check D2L and use the resources on the site.** You should check the site twice weekly outside of class for updates or announcements. If you have questions about accessing the site, please contact your professor.

Privacy Warning
Please note that e-mail is not a secure method of communication; thus, anything you send or receive via email may be intercepted by an outside party, though such a scenario is unlikely.

Classroom Etiquette
Use of cellular phones, cordless phones, corded phones, phone booths, smoke signals, Blackberries, walkie-talkies, random text messaging devices, iPods, swap-meet purchased fake iPods, and other such communication/music devices is forbidden during class. Should a student's device distract the professor or other students during class, the professor will gladly answer the phone in a manner that is sure to embarrass the student or delete the entire collection of funky illegally downloaded MP3's from the student's device. Should a student be expecting an extremely important call (e.g., his/her partner is nine months pregnant, a boss will fire the student if he/she doesn't take a call, or a relative is on his/her death bed), please inform the professor before class. If a student is expecting a call, he/she should also sit close to an exit and set the phone to vibrate mode, so that the phone can be answered and the student can then leave the room without disturbing classmates and the professor.

Further, students are expected to behave in an appropriate manner, contributing to an environment of mutual respect between students and between the students and the professor.

Other Information
Please feel free to talk with the professor about grades and class standing at any point during the semester. The course syllabus (including test dates) may be changed at the professor's discretion, including the addition or deletion of assignments, and the change of test dates. If such changes are made, the class will be given adequate warning.