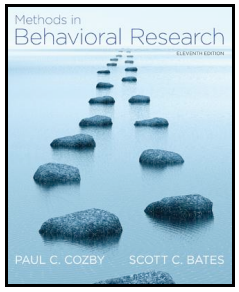
Fall 2012 University of Oregon

# Research Methods

Psychology 303




## Lecture

**Instructor:** Scott A. Reed, M.A.
**E-mail:** sreed@uoregon.edu
**Phone:** 346-1585
**Office Hours:** MW 10:30-11:30am in 232 LISB, or by appt.
**Lecture:** MW 8:30-9:50am in 242 GER

## Lab

**Leslie Roos**
Office: TBD
Office Hours: F 10:00am-12:00pm
Email: lroos@uoregon.edu
Lab Section: R 8:30-9:50am in 180 Straub
F 8:30-9:50am in 180 Straub

**Smrithi Prasad**
Office: TBD
Office Hours: T 2:00-4:00pm
Email: smrithi@uoregon.edu
Lab Sections: F 2:00-3:20pm in 180 Straub
F 4:00-5:20pm in 180 Straub

## Course Description

This class is a foundation course for the scientific study of psychology. Throughout the term, you will learn how to test scientific hypotheses, design experiments, evaluate research conclusions, and conduct your own research studies. In many psychology courses, you learn *what* human behavior is or *why* it occurs, but this class is much more important, for it teaches *how* to study human behavior and arrive at those conclusions, and how to think like a psychologist. The material we will cover in this course will provide you with the ability to design research studies, conduct proper analyses to test the predictions of a study, and to critically infer what conclusions can be made based on the design and analyses of a study. In addition, this course will teach you how to evaluate the validity of others' research, which if not properly understood, can often be misleading. Science is often concerned with the pursuit of truth, and in the study of psychology, it is this course that teaches you the correct way to pursue it.

## Course Pre-Requisites

In addition to WR 121, 122, successful completion of Psychology 302 (Statistics) is a pre-requisite for this course. We will review important statistical concepts as they apply to conducting, analyzing, interpreting, and reporting research results, but this should not be 'new' material to you.

## Required and Recommended Books

**Required Books (1):**

Cozby, P. & Bates, S.C. (2012). *Methods in Behavioral Research* (11th ed.). New York: McGraw-Hill.

The textbook, *Methods of Behavioral Research*, is an excellent book that is very user-friendly. We shall set a very steady pace throughout the term, often covering multiple chapters a week, so please keep up with the readings as they will make our discussions in class much more lively and informed. In addition, the publisher of the text maintains an on-line learning center for students with quizzes, flashcards, chapter outlines, exercises, and additional links for relevant concepts. You are encouraged to use the site for supplemental material, studying, and exam preparation. The website can be found at: www.mhhe.com/cozby11e

**Additional Required Course Materials (1):**

Aplia (online course learning software from Cengage; see 'Aplia' section below for additional details)

**Recommended books (1):**

American Psychological Association. (2009*). Publication Manual of the American Psychological Association* (6th ed.). Washington, DC: Author.

## Aplia

Aplia is an online software package that provides additional course resources, including practice problem sets (i.e., non-graded), graded problem sets (i.e., homework), and study materials. All graded problem sets will be taken online through Aplia. A benefit in using this software is that on both practice and graded problem sets, feedback is provided as to why an answer is either correct or incorrect. It is strongly recommended that you spend time reviewing this feedback, as this will ensure that you have adequately grasped that corresponding topics, which will be crucial to doing well in this course as we will tend to build upon topics as the course proceeds (e.g., it is necessary to understand the fundamentals of basic experimental designs before progressing to complex experimental designs).

Registration:

1) **You can access the online Aplia site here (note that you will first need to register on the site): http://login.cengagebrain.com/**
2) If you already have an account, sign in and enter the course key **(J4WT-JHZL-FV95)** in the box provided and click the 'Register' button. If you don't have an account, click the 'Create an Account' button, enter the course key (J4WT-JHZL-FV95) when prompted, and continue to follow the on-screen instructions. Note that the name of the Aplia course is 'PSY 303, Reed, Fall 2012'.
3) Access to the Aplia course can be done online (from the CengageBrain website) or through the UO bookstore. After paying, you will have the option to purchase a physical book at a discounted price, however, this is NOT NECESSARY, as we will be using a different textbook for the course (Cozby, 11th edition), which can also be purchased from the bookstore.

## Course Points

**Lecture (300 points)**

Aplia Problem Sets: 75 points
Activity Assignments: 25 points
Midterm Exam: 100 points
Final Exam: 100 points

**Lab (200 points)**

Lab Participation: 10 points
Lab Homework: 30 points
Literature Review Paper: 25 points
Correlational Study Paper: 55 points
Experimental Study Paper: 80 points

**Total Points: 500**

## Grading

In general, written work in this course will be graded based on form (i.e., proper APA formatting, spelling, grammar, sentence structure, length), critical thinking (i.e., how well you display knowledge of the material, how well you have analyzed and evaluated the material, and how well you effectively communicate the information), and the assignment criteria that are outlined in each assignment (i.e., completing all aspects of the work assigned based on the instructions and guidelines of the assignment).

Grades will be assigned based on your total percentage points in the course (i.e., your point total/500):

| GRADE | PERCENTAGE | | GRADE | PERCENTAGE |
|---|---|---|---|---|
| A+ | 99-100% | | C | 72-77.9% |
| A | 92-98.9% | | C- | 70-71.9% |
| A- | 90-91.9% | | D+ | 68-69.9% |
| B+ | 88-89.9% | | D | 62-67.9% |
| B | 82-87.9% | | D- | 60-61.9% |
| B- | 80-81.9% | | F | 59.9% and Below |
| C+ | 78-79.9% | | | |

## Blackboard

Blackboard will be used in this course as an online resource for the syllabus, powerpoint lecture slides, activity assignments, study guides, lab materials (i.e. handouts, homework assignments, online surveys), and APA formatting resources. It is recommended that you frequently check Blackboard in order to stay up to date on the course materials that are posted from week to week. Please note that while you may have access to the lecture slides ahead of time, attending both lecture and lab will be crucial to doing well in the course. The blackboard site for this course can be found at: http://blackboard.uoregon.edu.

# Course Components

**Aplia Problem Sets (75 points):**

Each week, you will complete a graded problem set through the Aplia website (problem sets are listed under the 'home' tab). You will have the opportunity to take each problem set up to three times, where your average score will constitute your final score on a given problem set. Each problem set (for a given week) is due on Sunday by 11:00PM and cannot be completed after the date it is due. Note that once you start working on a problem set, you can always come back to it and finish it at a later time (by hitting 'Save and Continue') as long as it is before the due date. When you have finished a problem set, click the 'Grade it now' button in order to submit your responses for a grade (and subsequent feedback). You then have the option to continue to the next problem set or to take the previous problem set again (up to a maximum of three times, where your grade for that problem set is the average score from the three attempts). Note that while each Aplia problem set is graded based on a relative amount of points (e.g., the problem set for week 1 may be graded out of 59 points), your final grade on this component of the course is based on your overall percentage for all completed problem sets out of 75 points possible (e.g., if your total on all problem sets is 850/975 points, or 87.2%, the amount of points you earn towards your final grade is 87.2% of 75, or 65.4 points).

**Activity Assignments (25 points):**

Five times throughout the term, we will have an in-class activity assignment during lecture. Activity assignments involve in-class responses to either videos, written scenarios, in-class experiments, or group discussions centered around a specific topic that we cover in a given week in lecture. The purpose of these assignments is to give you hands-on practice in applying some of the more abstract concepts that we cover in lecture. No preparation is required, and each Activity Assignment is due at the end of class that day. Each assignment is worth 5 points and, since they are based on in-class/group activities that cannot be replicated outside the classroom, they cannot be made up.

**Exams (200 points):**

There will be two exams throughout the term, 1 midterm and 1 final (see Course Calendar for specific dates). Each exam will cover the textbook chapters listed in the course calendar in addition to the lecture material we covered in class. The exams will consist of multiple-choice and short answer questions. Each exam will be worth 100 points and the final exam will be comprehensive. Study guides will be handed out one week prior to the exam date, and exams will be graded and returned to you no later than the following week. You will not need to bring scantron forms.

**Lab Work (200 points):**

The lab component of the course will give you hands-on experience in conducting, analyzing, and writing up your own research studies. The majority of lab points will be based on successful completion of three papers that are conducted through the term in lab. The first is a literature review paper in which you will review the past research on a topic in psychology, and make predictions about the relevant variables based on your review. The second paper will be based on a correlational study that each lab will conduct using measures of the relevant variables from the first paper. Each student will administer these measures to five people (e.g., friends and family members) and, as a lab, the results will be analyzed and written up in an APA style paper. The third paper will be based on an experimental study that each lab will conduct using similar means of data collection. Again, the results of the experimental data will be analyzed and written up in an APA style paper. In addition to these three papers, points in lab will also be based on attendance and homework assignments. Please see the lab syllabus for further details.

## Course Expectations

**Academic Honesty:**

Group discussion outside of class is encouraged. However, all work submitted in this course must be your own and produced exclusively for this course. Copying or paraphrasing information from any source, print or electronic, without citation, is plagiarism. The use of sources must therefore be properly acknowledged and documented. The consequences of academic dishonestly will be taken seriously and are noted on student disciplinary records. If you are in doubt regarding any aspect of these issues, please come and speak with me.

**Academic Responsibility:**

Attendance is critical to earning a good grade for the course. I do not take roll, however, it is very important that you show up to class to participate. This class will be guided by University Policies that entails a standard of responsibility, honesty, and integrity for me, your classmates, and the work that you do. This also means that you should do your absolute best to attend every class meeting, and to come to class prepared and ready to participate in our discussions. There will be topics in lecture that may not be in the textbook, and there will be exam questions based on lecture material. In addition, there will be certain things we shall do in class (demonstrations, videos, etc.) to which exam questions will apply, and therefore, you must show up if you wish to do well on the exams. Finally, the quizzes will also be an indirect measure of your attendance and participation, and once again, these cannot be made up. This course has been designed to comply with the psychology department's guidelines for teaching and learning. Please review these guidelines at http://psychweb.uoregon.edu/guidelines/index.htm

## Student Accommodations

**Students with Disabilities:**

If you have a documented disability and anticipate needing accommodations in this course, please make arrangements to meet with me. Also, please request that the Counselor for Students with Disabilities, Molly Sirois, send me a letter verifying your disability. The phone number for disability services is 346-1155 and the email address is **disabsrv@uoregon.edu**.

**Students for Whom English is Not Their Native Language:**

Foreign language dictionaries are permitted during exams. Exams will be designed to take approximately one hour to complete within an hour and twenty minute period; therefore, it is unlikely that you will need additional time. However, if you find that you do need additional time to complete the exam, please make arrangements with me ahead of time.

"*If I have seen further than others, it is because I have stood on the shoulders of giants.*"
--- Sir Isaac Newton

## Learning Objectives, Activities, and Assessment

| Learning Objectives | Activities | Assessment |
|---|---|---|
| To gain an understanding of how to conduct research in psychology and how to write APA style papers. | Lectures, readings, lab activities, group discussions, lab research projects. | Exams, Aplia problem sets, lab homework, term papers. |
| To learn how to formulate and test scientific hypotheses. | Lectures, readings, group discussions, in-class exercises, lab research projects. | Exams, short answer essays, Aplia problem sets, term papers. |
| To learn the basic principles of different research designs, and what conclusions can be drawn from them. | Lectures, group discussions, readings, in-class activities, lab research projects. | Exams, short answer essays, Aplia problem sets, activity assignments, term papers. |
| To understand the concepts of reliability and validity and why they are essential to psychological measures and scientific conclusions. | Lectures, readings, group discussions, in-class activities. | Exams, short answer essays, Aplia problem sets, lab activities. |
| To understand some basic principles of statistical analyses, statistical results, and how to code data. | Lectures, readings, group discussions, lab activities and term papers. | Exams, Aplia problem sets, term papers. |
| To learn the ethical responsibilities of conducting psychological research. | Lectures, readings, in-class activities, group discussions. | Exams, short answer essays, Aplia problem sets. |
| To understand the limitations and implications in generalizing research results to larger populations. | Lectures, readings, group discussions. | Exams, Aplia problem sets. |

*"The purpose of psychology is to give us a completely different idea of the things we know best."*

*--Paul Valery*

# Course Calendar for Lecture

| Week | Date | Lecture Topic | Aplia Problem Set | Text |
|---|---|---|---|---|
| **1** | **M ~ Sept. 24** | Introduction; Course Overview | Introduction to Aplia (Practice) | |
| | **W ~ Sept. 26** | A Scientific Understanding of Behavior | 1-2) Human Inquiry & Science; Reading & Writing Research | **CH. 1** |
| **2** | **M ~ Oct. 1** | Theories and Hypotheses | 3) Hypotheses and Theories | **CH. 2** |
| | **W ~ Oct. 3** | Ethical Research<br>**ACTIVITY 1**:<br>What is Ethical? (10/3) | 4) Ethics and Politics of Research | **CH. 3** |
| **3** | **M ~ Oct. 8** | Conducting Surveys | 5-6) Survey Research; Sampling Techniques | **CH. 7** |
| | **W ~ Oct. 10** | Reliability and Validity<br>**ACTIVITY 2**:<br>Facilitated Communication (10/10) | 7) Conceptualization, Operation, & Measurement | **CH. 5** |
| **4** | **M ~ Oct. 15** | Studying Behavior; Correlational Studies | 8) Correlation and Regression | **CH. 4** (68-80) |
| | **W ~ Oct. 17** | Description and Correlation | 9-11) Frequency Distributions; Central Tendency; Quantitative Research | **CH. 12** |
| **5** | **M ~ Oct. 22** | Midterm Review | | |
| | **W ~ Oct. 24** | **MIDTERM EXAM**<br>**Wednesday, 10/24** | | |
| **6** | **M ~ Oct. 29** | Observing Behavior; Case Studies<br>**ACTIVITY 3:**<br>Observing Behavior (10/29) | 12-13) Qualitative Field Research; Unobtrusive Research | **CH. 6** |
| | **W ~ Oct. 31** | Experiments; Types of Validity<br>**ACTIVITY 4**:<br>Internal Validity (10/31) | | **CH. 4** (80-94) |
| **7** | **M ~ Nov. 5** | Experimental Designs | 14) Experiments | **CH. 8** |
| | **W ~ Nov. 7** | Conducting Experiments | 15) Research Design | **CH. 9** |
| **8** | **M ~ Nov. 12** | Complex Experimental Designs | | **CH. 10** |
| | **W ~ Nov. 14** | Quasi-Experimental Designs | 16-17) Evaluation Research; Analysis of Variance | **CH. 11** |
| **9** | **M ~ Nov. 19** | **ACTIVITY 5**:<br>In-class Experiment (11/19) | 18-19) Statistical Analyses; Hypothesis Testing | |
| | **W ~ Nov. 21** | Statistical Inference | | **CH. 13** |
| **10** | **M ~ Nov. 26** | Generalizing Results; External Validity | 20) Probability | **CH. 14** |
| | **W ~ Nov. 28** | Final Exam Review | | |
| **FINALS WEEK** | **Th ~ Dec. 6** | **FINAL EXAM**<br>**Thursday, 12/06 at 10:15AM** | | |

**NO WORK OF ANY KIND WILL BE ACCEPTED AFTER FRIDAY, DECEMBER 7th OF FINALS WEEK**