College of Arts and Science
Department of Psychology
Oakland University

Introduction to Research Design – Fall '10

Instructor: Cynthia Sifonis **Office Hrs**: T,Th 1:30 – 3:00 PM
Course: Psy 250 **Office**: 222 Pryale Hall
Course Section: # 44922 **Office Phone:** 248-370-4680
Class Time: T, Th: 8:00 – 9:47 AM **Email:** sifonis@oakland.edu
Class Location: 316 Pawley Hall

Course goals:

Psychology is a scientific discipline. Consequently, it is vital to understand the use of the scientific method to investigate issues of human thought and behavior. This course will introduce you to the types of questions asked by psychologists and the methods used to determine answers to those questions. By the end of the course, you will have the tools that you need to critically evaluate scientific claims - those of psychology as well as all the other types of research that inundate us on a daily basis. Through lectures, class discussions, group activities, assignments, and reading scientific articles the following objectives will be met:
* Identify the steps in the research process
* Distinguish between different research methods and strategies
* Identify the criteria that allows you to distinguish science from pseudoscience
* Critically evaluate research in the social sciences for its strengths and weaknesses
* Learn how to read scientific articles and communicate what you read to others

Evaluation:

Your course grade will be determined by your performance on exams, assignments, and classroom participation.

Exams
You will be given three exams that will be equally spaced throughout the semester. Each exam will contain both multiple-choice and short answer questions. Your mean exam score counts for **65%** of your class score. These exams will be cumulative in that certain information will be tested throughout the semester. The information selected for this treatment will be information crucial for critically evaluating research and for performing well in PSY 251 (Stats).

Homework Assignments
During the course of the semester you will also be required to complete a several homework assignments. Your mean score on these assignments will count towards **30%** of your overall grade in the course.

Research Participation
To receive credit for this class, you need to either participate for two hours as a research participant in experiments conducted by the professors in the psychology department or complete

two research-related written assignments. Failure to comply with the research participation requirements will result in a **failing grade** in the course.

You can sign up online to participate in studies conducted in the Psychology Department at http://www2.oakland.edu/psych/exp_cal.cfm. All registration to participate in an experiment occurs on this site. As soon as you sign up, you receive an email notice containing the details of your experiment (time, room, etc.) If you do not see any available spaces for a particular experiment, check again later. The experimenters are constantly adding new time slots. Further details about research participation will be provided on another handout.

Classroom Participation

This course is designed so that much of what you learn will occur through classroom discussions and in-class group exercises (groups of 4-5 students). Everybody's class participation is important in order to obtain the full benefit from these discussions and exercises. Participation will also help improve your performance on the homework assignments and master the concepts you will be tested on in the exams. These classroom discussions and group exercises will be spaced out throughout the semester and will count for **5%** of your grade in the course. The discussions/exercises will take a variety of forms including reviews of concepts discussed in class and in the textbook, discussion and evaluation of journal articles, conducting literature searches and applications of principles discussed in class. The work will be graded on content, completeness and accuracy. **The articles and documents needed for classroom participation will be posted in Moodle. It is your responsibility to bring the articles and documents to class; otherwise you may not be able to complete the in-class assignments.** If you are late to class or absent, you will not have the opportunity to complete in-class work. Your lowest grade will be automatically dropped. **Classroom participation dates are not posted in Moodle or in the syllabus.**

Extra Credit

Occasionally, opportunities will be provided to earn extra credit towards your grade. These opportunities will be announced in class and on the class website.

The grading scale for the class will be as follows:

4.0 = 100.00% - 98.60	2.9 = 79.59 – 78.60	1.9 = 69.59 – 68.60
3.9 = 98.59 – 96.60	2.8 = 78.59 – 77.60	1.8 = 68.59 – 67.60
3.8 = 96.59 – 94.60	2.7 = 77.59 – 76.60	1.7 = 67.59 – 66.60
3.7 = 94.59 – 92.60	2.6 = 76.59 – 75.60	1.6 = 66.59 – 65.60
3.6 = 92.59 – 89.60	2.5 = 75.59 – 74.60	1.5 = 65.59 – 64.60
3.5 = 89.59 – 88.60	2.4 = 74.59 – 73.60	1.4 = 64.59 – 63.60
3.4 = 88.59 – 86.60	2.3 = 73.59 – 72.60	1.3 = 63.59 – 62.60
3.3 = 86.59 – 84.60	2.2 = 72.59 – 71.60	1.2 = 62.59 – 61.60
3.2 = 84.59 – 82.60	2.1 = 71.59 – 70.60	1.1 = 61.59 – 60.60
3.1 = 82.59 – 80.60	**2.0 = 70.59 – 69.60**	1.0 = 60.59 – 59.60
3.0 = 80.59 – 79.60		

Note: *Psychology Majors are required to obtain at least a 2.0 GPA in this course to graduate.*

Examination and Homework Policy:

Exams must be taken at the time indicated on the syllabus. Missed exams can only be made up if you provide documentation of a legitimate University-approved excuse (e.g., medical emergency) <u>within three days</u> of the missed exam. This also applies to homework assignments.
I expect all of the independent work you submit for a grade to be your own work. Plagiarism of any kind, dual submissions (turning in an assignment for this class you have already submitted for a grade in a different class), and cheating on exams will result in a failing grade for that assignment and (depending on the seriousness of the infraction) possible evaluation by the university academic misconduct committee. All homework must be turned in via Moodle. Emailed assignments will not be accepted.

Attendance Policy:

Class attendance is **required** in this class. There are several reasons why regular attendance is necessary in order to do well in this course. A majority of the class sessions involve group exercises and discussions and the grade you will receive for this course includes a class participation component. Some of your homework assignments will be assigned and completed during class time. Even though all of your homework assignments will be posted on the class web page and in Moodle, class attendance is your best guarantee for understanding the requirements of the assignments and turning them in on time.

In addition, much of the material presented during class is presented in more detail than in the text. Some of the material presented in class is not in the text. Because you are responsible for both lecture and textbook information, it is in your best interests to attend class.

Class Materials:

Text:
Patten, M.L. (2009). <u>Understand Research Methods: An overview of the essentials</u> (7th Ed)
Stanovich, K.E. (2009). <u>How To Think Straight About Psychology</u> (9th Ed).

Web Page:

In this class I will provide you with Internet resources as an aid to both the lectures and the text. On the class web page you will be able to access such things as your syllabus, links to relevant or interesting psychology topics, due dates for homework assignments, and lecture outlines. Mp3 recordings of the class lecture will be available for download on the class webpage. Much of this information will also be posted in Moodle.
The html address for the class web page is:
http://www.cindy.sifonis.com/Classes/ExpPage.htm

Lecture Handouts:

I have provided handouts for the lectures on the class web page and in Moodle. Students have found that having access to these handouts is useful in several ways. When they have the handout for the lecture it allows them to follow along with the PowerPoint presentation and it helps them to organize their notes. Because my lectures are fast paced, I strongly recommend downloading a copy of each handout prior to attending class that day. In addition, these handouts are also a valuable study tool when it is time to study for the test.

SCHEDULE

DATE	SUBJECT	CHAPTER & PAGES
9/2	Orientation & Intro to Research	Topics 1-11,13 (Patt); Ch. 1-3 (Stan)
9/7	Intro to Research	
9/9	Understanding Research Literature	Topics 14-19, Appendix A (Patt)
	Homework #1 due (9/12)	
9/14	Pseudoscience	Ch. 4, 8 (Stan)
9/16	Ethics	Topic 11 (Patt)
	Last day to add/drop class with 100% tuition refund (9/16)	
9/21 – 9/23	Descriptive Statistics	Topics 43,45,46,49-52 (Patt)
	Homework #2 due (9/26)	
9/28	**EXAM #1**	
9/30 – 10/5	Inferential Statistics	Topics 57-60, Appendix D,E (Patt); Ch10, 11 (Stan)
10/7	Communicating your Research	Topics 71-77 (Patt)
10/12 – 10/14	Self Report/Observation	Topics 66-70 (Patt)
	Homework #3 due (10/17)	
10/19	Correlation	Topic 53 (Patt); Ch5 (Stan)
10/21	Reliability/Validity	Topics 27-85 (Patt)
10/26	Sampling	Topics 20-26 (Patt); Ch7 (Stan)
10/28	**EXAM #2**	
	Includes: Operational definitions, Independent/dependent/extraneous variables, Measures of central tendency and variability (including the normal curve and standard deviations)	
11/2 – 11/4	Experimental Control	Topic 38,39,42 (Patt); Ch 6 (Stan)
	Last day to withdraw from classes with a "W" grade (11/4)	
11/9 – 11/11	Experimental Design	Topics 37,40 (Patt); Ch 9 (Stan)
	Homework #4a due (11/17)	
11/16	Experimental Design Examples	
	Homework #4b due (11/17)	
11/17	**Last day to participate in research/research participation papers are due**	
11/18	Single-participant Design	
11/23	Quasi-experimental Design	Topic 41 (Patt)
11/25	**NO CLASS – Thanksgiving Break**	
11/30	Quasi-experimental Design	
12/2	Group project presentations (Homework #5)	

12/9   FINAL EXAM 8:00 AM – 11:00 AM

   Includes: Operational definitions, Independent/dependent/extraneous variables, Measures of central tendency and variability (including the normal curve and standard deviations), Null and alternative hypotheses, Type I and Type II errors, Effect size, Alpha, Power (what it is and how to increase it in your study), Correlation, Measures of Reliability and Validity