Psych 303 -- Research Methods

Fall 2005 Tues/Thurs 4:00-5:20pm 132 Lillis Hall

Instructor: Veronica Perez Email: vperez@uoregon.edu Office Hours: 320 Straub Hall, 346-4990 Tuesday 2:30-4:00pm or by appointment

Textbook: Research in Psychology: Methods and Design, 4th Ed. (C. James Goodwin)

<u>Blackboard website</u>: blackboard.uoregon.edu You *must* have an uoregon.edu email account and have access to blackboard to participate in this course!

Teaching Assistants:

Cara Bohon

Lab sections: <u>Thursday 8:30-9:50am</u> 180 Straub Hall Email: cbohon@uoregon.edu Office hours: Straub 139 Wednesday 3:00-4:00pm or by appointment

Sean Laurent

Lab section: <u>Thursday 12:00-1:20pm</u>; <u>Thursday 2:00-3:20pm</u> 180 Straub Hall Email: slaurent@uoregon.edu Office hours: Straub 341 Tuesday 12:00-2:00pm or by appointment

<u>Course Content</u>: This course aims to provide you with the tools necessary to create, interpret, and evaluate scientific data. Although the course will be focused on research in the field of psychology, the basic concepts that we discuss will be relevant to your understanding of most scientific studies. The topics we will discuss will include: the assumptions of the scientific method, experimental design, critical analysis of existing research, and data analysis.

<u>Course Evaluation</u>: Course grades will be based on 3 exams (55%), the final project report (30%), and performance during lab sections and in-class activities (15%). Failure to complete the final project *or* more than one of the exams will be grounds for failing the course. If you know that you cannot attend class when exams are scheduled, do not take this course. No makeup exams will be administered for any *preventable* schedule conflict. Exams will focus on the material from the section of the course just prior to them. However, some concepts will necessarily build upon those that were learned in earlier sections.

<u>Late Assignments</u>: The final project in particular will be subject to a very strict deadline (Monday December 5th, 12:00PM). *Late projects will be penalized one letter grade per day, starting immediately after the time when the projects are due.* There will be no exceptions to this rule for any reason.

Exams will cover material in the text *and in lecture*. While there will be substantial overlap between lecture and text materials, we will cover additional material during lectures. So you will need to attend lectures in order to do well in the course.

Research projects will be created and conducted in small groups. Groups will have the opportunity to select the topic of their projects from a selection of options detailed in the *Project Ideas* document on Blackboard. Each group will build their own research experiment, participate in data collection, and perform statistics on the data. The final project report will be written in APA format and contain 5 sections: Abstract, Introduction, Methods, Results, and Discussion. *Each individual member of each group will be responsible for his/her own project reports. Plagiarism will be grounds for failure of the course.

<u>Lab sections</u>: Attendance in lab sections is mandatory, and will be a factor in the course grade. We will use these labs to extend discussion of important concepts, and to provide some hands-on experience and guidance with statistical software and experimental procedures. Students will use this time to learn how to create, conduct, and write-up their research project.

| Date | Lecture Schedule | Readings |
|-------------|---|--|
| Sept 27 | Introduction | |
| Sept 29 | What is the scientific method? | ch. 1 & 3 |
| Oct 4 | Basics of Experimentation | ch. 5: pg. 145-158 |
| Oct 6 | More on Experiments & Ethical issues | ch. 2 |
| Oct 11 | Ethical issues cont. | ch. 2; Appendix B |
| Oct 13 | Reliability, Validity, Scales of measurement | ch. 4: pg.107-122; ch. 5: pg.159-171 |
| Oct 18 | Sampling | ch. 12: pg.405-409 |
| Oct 20 | Exam 1 | |
| Oct 25 | Statistics: statistical power, significance testing null hypothesis testing | ch. 4: pg. 123-144 Appendix C: pg.482-485 |
| Oct 27 | Statistics: statistical power, significance testing null hypothesis testing | ch. 4: pg. 123-144 |
| Nov 1 & 3 | Observation, Survey, Correlational Research | ch. 9 & ch.12: pg. 391-402; 409-434 |
| Nov 8 | Exam 2 | |
| Nov 10 & 15 | Experimental design: within vs. between subject designs order effects bias effects floor effects, ceiling effects | ch. 6 & 7 Appendix C: pg. 485-494 |

| Dec 1 | Exam 3 | |
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| Nov 29 | Quasi experiments & Small N designs | ch. 10 & 11 |
| Nov 24 | Thanksgiving No Class | |
| Nov 22 | Multiple factor experimental designs: understanding <i>interactions</i> between factors; Quasi experiments | ch. 8 & 10 * Draft of DISCUSSION DUE |
| Nov 17 | Multiple factor experimental designs: | ch. 8 |

Reminder: Final Project Papers will be due on Monday, December 5th at 12:00 PM in the main office of the Psychology Department (Straub 131).