

Revised By: M. Oja
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C & GE Approved:
Board Approved:
Textbook Update: Spring 2026

PSYC (Psychology) 2205 Introduction to Research Methods in the Social Sciences (4 Units) CSU: UC

Prerequisite: Successful completion of Psychology 1500 and Psychology 2200 or Statistics 1510 with grades of 'C' or better

Advisory: Eligibility for English 1500 (C1000) or 1501(1000E) strongly recommended.

Hours and Units Calculations:

48 hours lecture. 96 Outside of class hours. 48 hours Lab (192 Total Student Learning Hours) 4 Units

Catalog Description: This course surveys various psychological research methods with an emphasis on research design, experimental procedures, descriptive methods, instrumentation, and the collection, analysis, interpretation, and reporting of research data. Research design and methodology will be examined through a review of research in a variety of the subdisciplines of psychology. In laboratory sessions students will conduct experimental and non-experimental research in a variety of areas of psychology. Actual data collected from research conducted during laboratory sessions will be analyzed with statistical software.

Type of Class/Course: Degree Credit

Text such as:

Price, P. C., Jhangiani, R. S., Chiang, I-C. A., Leighton, D. C. & Cuttler, C. *Research methods in psychology, 3rd Ed.* PressBooks, 2017.

Jhangiani, R. S., Chiang, I-C. A., Cuttler, & Leighton. *Research method in psychology, 4th Ed.* LibreTexts, 2019.

American Psychological Association. *Publication manual of the American Psychological Association.* 7th Ed. American Psychological Association, 2020.

Additional Instructional Materials: None.

Course Objectives:

By the end of the course, a successful student will be able to:

1. Explain the basic principles of the scientific method.
2. Critically evaluate research reports.
3. Synthesize a body of research findings.

4. Develop testable hypotheses.
5. Demonstrate knowledge of general research designs, experimental and non-experimental methods, and standard research practices.
6. Select appropriate research designs to test hypotheses.
7. Explain the ethical treatment of human and animal participants in research and the institutional requirements for conducting research.
8. Assess the generalizability of study results.
9. Demonstrate proficiency in APA Style

Laboratory objectives:

1. Conduct scientific research in psychology.
2. Conduct analyses of the data collected in this research using statistical software.
3. Interpret the results of these analyses.
4. Communicate these research findings using APA style.

Course Student Learning Outcomes:

- Report the results of social science research using APA style writing.
- Design, conduct, analyze, and report the findings of scientific research in psychology or sociology using an appropriate student selected research design.

Course Scope and Content (Lecture):

Unit I Introduction to social research

- A. Foundations and history of social science research
 1. scientific and nonscientific approaches to knowledge
- B. Steps in the research process
 1. scientific method and its goals
- C. Purposes of research
 1. Exploration
 2. Description
 3. Explanation
- D. Literature review
 1. Evaluating peer reviewed literature

Unit II Theory and research methodology

- A. Theories, research questions, hypotheses
- B. Theoretical and operational definitions
- C. Measurements (choosing and methodology)
- D. Dependent and independent variables
- E. validity and reliability
- F. causal and correlational relationships
- G. samples and sampling methods

Unit III Ethics in social research

- A. Professional guidelines
- B. Power relations
- C. Ethical issues involving research participants
 1. APA ethical standards

- 2. risk/benefit ratio of research
- 3. use of deception in research
- 4. Human and animal subject use
- D. Ethics and the scientific community
- E. Ethics and the sponsors of research
- F. Institutional Research Review Board
- G. Politics of research

Unit V Experimental methods

- A. Independent group designs
- B. Repeated measures designs
- C. Reasons to use and limitations of experimental methods
- D. Counterbalancing and practice effects
- E. Main effects and interaction effects using both table and graph methods

Unit VI Other research designs

- A. Single-case research design
- B. Quasi-experimental designs
 - 1. Characteristics of true experiments and quasi-experiments

Unit VII Conducting quantitative research

- A. Hypothesis formation and research variables
- B. Defining measurement
- C. Operationalization
- D. Reliability and validity
- E. Analysis of quantitative data
 - a. Selection of appropriate statistical test (chi-square, correlation, *t*-test, ANOVA)

Unit VIII Conducting survey research

- A. Observational techniques and rationale
- B. Reactivity, demand characteristics, observer bias, expectancy effects, and other biases
- C. Sampling
- E. Types of surveys
- F. Questionnaire construction
- G. Survey interviewing
- F. Interpretation and limits of correlational data
- G. Levels of measurement

Unit IX Measures of behavior – obtrusive and unobtrusive

- A. Overview of qualitative methods
- B. Participant observation/ethnographic methods
- C. Focus groups
- D. Case studies
- E. Content analysis
- F. Physical trace methods
- G. Archival research methods

Unit X Writing a research report

- A. APA Style
- B. Organization
- C. Using existing research
- D. Using your own data
- E. Citing sources

Course Scope and Content (Laboratory)

Unit I Literature review

- A. Finding peer-reviewed, empirical studies (primary sources)
- B. Evaluating academic literature
- C. Summarizing empirical studies and citing sources

Unit II Variables

- A. Operational definitions
- B. Measuring variables
 - a. Surveys
 - b. Interviews and focus groups
 - c. Psychophysiological measures
 - d. Observations
 - e. Unobtrusive measures
 - i. Physical trace
 - ii. Archival data (records)

Unit III Ethical research

- A. Institutional Research Review Board
- B. Informed Consent

Unit IV Conducting Empirical Research

- A. Experimental designs
- B. Quasi-experimental designs
- C. Non-experimental designs
 - a. Qualitative designs

Unit V Analyzing Results

- A. Interpreting Descriptive Statistics
- B. Analyzing and communicating descriptive statistics
- C. Interpreting inferential statistics
- D. Analyzing and communicating inferential statistics

Unit VI Communicating Research Findings

- A. APA Style formatting
- B. Copy manuscripts
- C. Research presentations
- D. Research proposals

Learning Activities Required Outside of Class:

The students in this class will spend a minimum of 6 hours per week outside of the regular class time doing the following:

1. Completing required reading
2. Performing approved data collection and analysis
3. Writing a research paper based on data collection and analysis
4. Reading and summarizing empirical research articles

Suggested Methods of Instruction:

1. Lecture
2. Group discussion
3. Instructor demonstrated problem solving
4. Instructor led problem solving
5. Individual problem solving with instructor guidance
6. Group problem solving with peer guidance
7. Individual problem solving
8. Individual statistical culminating project paper
9. Critical analysis of published research

Methods of Evaluation Options:

1. Exams, tests, or quizzes and homework problems
 - a. peer review/observation
 - b. instructor review/observation
 - c. Research project paper
 - d. Writing assignments

Laboratory Category: Extensive Laboratory

Pre delivery criteria: All of the following criteria are met by this lab.

1. Curriculum development for each lab.
2. Published schedule of individual laboratory activities.
3. Published laboratory activity objectives.
4. Published methods of evaluation.
5. Supervision of equipment maintenance, laboratory setup, and acquisition of lab materials and supplies.

During laboratory activity of the laboratory: All of the following criteria are met by this lab.

1. Instructor is physically present in lab when students are performing lab activities.
2. Instructor is responsible for active facilitation of laboratory learning.
3. Instructor is responsible for active delivery of curriculum.
4. Instructor is required for safety and mentoring of lab activities.
5. Instructor is responsible for presentation of significant evaluation.

Post laboratory activity of the laboratory: All the following criteria are met by this lab.

1. Instructor is responsible for personal evaluation of significant student outcomes (lab exercises, exams, practicals, notebooks, portfolios, etc.) that become a component of the student grade that cover many lab exercises performed during the course.
2. Instructor is responsible for supervision of laboratory cleanup of equipment and materials.

Supplemental Data:

TOP Code:	200100 Psychology, General
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SAM Priority Code:	E: Non-Occupational
Funding Agency:	Y: Not Applicable
Program Status:	1: Program Applicable
Noncredit Category:	Y: Not Applicable
Special Class Status:	N: Course is not a special class
Basic Skills Status:	Not Applicable
Prior to College Level:	Y: No Applicable
Cooperative Work Experience:	N: Course is not a part of a cooperative education program
Eligible for Credit by Exam:	Yes
Eligible for Pass/No Pass:	No
Discipline	Psychology or Sociology