

Psychological Research Methods

PSYC 20200 Spring 2009

1. Basic Information

Instructor: Asia A. Eaton, Ph.D.
Office: Beecher 112
Office Hours: Wednesday 10:30am-12:00pm, or by appointment
Email: asia@uchicago.edu

Class: Lecture: HM 140 MW 9:30am-10:20am
Section F 9:30am-10:20am

Teaching Assistants:

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Section:	Section 1: Beecher 101	Section 2: Green 117	Section 3: SS 106
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Office Hours:	Tues 10:30am-12:00pm	Wed 10:30am-12:00pm	Friday 10:30am-12:00

2. Course Description

This course introduces the concepts and strategies used to gather scientific information about psychological phenomena, including behavioral observation, case studies, content analysis, surveys, and experiments. Exercises and assignments in the course will develop students' ability to both consume and produce scientific research. Recurrent themes in the course include the development of skills for critically evaluating psychological information in scientific journals and in the mass media, and the ethical responsibility of the researcher.

Over the duration of the course you will work in small groups (3-4 students per group) to design and execute an original research project using an experimental or quasi-experimental research design. In addition to designing your own study and collecting the data, you will also learn how to conduct basic statistical analyses, and write up the results of your investigation in accordance with APA guidelines. Each group will turn in a team research paper and will share the results of their research with the class in a science fair held on the last day of class. Through these experiences, the course will expose you in a very direct way to the process by which psychological science is done.

3. Learning Objectives

Students who complete this course will:

1. Understand what science is and how it differs from other ways of knowing
 - **Methods for Assessing this Learning Objective:** *Weekly Quizzes, Article Evaluation, Research Design Assignment, Team Research Paper, Experiment Participation*

2. Be able to articulate the processes and methods used to generate and evaluate psychological theories and phenomenon
 - **Methods for Assessing this Learning Objective:** *Weekly Quizzes, Team Research Paper*
3. Develop skill in critically evaluating "evidence" (scientific research and everyday claims)
 - **Methods for Assessing this Learning Objective:** *Weekly Quizzes, Article Evaluation, Literature Review, Team Research Paper*
4. Understand the ethical principals that apply to human research participants
 - **Methods for Assessing this Learning Objective:** *NIH Certificate, Experiment Participation, Team Research Paper*
5. Develop skill in and comprehension of every step of the research process, from literature review, to generating hypotheses, to study design, to statistical analyses, to presenting study results
 - **Methods for Assessing this Learning Objective:** *Article Evaluation, Literature Review, Research Design Assignment, NIH Certificate, Experiment Participation, Team Research Paper, and Team Poster Presentation*
6. Achieve a better understating of what research psychologists do, helping you to determine if you want to take the next step in pursuing a research career, such as joining a psychology laboratory and/or pursuing psychology graduate work.
 - **Methods for Assessing this Learning Objective:** *No formal assessment*

4. Academic Integrity

Throughout this course we will be reading and discussing ideas from eminent scholars in the field of Psychology. Their theories, research findings, and conclusions will often serve as the basis for your arguments and claims in written assignments. In this context it is **imperative** that you properly acknowledge your use of another's ideas, whether that use is by direct quotation or by paraphrase, however loose. If you consult any written source and either directly or indirectly use what you find in that source in your own work, you must identify the author, title, and page number. If you have any doubts about what constitutes "use," consult your instructor and view:

www.college.uchicago.edu/academics.discipline.shtml

5. Course Materials

Textbook: Your textbook, *Research Design and Methods: A Process Approach, 7th Edition*, by Bordens & Abbott (2008) is available at the Seminary Co-op Bookstore.

Reference Book: In writing your team research paper and in creating your team poster you must consult the *Publication Manual of the American Psychological Association, 5th Edition*, by the American Psychological Association (2001) (aka the "APA Publication Manual"). This book is available at available at the Seminary Co-op Bookstore and at the library. Although not mandatory, I highly recommend that you purchase this book if you are a psychology major or expect to continue education in psychology. Links to websites describing APA format are also available through the class website.

Additional Readings and Materials: The class website is <http://chalk.uchicago.edu> (select the PSYC 20200 website link). All additional documents, including class readings, assignments, handouts, tip sheets, and the syllabus can be found here. Class updates or changes will be posted on Chalk, but lecture notes will not be made public.

6. Quizzes, Assignments, and Grades

Grades will be based on your Weekly Quizzes (48%), Research Project Assignments (20%), Team Research Paper (20%), and Team Poster Presentation (12%)

Weekly Quizzes = 120 points maximum (for the best 12 of 14 chapters) = 48% of final grade

Research Project Assignments = 50 points maximum (for five 10-point assignments) = 20% of final grade

Team Research Paper = 50 points maximum (for five 10-point paper sections) = 20% of final grade

Team Poster Presentation = 30 points maximum (for two 15-point criteria) = 12% of final grade

250 total points possible

- 225 or above = A range
- 200 = B range
- 175 = C range
- 150 = D range
- 149 or below = F

Weekly Quizzes = 48% of your final grade

All quizzes will be in multiple-choice format. Quizzes will be administered and completed at the beginning of each Friday discussion section.

1) Sometimes the weekly quiz will cover only **one** book chapter (along with a few questions from that week's lectures) and include 10 questions worth 10 points total. Other weekly quizzes will cover **two** book chapters (along with a few questions from that week's lectures) and be twice as long and therefore worth twice as much (20 points). See the course outline for what chapters each weekly quiz will cover.

2) There will be no make-up quizzes. Your 2 lowest chapter scores will be dropped. So only the best 12 of 14 possible chapter scores will count towards your final grade! This policy is in place to allow forgiveness for accidents, emergencies, and other personal or professional issues that may prevent a student from completing a quiz or doing his or her best on a quiz. Quizzes will not be returned to students, but you may look over your quiz with the teaching assistant for your section. Quiz grades will be posted the following Monday.

Research Project Assignments = 20% of your final grade

Over the tenure of this course you will be asked to individually complete five separate assignments whose purpose is to facilitate the completion of your team research project. Each assignment is worth 10 points and no late assignments will be accepted. These assignments include the following:

Assignment 1: Article Evaluation

For this assignment you will perform a thorough review of a recent article (published within the last 5 years) that is relevant to the topic of your research. This evaluation will be 2 double-spaced pages long. Issue to consider and address in your article evaluation will be outlined in a handout posted on Chalk.

Assignment 2: Literature Review

For this assignment you will perform a systematic review of the literature (especially the literature in the past 5-10 years) relevant to your research topic. You will use the basic strategy for literature reviews outlined on page 73 of your textbook, and you will use the search tools and methods suggested in Chapter 3. This review will be two double-spaced pages long, not including references, in APA format. An example literature review will be posted on Chalk.

Assignment 3: Research Design Assignment

To complete this assignment, you will use the handout on Research Design posted on Chalk. In this handout you are asked to state the basic experimental or quasi-experimental design for your research project, the measures and manipulations you will use, possible confounds in your design and how you intend to control for them, manipulation checks and pilot testing that need to be performed, and so on.

Assignment 4: NIH Protecting Human Research Participants Certificate

You will obtain this certificate by completing an online course sponsored by the NIH on Protecting Human Research participants. This course is available at: <http://phrp.nihtraining.com/users/login.php>. When you have finished the course you will be able to print out your certificate of completion to hand in. ***You MUST complete this certificate in order to be able to conduct your research!***

Assignment 5: Experiment Participation

Participating in psychological research provides an invaluable opportunity to see and experience the various methods and procedures that psychologists use to study the human mind and behavior. As students in psychology courses you've been "consumers" of research findings, but participating in psychological research offers you your first real glimpse of the other side of the process, clarifying in a vivid way the science of psychology. To fulfill this assignment you must complete 1.5 hours of research participation by the last day of class (Wednesday, June 3). You can find studies to participate in for course credit at: www.experimetrix.com/uchicago

If you do not want to participate in research studies you may write a paper instead, reviewing any Psychological Science paper in the past 12 months. The paper should be 3 pages double spaced and is also due on the last day of class (Wednesday, June 3).

Team Research Paper = 20% of your final grade

Each research team of 3-4 students will turn in a single paper that represents the team's combined efforts to summarize their research process from beginning to end using APA format. As such, the paper will contain a title, an abstract, an introduction, a methods section, a results section, a conclusion, references, and graphs or figures, all documented with APA-style citations and references. The paper should be 10-12 pages, double-spaced, not counting the abstract, references, or graphs/figures.

APA format will be used throughout the paper based on the guidelines in the *Publication Manual of the American Psychological Association, 5th Edition*, by the American Psychological Association (2001) (aka the "APA Publication Manual"). Details on each section of the paper, examples of papers written in APA style, and links to APA style websites will be available on Chalk and discussed in Friday sections.

All team members will receive the same grade for the team research paper. How you decide to allocate the work load is up to each individual team. The paper is due in class on the last day of class (June 3rd).

The grading scheme for the team research is:

Introduction = 10 points maximum
 Methods = 10 points maximum
 Results = 10 points maximum
 Conclusion = 10 points maximum
 Abstract, references, graphs/tables = 10 points maximum

 50 points

Team Poster Presentation = 12% of your final grade

At the end of the quarter, each research team will be assigned to share the results of their research through a professional poster in one of two poster sessions (Poster Session 1 on June 1st or Poster Session 2 on June 3rd). Example posters and details on each written section to be included in the poster will be available on Chalk and will be discussed in Friday sections. Groups will be assigned to one of the two poster sessions at random.

All team members will receive the same grade for the team poster presentation. How you decide to allocate the work load is up to each individual team. However, each team member must be present for the poster presentation at the end of the quarter, and all members should expect to be asked questions about all aspects of the paper by the professor.

The grading scheme for the team poster presentation is below:

Verbal explanation of the poster = 15 points maximum
 Poster design and accuracy = 15 points maximum

 30 points

7. Absentee and Late Policy

To allow for minor emergencies and everyday mishaps, each student will be allowed to drop their **two** lowest quiz scores. No make-up quizzes will be given. No late assignments or papers will be accepted.

8. Course Outline

Date	Topic	<i>Reading and Assignment</i>
Week 1: <u>Class 1</u> Monday, March 30	Class introduction and characteristics of science	
Week 1: <u>Class 2</u> Wednesday, April 1	A brief review of the philosophy of science	<i>Chapter 1</i>
Week 1: <u>Class 3</u> Friday, April 3	Section	QUIZ 1: Chapter 1
Week 2: <u>Class 4</u> Monday, April 6	Introduction to theory	<i>Chapter 2</i>
Week 2: <u>Class 5</u> Wednesday, April 8	Testing theories and strong inference	<i>Platt (1964)</i>
Week 2: <u>Class 6</u> Friday, April 10	Section	QUIZ 2: Chapter 2
Week 3: <u>Class 7</u> Monday, April 13	Getting and Developing Research Ideas and McGuire Worksheets	<i>Chapter 3</i>
Week 3: <u>Class 8</u> Wednesday, April 15	More on Getting and Developing Research Ideas	<i>Chapter 3</i>
Week 3: <u>Class 9</u> Friday, April 17	Section	QUIZ 3: Chapter 3 Assignment 1 Due: Article Evaluation
Week 4: <u>Class 10</u> Monday, April 20	Choosing a Research Design	<i>Chapter 4</i>

Date	Topic	<i>Reading and Assignment</i>
Week 4: <u>Class 11</u> Wednesday, April 22	Making Systematic Observations	<i>Chapter 5</i>
Week 4: <u>Class 12</u> Friday, April 24	Section	QUIZ 4: Chapters 4 & 5 Assignment 2 Due: Literature review
Week 5: <u>Class 13</u> Monday, April 27	Survey Research	<i>Chapter 9</i>
Week 5: <u>Class 14</u> Wednesday, April 29	Between and Within-Subjects Designs	<i>Chapter 10</i>
Week 5: <u>Class 15</u> Friday, May 1	Section	QUIZ 5: Chapters 9 & 10 Assignment 3 Due: Research Design Assignment
Week 6: <u>Class 16</u> Monday, May 4	Choosing and Using Research Subjects	<i>Chapter 6</i>
Week 6: <u>Class 17</u> Wednesday, May 6	Ethical Issues in the Research Process	<i>Chapter 7</i>
Week 6: <u>Class 18</u> Friday, May 8	Section	QUIZ 6: Chapters 6 & 7 Assignment 4 Due: NIH Certificate
Week 7: <u>Class 19</u> Monday, May 11	Nonexperimental Research	<i>Chapter 8</i>
Week 7: <u>Class 20</u> Wednesday, May 13	Specialized Research Designs	<i>Chapter 11</i>

Date	Topic	<i>Reading and Assignment</i>
Week 7: <u>Class 21</u> Friday, May 15	Section	QUIZ 7: Chapters 8 & 11
Week 8: <u>Class 22</u> Monday, May 18	Describing Data	<i>Chapter 13</i>
Week 8: <u>Class 23</u> Wednesday, May 20	Using Inferential Statistics	<i>Chapter 14</i>
Week 8: <u>Class 24</u> Friday, May 22	Section	QUIZ 8: Chapters 13 & 14
Week 9: NO CLASS Monday, May 25	NO CLASS: Memorial Day	NO CLASS: Memorial Day
Week 9: <u>Class 25</u> Wednesday, May 27	Reporting Your Research Results	<i>Chapter 16</i>
Week 9: <u>Class 26</u> Friday, May 29	Section	QUIZ 9: Chapter 16
Week 10: <u>Class 27</u> Monday, June 1	Poster Session 1	Team Poster Presentation for Poster Session 1
Week 10: <u>Class 28</u> Wednesday, June 3	Poster Session 2	Team Poster Presentation for Poster Session 2 ALL Team Research Reports DUE