Course Syllabus Fall 2008

PSYCHOLOGY 202: Research Methods in Psychology, Lecture

California State University, Fullerton
T&Th: 8:30am-9:20am (1 hour TBA)
Class Location: H-523

Professor:

Russ Espinoza, Ph.D., M.F.T.
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Office Hours: Tues. & Thurs. 1-2pm, 1 hour to be arranged On-Line, and by appointment

Teaching Assistants

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Office Hours: TBA

Course Materials & Equipment

Text: Orcher, L. T. (2005), Conducting Research: Social and Behavioral Science Methods. Pryczak, Glendale, CA.

Lectures, Powerpoints, and Assignments will be pasted on Blackboard for each week's class. Make sure you are able to print these out, read through them (before class), and bring them with you to class.

***** Get a Calculator and bring to class everyday *****
***** Get a 3-ring binder to keep class printouts in (separate into lecture/lab, and units 1-4) *****
***** Get a FLASHDRIVE (USB drive) for Labs so you can do the in-class laboratory assignments and print them off at home, in the library, or computer labs around campus *****

Introduction to the Course

In Psychology 202 (Research Methods) you will learn about two important sets of skills: 1) the ability to design, complete, interpret, and report empirical research to test hypotheses derived from Psychological theory or its application, and 2) the ability to critically evaluate research produced by others and to propose changes in the design, analysis, or interpretation of it.

You might not be planning a career as a research psychologist, and many professional psychologists do not themselves contribute to the research literature. However, all psychologists must be competent "consumers" of the psychological research literature in their area of expertise, whether it is clinical, counseling, social, consulting, educational, law-psych, I/O, human resources, human factors, or some other area of psychology.

Also, most jobs held by professional psychologists require a substantial amount of data analytic skill and report writing ability, whether it is to document decision making, obtain funding, to provide evidence for the efficacy of service delivery, or to contribute to the professional literature.

In addition, the ability to produce competent, theoretically relevant empirical research is usually the "ticket for admission" to a career as a professional psychologist. Completion and presentation of your own independent research (say, an Honors Thesis or presentation/poster at a student research conference) is often helpful evidence that you can "do research" when applying to

graduate school. And, lastly, most Ph.D. programs require *at least* two empirical research projects -- the Master's thesis and the Ph.D. dissertation.

What you will learn in this course is the "common sense of the discipline of Psychology". Everybody who engages in psychology – theoretical or applied, academic or professional, uses these principles and processes every day. And everything else that you learn while getting your degree in this major is based on these principles and procedures! I think that knowing how psychologists acquire "new knowledge" and how data collection and analysis fit into this process is a pretty cool thing. But I am a psychologist (i.e. an academic nerd) so don't trust me on this! I will try, desperately, to infuse the enthusiasm and passion I have for this subject into you this semester. No matter what you have planned for your future, or how much those plans change, a practical knowledge of this material and these skills will increase your chances for success – I really believe that!

Specific Course Goals

By the completion of this course you should be able to:

1. Critique (i.e., identify and evaluate the components of) a summary of a research project, including: the purpose and research hypotheses, the sampling and subject assignment procedures, IV manipulation and DV measurement procedures, confound control, and the statistical analyses & their interpretations.
2. Generate original and meaningful research, including the details of: purpose, hypothesis, research methodology, data collection and statistical analysis procedures.
3. Complete data collection and collation procedures based upon the operational definitions of a research design.
4. Select and perform the appropriate statistical analyses based upon the explicit research hypotheses and/or the questions and comparisons implicit in the research design and variable set.
5. Employ a computer statistical package to perform analyses of experimental data, including how and when to augment that package with hand-calculated statistical analyses.
6. Communicate the purpose, hypotheses, procedures, data, analysis results and interpretations of a research project using the conventional written format and style (i.e., APA-style papers).
7. Use a computer word processing package to prepare manuscripts and other written products.

Sections of the Course

The expected sections of the course (things could change) are:

1. Research Hypotheses, Validity & Research Designs
2. Basic Data Analysis
3. Analysis of Larger Research Designs
4. Psychometrics & Advanced Research Designs and Data Analysis

Course Grade

Your course grade will be based upon (this might change): **four lecture exams** (**50% of your grade**), **homework assignments from text** (**10%**), **laboratory assignments** (**25%**), **laboratory project/paper (10%), presentation (2.5%), and lab final exam (2.5%)**. Attendance and participation in lecture and laboratory will be noted and used in the assignment of the final grades, especially decisions about "borderline" grades. The ***actual*** points for each part of your overall grade will vary per section. More about this in class.

Letter Grade	Percentage
A	90% an above
B	80 - 89%
C	70 - 79%
D	60 - 69%
F	less than 60%

Please note: You cannot receive a passing grade in the class unless you complete all of the out-of-class laboratory assignments and both the lecture and laboratory final exams.
Please note: A "C" is the minimum grade for this course to count toward a Psychology major
Please note: Consideration of "Withdraw" and "Incomplete" grades will be according to the guidelines provided in the *Undergraduate Catalog* and the *Schedule of Classes*

As you can see, the homework and in-class assignments make up a great deal of your grade so it is imperative that you do not miss class and that you turn in your assignments ***ON TIME***!.

Homework
There will be "lots" of homework and in-class assignments throughout the semester. The purpose is to give you an opportunity to "try out" the material and procedures and to assess your understanding. You are expected to complete *Homework Assignments* before the beginning of the next lecture meeting. Because of the cumulative nature of this course (each topic is a building block for topics that follow), timely completion of the activities is important and will be richly rewarded. The grading system for the homework assignments is designed to motivate you to keep up. Research over the past several years has clearly demonstrated that those who complete and perform well on homework get better exam grades and, consequently, better grades in the course. The best thing is to finish the exercise before the next class. Each class usually builds upon previous classes, so the better you know the earlier material the better prepared you will be for future material

Readings
You will notice that the readings from the Orcher text are separated by subject matter between the lecture and the lab. Some homework assignments from the text will be turned in for lecture and some for lab. NOTE THE DIFFERENCE!

Please note: If you have difficulty with any assignment -- whether conceptual or with execution -- you should contact me or the T.A.(email is best because it automatically times and dates your correspondence). Depending upon the nature of the difficulty, the "due date" for an assignment may be adjusted but only if you contact me before that assignment is due.

Attendance
Yours -- You are responsible for all of the information, materials, assignments, due dates, etc. that are presented in class lectures and on Blackboard, including any changes that are made. Some absences are unavoidable, and I will help you to “recapture” missed material (usually by suggesting reading you should do or encouraging you to get notes and other information from other students). If an absence can be anticipated, I can often be of greater help.

Mine – Because of various commitments (typically, attending professional conferences), I may be gone. When this happens the substitute will usually be a graduate student who is particularly skilled with this material.

1 Hour TBA

In the course catalog and course description for *PSYC 202: Research Methods in Psychology* there is 1 hour that is *to be arranged* (TBA). This hour will be covered by the semester long Laboratory Experiment. Each week we will be conducting an actual study that will be run, analyzed, and presented by each of you at the end of the semester. More regarding the Laboratory Experiment is covered in the Lab syllabus.

Academic Honesty

The consequences for cheating on any examination or quiz, or plagiarism (e.g., the use of unreferenced material in any laboratory writing assignment) will be: 1) failure in the course, and 2) referral of the matter to the office of Student Affairs for possible action by the Judicial Board as provided for in the CSUF Student Handbook. The issue of academic dishonesty for homework and assignments is somewhat less clear, and requires more of an explanation. The purpose of the homework, and many of the assignments, is to give you a chance to practice various skills (reading, interpreting, and computational skills). Thus, it makes good sense for you to work together with other members of your class. **However, the final product you submit must be your own work and in your own words.** An example should help: You are strongly encouraged to get together with your classmates to determine the components of a good definition for the terms which are part of the first several homework assignments. However, when you write your answers on the homework sheets, put them in your own words, and use your own examples. Evidence of dishonesty on any homework or assignment (including exact or very similar phrasing, order of topics, examples, computational examples, patterns of mistakes, etc.) will be addressed via a two step process: The first time "an incident" occurs we will discuss it and you will have the opportunity to re-do the homework assignment. Any additional "incident" will, again, lead to: 1) failure in the course, and 2) referral of the matter to the office of Student Affairs for possible action by the Judicial Board as provided for in the BSU Student Handbook. You will do fine…trust your intellectual capability.

Persons with Disability

It is University policy to provide, on a flexible and individualized basis, reasonable accommodations to students who have disabilities that may affect their ability to participate in course activities or to meet course requirements. Students with disabilities are encouraged to contact me as soon as possible to discuss their individual needs for accommodations and to give him a copy of the documentation provided by the Office of Disabled Student Development. All such conversations will be held in the strictest confidence. The University requires students with disabilities to register with the Office of Disabled Student Services (DSS), located in UH-101 and at (714) 278 – 3112, in order to receive prescribed accommodations appropriate to their disability. Students requesting accommodations should inform the instructor during the first week of classes about any disability or special needs that may require specific arrangements/accommodations related to attending class sessions, completing course assignments, writing papers or quizzes/tests/examinations."

Course Workload and Suggestions

Little of the material in this course is difficult, but the difficulty of the course comes from the sheer amount of material and the need to remember and apply large portions of it at any one time. For some of you, this will be the last formal presentation of this information you ever receive. For others, this is your best opportunity to prepare yourself for the rigorous and demanding training you will receive in graduate school. With these things in mind. **You should expect to "do something" for each class and laboratory meeting.** It may be reading, homework, preparing for exam reviews, whatever.

Sometimes this will require only two or three hours; other times it will require more. While I realize that you have other classes and other commitments beyond schoolwork (i.e., "a life"), to take full advantage of the learning opportunity provided by this course (and to get the A to prove you have done so) will require a considerable commitment of time and energy.

Lecture Schedule (subject to change)

***** Materials on Blackboard *****

Schedule for Unit #1 (subject to change) – Research Hypotheses, Designs & Validity		
Date	***Topic & Readings***	***Have these Handouts with you for Class***
Aug. 26	**Intro to Course** **Research Hypotheses** **Pages 1-6 of the PSYSC 202 Manual**	**Intro to Psyc202** **Knowledge, Research Hypotheses & Programmatic Research**
Aug. 28	**External Validity**	**External Validity**
Sept. 2	**Research Designs**	**Internal Validity**
Sept. 4	**Research Process**	**Research Designs**
Sept. 9	**Data Collection**	**Research Process**
Sept. 11	**Data Collection – Validity & Ethics**	**Data Collection** **Validity & Ethics**
Sept. 16	**Catch-up & Review for Exam #1** **Review Study Questions for Exam #1**	
Sept. 18	**Unit #1 Exam**	

Likely Schedule Unit #2 (subject to change) -- Basic Data

Analysis		
Date	**Topic**	**Have these Handouts with you for Class**
		SPSS Handouts **Hand Calculation Handouts**
Sept. 23	**Data & Univariate Stats**	**Variables, Summaries & Univariate Stats Applied to Research Designs**
Sept. 25	**Data & Univariate Stats, cont.**	**Practice with Univariate Stats** **Univariate Stats on SPSS** **Univariate Stats calculations**
Sept. 30	**Statistical Hypothesis Testing**	**Statistical Hypothesis Testing**
Oct. 2	**ANOVA**	**BG & WG ANOVA Applied to Research Designs** **2BG ANOVA** **2BG ANOVA on SPSS** **2BG ANOVA Practice answers** **BG ANOVA calculations** **F-table** **2WG ANOVA** **2WG ANOVA on SPSS** **2WG ANOVA Practice answers** **WG ANOVA calculations**
Oct. 7	**Pearson's r & X^2**	**Pearson's r & X^2 Applied to Research Designs** **Pearson's r** **r on SPSS** **Scatterplots** **Correlation Practice answers** **r calculations** **r-table** **Pearson's X^2** **X^2 on SPSS** **X^2 Practice answers** **X^2 calculations** **X^2-table**
Oct. 9	**Details of Bivariate Stats**	**Details of Bivariate Tests Applied to Research Designs** **Math Lesson**
Oct. 14	**Bivariate Practice**	**Jargon, Cognitive Structure & Script Applied to Research Designs**
Oct. 16	**Effect Size & Power Analysis**	**Effect Size & Power Analysis Applied to Research Designs** **Power & Formula Table**

		Effect Size Computator Effect Size & Power Rules
Oct. 21	Catch-up & Review for Exam #2	Review Study Questions
Oct. 23	Unit #2 Exam	

Likely Schedule Unit #3 -- Multiple Groups Designs		
Likely Date	Topic	Have these Handouts with you for Class
Oct. 28	k-group Designs ANOVA & Pairwise Comparisons	Multiple Groups Designs k-group ANOVA Applied to Research Designs kBG ANOVA on SPSS kWG ANOVA on SPSS LSD/HSD
Oct. 30	k-group ANOVA – Effect Sizes & Power	k-group Effect Size & Power Applied to Research Designs Effect Size Computator Power Table k-group ANOVA Practice
Nov. 4	k-group X^2	k-group X^2 (pdf) k-kgroup X^2 on SPSS k-group X^2 Practice
Nov. 6	Inference & Replication	Inference & Replication Replication Practice
Nov. 11	Unit # 3 Exam	Unit #3 Exam

Likely Schedule Unit #4 -- Advanced Designs & Data Analysis		
Likely Date	Topic	Have these Handouts with you for Class
Nov. 13	Intro to Psychometrics	Psychological Measurement (pdf)
Nov. 18	Reliability & Validity	Reliability & Validity

		Cronbach's α
Nov. 20	Factorial Designs	Intro to Factorial Designs
Nov. 25 & 27		Thanksgiving Break
Dec. 2	Describing Factorial Effects	Describing Factorial Effects Factorial practice
Dec. 9	Factorial Hypotheses	Factorial Hypotheses
Dec. 11	2x2 ANOVA & Programmatic Research	Kinds of Factorial Designs & Their Uses in Programmatic Research 2x2 BG ANOVA on SPSS 2x2 MG ANOVA on SPSS LSD/HSD 2x2 BG Factorial practice 2x2 MG Factorial practice
Dec. 18 9:30-11:30	Unit #4 Exam GOODBYE AND GOOD LUCK!	

DEPARTMENT OF PSYCHOLOGY
Student Responsibility Code

The Department of Psychology is dedicated to providing you with the highest quality educational program. In order to maximize the benefits of our program, it is important that you meet your responsibilities as a student. Listed below are some of the responsibilities to be met.

Advisement – Please familiarize yourself with university and departmental policies and deadlines.

You should obtain and read pertinent sections of the University Catalog, Class Schedule booklet, and instructor course outlines. If you are a psychology major or minor, you should read the Psychology Student Handbook and meet with a psychology undergraduate advisor (Room H-830J) at least once a year to review your study plan and career goals. The Handbook is available to you at no charge from the Psychology Department Office (H-830M) or from the Psychology Undergraduate Advisement Office (H-830J). Please also consult http://hss.fullerton.edu/psychology for further information.

Class Attendance – Please remember that you are responsible for attending all classes and laboratory meetings, and for being on time. The benefit you derive from your education is often lost if you are lost too!

The Learning Environment – Please be mindful of your fellow students and the instructors.

Behavior that persistently interferes with classroom activities may be subject to disciplinary action. Such behavior may include, but is not limited to, cell phones or beepers ringing, entering the class late, leaving the class prematurely, eating in class or chatting with other students during class. A student responsible for continual disruptive behavior may be required to leave class pending discussion and resolution of the problem.

Workload – Please be realistic in adjusting your outside responsibilities (work, family, social obligations, etc.) in order to allow sufficient time for your education.

In order to receive a quality education, you must not overload yourself. As a general rule, you should allow two to three hours of study outside of class, for each hour spent in class. Additional information on this topic is discussed in the Psychology Student Handbook.

Academic Integrity – The world of academia is completely dependent on straightforward honesty and integrity, and it protects these values in many ways. Your ability to think of yourself as an educated person depends on these same values. For these reasons the University imposes serious penalties for breaches of academic honesty and cases of suspected breaches of honesty may be reported. Please familiarize yourself with the academic integrity guidelines found in the current student handbook.

- Work produced through academic misconduct (e.g., cheating on exams, plagiarism) will be dealt with according to the policies of the academic integrity guidelines. Students who violate university standards of academic integrity are subject to disciplinary sanctions, including failure in the course and suspension from the university. Since dishonesty in any form harms the individual, other students and the University, policies on academic integrity are of great concern to us all.
- Your exams, homework, research reports, and term papers should reflect your own work, unless your instructor directs you otherwise.
- Proper methods of referencing outside sources of information should be used at all times. Additional information on this requirement may be obtained by reading the University Catalog section on Academic Dishonesty.

Special Needs – If you need special assistance in the classroom, please inform the instructor in order to facilitate contact with Dr. Paul Miller at the office of Disabled Student Services located at UH-101, (714) 278-3117.

If you have any questions concerning the above responsibilities,
please contact your psychology instructor or the Psychology Department Chair.
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