

# Syllabus

## PSYED 2001/EDUC 2201: Introduction to Research Methodology

### PREREQUISITE

None

### COURSE DESCRIPTION

This course is designed to introduce you to the basic concepts and specialized terminology of research methodology, and to the important features of a variety of research approaches. The primary goal of this course is to help you become an intelligent consumer of research. The lectures, readings, discussions, and exercises are all intended to help you develop an understanding of the interrelated roles of research design, measurement, and statistics in the research process, and to make you aware of the methodological decisions researchers must make. Completion of this course will increase your ability to interpret and evaluate published research.

It is not expected that upon completion of the course that you will have acquired all the skills necessary to design and conduct your own research. To become a competent researcher requires in-depth course work in various aspects of research methodology as well as considerable “hands-on” experience. However, this course can serve as a foundation for more advanced research methodology courses.

The material covered and requirements, including assignments and exams, for this course are equivalent to the requirements for the standard PSYED 2001 course that meets in person.

### COURSE OBJECTIVES

**The first half of the course (Modules 1–7) provides you with a general introduction to research methodology.** In this part of the course, students will learn about:

- Strengths and limitations of the scientific/disciplined inquiry approach.
- Contribution of research to theory and practice.
- The steps in the research process.
- Why it is useful to classify research.
- Characteristics of qualitative and quantitative approaches to research, and distinctions among four types of quantitative approaches.
- How researchers generate ideas for research problems.
- Why researchers carry out a review of the literature.
- Ethical guidelines that researchers must follow.

- Methods researchers use to select a sample of participants, impact of sampling method on soundness of research conclusions.
- How descriptive statistics are used to summarize quantitative data.
- Various methods researchers use to collect data; factors researchers should consider when selecting instruments to collect data; and impact of instrument selection on soundness of research conclusions.

**The second half of the course (Modules 8–13) provides you with an introduction to the unique methodological issues associated with specific types of research.** In this part of the course, students will read representative research articles in addition to the textbook and will learn about:

- Issues to consider in evaluating descriptive, correlational, and causal-comparative research.
- Distinguishing features of experimental research, impact of the design of an experiment on the strength of conclusions about cause-effect relationships, and criteria for evaluating experimental research.
- The purpose of single-subject experiments, issues in designing single-subject experiments, and criteria for evaluating single-subject experiments.
- The qualitative perspective, characteristics of sound qualitative research, and factors to consider in evaluating qualitative research.
- How quantitative and qualitative approaches come together in mixed-methods research; criteria for evaluating mixed methods research.
- Why and how inferential statistics are applied in analyzing data in quantitative research.

## REQUIRED MATERIALS

Gay, L. R., Mills, G. E., & Airasian, P. W. (2011). *Educational research: Competencies for analysis and applications* (10th ed.). Upper Saddle River, NJ: Pearson.

The textbook is available at The University Store on Fifth. Upon request, they will ship the textbook to you. To arrange for shipment, call the Book Center at 412-648-1455.

## COURSE EVALUATION

See **Assignments** in the course navigation menu for detailed instructions.

## EVALUATION

Item Evaluated	Description	Point Value	Percentage
Assignment 1	Creation of student homepage	5	10%
Assignment 2	Comparison of qualitative and quantitative research articles	10	
Assignment 3	Comprehension questions about literature review section	5	
Assignment 4	Exercise on sampling	5	
Assignment 5	Exercise on descriptive statistics	10	
Assignment 6	Exercise on measurement	10	
Assignment 7	Comprehension questions about descriptive research article	5	
Assignment 8	Comprehension questions about causal-comparative research article	5	
Assignment 9	Exercise on correlational research	10	
Assignment 10	Random assignment exercise	5	
Assignment 11	Comprehension questions about experimental research article	5	
Assignment 12	Exercise on internal and external validity of experiments	10	
Assignment 13	Comprehension questions about single-subject research article	5	
Assignment 14	Comprehension questions about qualitative research article	5	
Discussion Board Forums (8)		16	10%
Article Evaluation		20	20%
Midterm		60	30%
Final Exam		60	30%
<b>Total</b>		<b>251</b>	<b>100%</b>

## GRADING SCALE

Grade	Points
A	93–100
A-	90–92
B+	86–89
B	83–85
B-	80–82
C+	76–79
C	73–75
C-	70–72
D+	67–69
D	64–66
D-	60–63
F	Less than 60

## ASSIGNMENT GUIDELINES

The first assignment consists of creating personal homepage on Blackboard. Homepages give students the opportunity to introduce themselves both to the instructor and to each other. No special technological skills are required to create a homepage. Detailed instructions will be posted under Learning Modules, Module 1. All students will receive the full score of 5 points on the first assignment provided that they submit the homepage by the deadline and provide all the information that is requested.

Assignments 2, 5, 6, 9, and 12 give students the opportunity to apply the concepts covered in the textbook reading and lecture and are each worth 10 points. Before submitting these five assignments, students are required to submit a corresponding practice assignment. Answers to the practice exercises will be posted so that students can check their understanding of concepts. Practice exercises will not be graded; however, *students will not receive credit for a graded assignment unless they have previously submitted the corresponding practice exercise.* There will be no exceptions.

Although Assignment 4 also gives students the opportunity to apply course concepts, it has no corresponding practice assignment because it is not as demanding as the five assignments listed in the previous paragraph.

Assignments 3, 7, 8, 11, 13, and 14 enable the instructor to monitor students' comprehension of the assigned research articles and are each worth 5 points. Assignment 10 is a "hands-on" exercise on random assignment.

## EXAM GUIDELINES

There will be two exams for the course. The first will cover learning material from Modules 1 through 7, and the second will cover Modules 8 through 13. The exams will assess your knowledge through multiple-choice items and constructed response items. Questions will be generated from the assigned readings and study guides.

During the assigned week, the test will be available during a specific time window, so you can take it at your convenience during that window. Each test is timed for 2.5 hours. Once you open the test and begin, the computer clock will start and will not let you close to start over. This means that any unmarked or incomplete answers will be marked wrong. Plan accordingly and be prepared to complete the test in its entirety.

## ARTICLE EVALUATION

Students are required to write a short paper evaluating a research article. The instructor will post several articles in different substantive areas, and students will choose the one they wish to evaluate. The questions to be addressed in the article evaluation will be posted along with the articles.

## TOPICAL OUTLINE

Refer to the course **Schedule**.

## TEACHING METHODS

Lecture, discussion, case study analysis.

## COURSE POLICIES

### OVERALL EXPECTATIONS

It is expected that all work will be typewritten. Students are expected to use correct style, grammar, and spelling. Style should be consistent with the guidelines specified in the current edition of *Publication Manual of the American Psychological Association*. A few examples of correct APA style can be found on the [APA website](#), and with the [University Library System](#).

It is expected that students will check their email regularly, and also check for Announcements on CourseWeb. The instructor will be sure to check email regularly and will inform students of unavailability for one or more days during the term.

Assignments must be submitted no later than 11:59 p.m. on the day of which they are due. Assignments will not be accepted after the deadline. There are no exceptions.

### DISCUSSION BOARD

Discussion board postings are the counterparts of class discussions. Discussion board forums are incorporated into the majority of course modules. After the initial week's discussion forum,

these will take place within your designated group. It is expected that you will participate in discussion boards as scheduled. All postings on the discussion board should be appropriate, thoughtful, and reflective contributions to the topic of the forum. Points are assigned for postings on each forum, so remembering to post is your responsibility.

To receive full credit for participating in a discussion board forum, a student must do both of the following by the deadline:

- Post an original response to each thread in the forum (All forums have either three or four threads).
- Reply to at least one post made by a classmate on at least one thread.

Deadlines for posting on Discussion Board forums will be provided in the Course Schedule. There are no exceptions regarding these deadlines.

## READINGS

### 1. Textbook Reading and PowerPoint Lectures.

There is a textbook reading assignment and a PowerPoint lecture for each course module. The PowerPoint lectures are intended to highlight important points in the textbook, but not to replace textbook readings.

### 2. Other Assigned Readings.

The discussion board forum for Module 2 will center on the literature review section of an article, and the discussion board forums for Modules 6, 7, 8, 9, and 11 will center on a complete article that is an example of the type of research covered in the given module. Articles for the relevant modules and questions for the discussion forum will be posted under Related Readings. As described in the next section of this syllabus, a graded assignment is associated with each of these readings. Students are responsible for completing the assigned reading and submitting the corresponding assignment prior to participating in the discussion forum.

## AVAILABILITY OF INSTRUCTOR AND TEACHING ASSISTANT

The instructor and teaching assistant will respond to all e-mails within 48 hours; typically it will be within 24 hours. You may also request a face-to-face meeting with the teaching assistant or instructor. The teaching assistant and instructor may not be available via e-mail on Saturdays and Sundays.

## **PLAGIARISM & ACADEMIC INTEGRITY**

Students in this course will be expected to comply with the [University of Pittsburgh's Policy on Academic Integrity](#). Any student suspected of violating this obligation for any reason during the semester will be required to participate in the procedural process, initiated at the instructor level, as outlined in the University Guidelines on Academic Integrity. This may include, but is not limited to, the confiscation of the examination of any individual suspected of violating University Policy. Furthermore, no student may bring any unauthorized materials to an exam, including dictionaries and programmable calculators.

## **STUDENTS WITH DISABILITIES**

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and the Office of Disability Resources and Services, 140 William Pitt Union, at 412-648-7890 or 412-383-7355 (TTY) as early as possible, but no later than the fourth week of the term or visit the [Office of Disability Resources website](#) as early as possible, but no later than the 4th week of the term. DRS will verify your disability and determine reasonable accommodations for this course.

## **ACCESSIBILITY**

Blackboard is ADA Compliant and has fully implemented the final accessibility standards for electronic and information technology covered by Section 508 of the Rehabilitation Act Amendments of 1998. Please note that, due to the flexibility provided in this product, it is possible for some material to inadvertently fall outside of these guidelines.

## **COPYRIGHT NOTICE**

These materials may be protected by copyright. United States copyright law, 17 USC section 101, et seq., in addition to University policy and procedures, prohibit unauthorized duplication or retransmission of course materials. [See Library of Congress Copyright Office](#) and the [University Copyright Policy](#).