

# RESEARCH METHODS

PSYC 3050 CRN 2322 Fall 2004

Instructor:	Anne P. DePrince, Ph.D.	Teaching Assistant:	Aimee Reichmann-Decker, M.S.
Office:	340 Frontier Hall	Office:	356 Frontier
Phone:	303-871-2939	Phone:	303-871-3773
Email:	adeprinc@du.edu	Email:	areichma@du.edu
Office Hours:	M 3:30-5	Office Hours:	T/R 11-12

## COURSE DESCRIPTION AND INFORMATION

*How do I know what good research is? How do I design studies to test my hypotheses about human behavior? Should I believe the research I read in the magazines at the grocery store?*

### Course Objectives/Content:

This course is designed to provide you with a basic understanding of research methods and research design in contemporary psychological research. The underlying principles and issues covered will be generalizable to scientific research conducted in many related disciplines (e.g., sociology, medicine). An even more general goal is to teach logic and critical analysis skills that will allow you to be an informed consumer of research findings and claims -- and to get you excited about research!

We will cover the major issues in conducting psychological research, discussing how to formulate a research question, design a study, conduct the study, analyze data, interpret findings, communicate the results, and critique research; these topics will be covered in the text and lectures. In addition, you will engage in activities that will require the practical application of what you have learned.

### Course Prerequisites:

SOCS 1710 or equivalent and 2300 or equivalent are prerequisites for this course. I will assume that you have a working knowledge of statistics.

### Course Attendance and Laptops:

This course will rely heavily on in-class demonstrations and activities. You are expected to attend all class meetings. Further, you are expected to bring a laptop to class with an Ethernet cable. If you are unable to bring a laptop, please see me immediately to make other arrangements. You will need to download Authorware Web Player in order to participate in in-class experiments. Please go to <http://psychexps.olemiss.edu/need.htm> to check if you have this software and for a link to download Authorware. You will need to be on-line during class in order to complete experiments and have your data recorded for analysis. Assume you need a laptop in class unless otherwise stated in advance by the Instructor.

### Textbooks:

Required Text: Trochim, W. (2004). *The Research Methods Knowledge Base*. Cincinnati: Atomic Dog Publishing. You have the option to buy either an online version of this text or a paperback+online version. See attached information sheet from Atomic Dog Publishing.

Recommended Text: I strongly recommend that you purchase the *Publication Manual of the American Psychological Association (5<sup>th</sup> edition)* available at the DU Bookstore.

# Course Requirements and Grading

Your grade in this course will be based on your performance on homework, labs, quizzes, discussion questions, and the final paper. You are expected to have completed the readings by date assigned on the syllabus.

## Grades

Grades will be determined according to the following point breakdown:

	Points	(approx % of total grade)
Homework (5 @ 25)	125	(25%)
Lab and In-class points	75	(15%)
Quizzes (4 @ 25)	100	(20%)
Final Paper	100	(20%)
Final Exam	100	(20%)
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Total Points	500	

A range: 90-100% of points; B range 80-89%; C range 70-79%; D range 60-69%; F below 60%. This course will not be graded on a curve.

## Quizzes

Each quiz includes the readings assigned through the day of the quiz, as well as lecture material (excluding the lecture for the day of the quiz). **Quizzes are cumulative.**

**NOTE: Make-up quizzes will not be allowed except in cases of illness with a note from a doctor or advance notice of a required absence in writing given to the instructor (such as participation in official University activities and religious observations).**

## Lab and In-class points

Lab and in-class points are earned by participating in in-class activities and completing short homework assignments based on in-class activities. For lab and in-class points, you will turn in responses to the in-class exercises at the time announced by the instructor (usually that day or the following class meeting time). Note that quiz questions frequently come from in-class exercises. **In-class exercises are NOT routinely announced ahead of time and you MUST be in class to receive credit for the assignment.** Make-up assignments will only be available in cases of illness with a note from a doctor or advance notice of a required absence in writing given to the instructor.

## Homework

Instructions for all homework assignments are posted on Blackboard (under Assignments); paper copies of assignments will not be handed out in class. Assignments will be graded on both content and writing. All written assignments (including the final paper) **must** be typed and consistent with the *Publication Manual of the American Psychological Association* (5<sup>th</sup> edition). A hard copy of your homework must be submitted **in class** at 9:00 a.m. on the day that it is due. Late papers will incur a 10% penalty for every day late (turned in late on the day due counts as an extra day). If a paper is due on Friday and is turned in Monday morning, the paper will be considered three days late (Fri., Sat. and Sun.).

Final Paper. Instructions for the Final Paper are posted on Blackboard (under Assignments). For your final paper, you will identify a research question and propose how you would answer that question. You will submit a research proposal as an APA manuscript, complete with an Abstract, Introduction, Proposed Methods, Proposed Data Analysis, Discussion, and References. The final paper is due at the beginning of the final exam period. I *strongly* recommend that you meet with either the TA or Instructor to discuss your research idea well in advance of the due dates. Students who do well on this assignment generally discuss a topic with the Instructor or TA by the end of the 5<sup>th</sup> week of classes.

Final Exam. The final exam is cumulative, drawing on content from the entire course. All students are required to take the final. No make up finals will be allowed. Finals will not be administered early or late; you must take the final exam on the date determined by the University Final Exam schedule.

### Extra Credit

You may earn extra credit in one of two ways:

1. Participate in DU Psychology Department research experiments that are offered for chits (1 chit=1/2 hour experiment). You may earn as many chits as you choose. Each chit is worth 4 points.
2. Attend approved department talk and write a two-page summary of talk to be turned in by the last day of class. See Blackboard for a list of talks that you may attend to fulfill this requirement. Each talk you attend and for which you turn in a two-page summary is worth 8 points.

### Course Web Site:

The web site for this course was constructed using "BlackBoard CourseInfo 6" software. This allows the web site to be extensive and interactive. On the web site, you will find general announcements for the class, all documents for the course (including this syllabus), descriptions of assignments, on-line discussions and links to relevant web sites. This web site will be a very useful tool for you in learning the material for this class and in further exploring topics you find interesting. Please check immediately to be sure you are enrolled for this class via Blackboard.

### Academic Honesty

All work submitted in this course must be your own and produced exclusively for this course. The use of sources (ideas, quotations, paraphrases) must be properly acknowledged and documented. For the consequences of academic dishonesty, refer to the University of Denver website on Academic Integrity (<http://www.du.edu/honorcode/studentprocedure.htm>). Violations will be taken seriously. If you are in doubt regarding any aspect of these issues as they pertain to this course, please consult with the instructor before you complete any relevant requirements of the course.

### Students with Disabilities

If you have a documented disability and anticipate needing accommodations in this course, please make arrangements to meet with the instructor soon. Also please request that the Disability Services Program send a letter verifying your disability [contact the Disability Services Program (DSP) at 303-871-2372 or via <http://www.du.edu/car/uap/>].

### **Items on this syllabus are subject to change.**

Changes will be announced in class and on email. It is your responsibility to keep up to date on assignment due dates, as well as changes in the syllabus.

## READINGS AND ASSIGNMENTS

Date	Reading	Topic	Work Due
9/14		Explaining behavior	
9/16	1-1 Chapter 1.1, 1.2, 1.4	Scientific Thinking Developing Research Ideas	Go to: <a href="http://psychexps.olemiss.edu/ne-ed.htm">http://psychexps.olemiss.edu/ne-ed.htm</a> and download Authorware
9/21	Harter and Rienks (2003; see Blackboard under Course Documents). Chapter 12	Scientific Writing Library Research	
9/23	Chapter 1.3	Ethics	Quiz 1
9/28	Chapter 2	Sampling	
9/30	Chapter 3	Measurement Reliability and Validity	
10/5	Chapter 4	Correlational Designs Survey Research	HW 1
10/7	Chapter 5	Survey Research Observational Research	Quiz 2
10/12	Chapter 6	Experimental designs: Overview	HW 2
10/14	Chapter 7	Experimental designs: Within and between subject designs	
10/19	Chapter 7	Experimental designs: Within and between subject designs	
10/21	Chapter 7	Experimental designs: Factorial designs	Quiz 3
10/26	Chapter 8 Chapter 9	Quasi-experimental and Applied designs	HW3
10/28	Chapter 10	Describing Data	
11/2	Chapter 10	Describing Data and Inferential Statistics	
11/4	Chapter 11	Inferential Statistics	Quiz 4
11/9	Chapter 11	Interpreting data	HW 5A
11/11		Small n designs Qualitative Research	HW4
11/16		Peer Review Exam Review	HW 5B
11/18		Evaluating Research	
11/23		Final Exam	Final Paper Due at beginning of exam period