PSYCHOLOGY 304: RESEARCH METHODS IN PSYCHOLOGY
Spring 2009
LECTURE: Tuesday & Thursday 6:10pm-7:50pm • King Hall D3082
LAB: Tuesday & Thursday 8:00pm-9:15pm • King Hall D3068
RECITATION: Tuesday & Thursday 9:20pm-9:45pm • King Hall D3068

SYLLABUS

Instructor: Daniel B. Shabani, Ph.D., BCBA-D
Office: KH A3043
Office hrs: Tuesday & Thursday 2:00pm-4:00pm & by appointment
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COURSE GOALS

The purpose of this course is to provide an introduction to experimental and non-experimental research designs and methods. Topics include scientific method, measurement and survey design, reliability and validity, and sampling. By the end of the course, students will be familiar with the use of scientific methods and understand how to collect data, select appropriate experimental designs for research topics, and interpret research results. Students will also understand the fundamentals of research ethics and design, data analysis, library research, and report writing using American Psychological Association (APA) style. Students will use this knowledge to design, conduct, and report (in written and oral formats) their own psychological research.

REQUIRED READINGS

1. Martella, R. C., Nelson, R., Marchand-Martella, N. E. (1999). Research methods: Learning to become a critical research consumer. Needham Heights, MA: Allyn & Bacon.
2. American Psychological Association (2001). Publication manual of the American Psychological Association (5th ed.). Washington, DC: Author.
3. Course pack: assignment descriptions, graduate school lecture materials, lab assignments, course pack handouts, book chapters, & journal articles.
    a. Carr, J. E., & Burkholder, E. O. (1998). Creating single-subject design graphs with Microsoft Excel™. *Journal of Applied Behavior Analysis, 31*, 245-251.
    b. Cooper, J. O., Heron, T. E., & Heward, W. L. (2007). Applied behavior analysis. Columbus, OH: Merrill. **(Chapters 4, 6, 8 & 9)**
    c. Derrickson, J. G., Neef, N. A., & Cataldo, M. F. (1993). Effects of signaling invasive procedures on a hospitalized infant's affective behaviors. *Journal of Applied Behavior Analysis, 26*, 133-134.
    d. Gravetter, F. J., & Wallnau, L. B. (2002). Essentials of statistics for the behavioral sciences (4th ed.). Belmont, CA: Wadsworth/Thomas Learning. **(Chapters 3 & 4)**
    e. Heard, K., & Watson, T. S. (1999). Reducing wandering by persons with dementia using differential reinforcement. *Journal of Applied Behavior Analysis, 32*, 381-384.

f. Ludwig, T. D., Gray, T. W., & Rowell, A. (1998). Increasing recycling in academic buildings: A systematic replication. *Journal of Applied Behavior Analysis, 31*, 683-686.
g. Peterson, L., Homer, A. L., & Wonderlich, S. A. (1982). The integrity of independent variables in behavior analysis. *Journal of Applied Behavior Analysis, 15*, 477-492.
h. Wolf, M. M. (1978). Social validity: The case for subjective measurement or How applied behavior analysis is finding its heart. *Journal of Applied Behavior Analysis, 11*, 203-214.

ORGANIZATION

Lecture will generally last 1-hour 40-minutes and cover material from the textbook and other sources. During this time you may also begin your lab assignments. The *Lab* section will last between 30-min to 1-½ hours. During lab time, you will be completing lab assignments, hear instructions on how to prepare your projects, take time to plan and conduct your research projects, and compete data entry and analyses. *Recitation* will be the last portion of the class and is time devoted to working individually and in groups on assignments, papers, and presentations. I will be available during that time to offer individual assistance regarding papers and assignments.

READINGS

All reading from the textbook or other sources should be done BEFORE each class session. If for any reason I believe students are not coming to class prepared with the days reading, a pop quiz may be given. Pop quizzes will generally be 5-6 short-answer or fill-in the blank questions and worth a total of 10 points. There are no make-ups for pop-quizzes. If you are not in class the day a pop-quiz is given you will receive a zero.

REQUIREMENTS & EVALUATION OF STUDENT PERFORMANCE

Research article review & critique	9%
Introduction & references draft	3%
Methods draft	3%
Results and tables/figures draft	3%
Discussion & abstract draft	3%
Final paper	9%
Project presentation	3%
Poster	3%
Lab assignments (#1-5)	10%
IRB tutorial	3%
PsycINFO assignment	3%
Exams 1-4	18%
Quizzes	16%
Proposal for group projects	2%
Excel graph assignment	2%
APA format report	3%
Data for project	2%
Class attendance & participation	5%

COURSE GRADE

A = 92% or higher
A- = 90-91.4%
B+ = 86-89.4%
B = 82-85.4%
B- = 80-81.4%
C+ = 76-79.4%
C = 72-75.4%
C- = 70-71.4%
D+ = 66-69.4%
D = 62-65.4%
F = below 61.4%

OTHER REQUIREMENTS

1. NIS account (go to academic computing in lobby of Palmer wing if you do not already have one).
2. Flash drive

ABSENCE & LATENESS

Class attendance and participation is worth 5% of your final grade, as stated above. You will receive 2 points per class. Late arrival to class or leaving early from class results in a loss of 1 point; absence results in a loss of 2 points. You are responsible for anything that occurs during class, including announcements, and changes of schedule. This means that if you miss class you should find out from another student what you missed. Also, because there are a number of graded assignments, if you miss a class you may miss a graded assignment. There are also no make-up exams.

LATE ASSIGNMENTS

All written assignments are due at the beginning of class. Graded assignments will lose one letter grade per class session that they are late.

CANCELED CLASSES

If an exam (or quiz) cannot be given because classes are canceled or for any other reason, the missed exam (or quiz) AND the scheduled exam (or quiz) will be given the day we return even if there has been no lecture over the material and even if there is another scheduled activity for that day. Likewise, if a non-exam (or quiz) class is canceled for any reason, the exam (or quiz) will be given on the scheduled day even if there has been no lecture over the material.

NOTE ON ACADEMIC INTEGRITY

Students are encouraged to share their opinions, ideas and information from the class with other students. However, graded assignments must be completed independently, except for designated joint projects. In papers, all material based on another source must be referenced. Any direct quotes must be in quotation marks, referenced with a page number, and included in a list of references. Failure to observe these guidelines constitutes plagiarism and is grounds for failure in the course. You are responsible for making yourself aware of and understanding the policies and procedures in the Undergraduate Catalog that pertain to Academic Integrity. These policies include

cheating, fabrication, falsification and forgery, multiple submission, plagiarism, complicity and computer misuse. If there is reason to believe you have been involved in academic dishonesty, you will be referred to the department chair who will decide if the situation warrants further action.

RESOURCES

The campus has a number of open access computer labs available for those of you who do not have access to computers at home. For help with writing, the University Writing Center offers workshops and other services. Students are encouraged to call 323-343-5350 for assistance with improving writing skills.

ASSIGNMENTS

DAILY QUIZZES

At the end of most classes, there will be a timed, 5-minute quiz (multiple-choice, true-false, fill-in) on the assigned readings and lecture for that day (there will be approximately 15 quizzes overall). The quiz will begin at the completion of lecture for that day and last 5 minutes. Students not in class for the scheduled time period will not be permitted to take the quiz. There will be no exceptions, so be on time. I will drop your lowest two quiz scores before grade calculation.

EXAMS

There will be four traditional exams this semester, each covering approximately 2-3 course topics. The exams will consist of primarily objective (e.g., multiple-choice, true/false) questions. There may be some short-answer questions. For each exam, you must bring a #2 pencil and scantron. You will have the entire scheduled lecture time to complete your exam. Make-up exams will only be allowed for extreme and documented emergencies and only if I am informed within 24 hours after the exam time.

REGRADE POLICY

If a student disagrees with an evaluation of a quiz or exam item, a regrade request may be submitted. Such requests must be submitted within one week of the return of the quiz or exam containing the item in question. The request must contain a full explanation of the point of contention, as well as a copy of the quiz or exam. Regrade requests will be evaluated only once, and may result in no grade change, or a higher or lower grade being awarded.

RESEARCH ARTICLE CRITIQUE

You will be required to read an assigned research article from the *Journal of Applied Behavior Analysis* and turn in a 5-page written critique. See the handout in your course pack for more details. Instructions for this assignment will be presented in class on a day to be announced. This assignment is due at the beginning of class on May 28.

PSYCINFO ASSIGNMENT

PsycINFO is the computerized (web-based) database of the entire psychological literature (journal articles, books, book chapters). You will be required to perform a rudimentary search in the PsycINFO database and turn in your printed results for course credit. See the handout in your course pack for more details. This assignment is due at the beginning of class on April 9.

EXCEL™ GRAPH ASSIGNMENT

You will be required to use Microsoft ExcelTM, which is available in all of the computer labs, to create a graph of an ABA withdrawal/reversal design. You are to use the instructions found in the Carr and Burkholder (1998) article to complete the assignment. Instruction for this assignment will be presented in class on January 30. You will also be given your own data with which to create the graph. See the handout in your course pack for more details. This assignment is due at the beginning of class on April 28.

APA FORMAT REPORT

You will be required to take a brief research report from the Journal of Applied Behavior Analysis and re-type it into APA format. Instruction for this assignment will be presented in class on January 30. See the handout in your course pack for more details. This assignment is due at the beginning of class on March 11.

LAB ASSIGNMENTS

Lab assignments include various exercises to be completed during lab time. Handouts for lab assignments are in your course pack. It is your responsibility to bring these handouts with you to class each day. These will be due either at the end of lab or in the following class session before lecture. The points for these assignments vary and some lab assignments not listed on the syllabus may be added as the quarter progresses. Some activities relating to preparation for your research projects (such as IRB tutorial and project proposals) will be considered lab assignments since you will be working on these during lab. The points you receive for these assignments will be included in points for lab assignments that make-up 14% of your total grade.

COURSE PACK HANDOUTS

Course pack handouts are located in the course pack. It is your responsibility to bring these handouts with you to class each day.

DRAFTS

Receiving feedback is an important part of learning to write a research paper. You will be required to turn in drafts of portions of your research paper. These drafts will be graded similarly to the final paper and you will receive points for these drafts. You will be given feedback on these drafts so that you can make changes before you turn in the final paper for final points.

FINAL PAPER

For this assignment, you will work with a group to design and conduct a study. Individually, group members will be required to write an APA style paper. *Each group member must turn in his or her own independent paper and drafts.* This paper will include a title page, abstract, introduction section (literature review), method, results, discussion, tables, figures, and references.

PROJECT PRESENTATION

In order to gain experience doing oral presentations, group members will be required to use PowerPoint® to present the results of their study and to create graphics and figures to demonstrate these results. Group members can work together on this presentation, but each person will receive an individual grade for their part of the oral presentation

and project. In addition each person in the group will anonymously rate each other and themselves on their contribution to the group. The average score from the anonymous ratings will be added to each person's individual grade. Therefore, it is imperative that each person in the group completes an equal share of the responsibilities for the project.

POSTER

Each group will also be required to make a single poster to present the results of their study. This poster should contain an abstract, introduction, method, results, and discussion section.

PROPOSAL FOR GROUP PROJECTS

Each group will turn in a proposal for their projects. Proposals for group projects will be due at the beginning of class on April 23rd.

DATA FOR PROJECTS

Each group will submit data from their projects. Data from projects will be due at the beginning of class on May 14th.

COPIES OF ASSIGNMENTS

You must keep back-up copies of all written assignments for at least 60 days after the designated due date. Assignments emailed to the instructor will not be accepted.

SCHEDULE

Note: I reserve the right to alter the schedule at any time.

Week	Day & Date	Lecture Topic	Readings	Lab	Assignments due
Week 1	Tues: 3/31	No class (Cesar Chavez Day)	None	None	None
Week 1	Thurs: 4/2	Course introduction, syllabus	Distribute student projects assignments (excel graph, APA format report, & article critique)	Response card training Instructions for article critique	Form groups (2-5 people)
Week 2	Tues: 4/7	Thinking critically about research	Martella et al. - Chp. 1 APA 1-30	Guidelines for designing final class project (course pack)	Lab assignment #1: Scientific inquiry
Week 2	Thurs: 4/9	Library session (meet at JFK Library, 6:10-7:40pm, Lec 1, 1st floor (behind ref desk) Fundamental issues for interpreting research	Martella et al. - Chp. 2 APA 31-69	Sample Consent & Debriefing form (course pack) IRB tutorial Developing research ideas (Lab assignment #2)	Lab assignment #2: Paper topics discussion
Week 3	Tues: 4/14	Measuring behavior and data collection;	Cooper, Heron, & Heward – Chp. 4; Carr & Burkholder (1998)	Making graphs in MS Excel	Lab assignment #3: Hypothesis and operational definitions
Week 3	Thurs: 4/16	**Exam #1**			PsycINFO assignment due
Week 4	Tues: 4/21	Reliability, validity & interobserver agreement	Martella et al. – Chp. 3	Bring a magazine to class (for Lab assignment #4)	Lab assignment #4: Developing an observational coding system
Week 4	Thurs: 4/23	Surveys & historical research	Martella et al. – Chp. 13 (pp. 449-469)		Proposal for group project due Turn in IRB tutorial

Week	Day & Date	Lecture Topic	Readings	Lab	Assignments due
Week 5	Tues: 4/28	Correlation research	Martella et al. – Chp. 7 (pp. 200-216; 225-246)	APA writing style (for APA format report) & how to write an introduction section Final paper checklist (course pack)	Lab assignment #5: Confounds Excel graph assignment due
Week 5	Thurs: 4/30	Causal-comparative research	Martella et al. – Chp. 6	Writing a method section Writing a results section Making tables and figures in excel	References for group project
Week 6	Tues: 5/5	Getting into graduate school	Course pack handouts	Gathering & entering data in excel Making tables and figures in excel	Introduction and references drafts due
Week 6	Thurs: 5/7	**Exam #2**			Method draft due
Week 7	Tues: 5/12	Descriptive Statistics	Gravetter & Wallnau – Chps. 3 & 4	Gathering & entering data in excel Writing a discussion section & abstract	Results and tables/figures draft due
Week 7	Thurs: 5/14	Group designs	Martella et al. – Chp. 5 Derrickson et al. (1993) Heard & Watson (1999) Ludwig et al. (1998)	Preparing a talk and making a poster (course pack) Poster sample Presentation sample	Data for project due APA format report due

Week	Day & Date	Lecture Topic	Readings	Lab	Assignments due
Week 8	Tues: 5/19	Constructing and interpreting graphic displays of behavioral data	Cooper, Heron, & Heward – Chp. 6	Work on posters & presentations Instructions for article critique (review)	Discussion and abstract drafts due
Week 8	Thurs: 5/21	**Exam #3**		Work on posters & presentations	
Week 9	Tues: 5/26	Single-case designs: reversal & alternating treatments design Single-case designs: multiple-baseline & changing criterion	Cooper, Heron, & Heward – Chp. 8 Cooper, Heron, & Heward – Chp. 9	Final data analysis Work on posters & presentations	
Week 9	Thurs: 5/28	Social validity & treatment integrity Ethics	Wolf (1978) Peterson, Homer & Wonderlich (1992)	Work on posters & presentations	Research article critique due
Week 10	Tues: 6/2	Posters & presentations		Posters & presentations	
Week 10	Thurs: 6/4	Posters & presentations		Posters & presentations	Final paper due
Finals Week (June 8-12)	Tues: 6/9 7:30pm-10pm	**Exam #4**		Posters & presentations	