

**PSY 3010-01: RESEARCH METHODS IN PSYCHOLOGY****CRN: 22949****Spring, 2012****Meeting in 138 North Plaza on Monday, Wednesday, and Friday from 12:00 – 1:25**Contact Information:

**PROFESSOR:** John T. Jones, Ph.D.  
**OFFICE:** McDonald 220  
**OFFICE HOURS:** 12:00 – 1:00 and 2:30 – 3:30 Tuesday and Thursday  
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TEXT: Cozby, P. C. (2009). *Methods in Behavioral Research*. (3rd ed.) New York: McGraw-Hill.  
Supplemental Readings: Posted to Blackboard.

**I. Course Description**

This course is an introduction to the research process; reasoning in science, the nature of theory, hypothesis testing and the use of empirical data; scientific knowledge and its applications. Naturalistic, case study, correlation, and experimental research methods will be examined. In this course you will also complete many of the steps associated with basic research in psychology, culminating in a research proposal. The pre-requisite/co-requisite for this course is Psychology 3000 Statistical Methods in Psychology. This is a 4 cr. course.

**II. Course Learning Goals and Outcomes****LEARNING GOAL 1: KNOWLEDGE BASE OF PSYCHOLOGY**

**Demonstrate familiarity with the major concepts, theoretical perspectives, and historical trends in psychology.**

**LEARNING OUTCOMES****1.1 Nature of psychology**

- a. **Define** psychology as the science that studies behavior and mental processes and the profession that applies that science.
- b. **Distinguish** the similarities and differences between the professional and scientific communities in psychology.

**1.2 Relationship of psychology to Science**

- a. **Explain** how psychology meets the criteria of science.
- b. **Analyze** how psychological research reflects scientific principles.
- c. **Evaluate** psychological science as a means of understanding behavior and mental processes.

**1.5 Objectives of psychology**

- b. **Compare** and **contrast** the primary objectives of psychology

**1.10 Role of ethics**

- a. **Describe** relevant ethical issues, as addressed by the APA code of ethics
- b. **Apply** relevant ethical principles, as addressed by the APA code of ethics
- c. **Evaluate** policies and procedures related to psychology research and practice using APA ethical principles

**LEARNING GOAL 2: RESEARCH METHODS IN PSYCHOLOGY**

**Understand and apply basic research methods in psychology, including research design, data analysis, and interpretation.**

**LEARNING OUTCOMES****2.1 Scientific method**

- a. **Describe** the basic characteristics of the scientific method in psychology
- b. **Analyze** how primary behavioral research adheres to scientific principles
- c. **Design** research that adheres to the principles of scientific method

**2.2 General research strategies**

- a. **Describe** various general research strategies, including advantages and disadvantages of use
- b. **Distinguish** the nature of designs that permit causal inferences from those that do not
- c. **Select** and **apply** general research strategies to address appropriate kinds of research questions
- d. **Categorize** research articles that employ methods permitting causal and non-causal inferences
- e. **Evaluate** effectiveness of a general research strategy in addressing a research question

**2.5 Correlation vs. Experimentation**

- a. **Explain** the difference between correlation and causation
- b. **Match** research questions to appropriate method
- c. **Evaluate** whether a specific research method warrants a cause-effect conclusion

**2.6 Research elements**

- a. **Define** hypotheses, variables, and operational definitions
- b. **Deduce** hypotheses, variables, and operational definitions from research articles and scenarios
- c. **Formulate** testable research hypotheses, based on operational definitions of variables

**2.7 Participant selection and assignment**

- a. **Describe** rationale for choosing and assigning specific group of participants
- b. **Analyze** potential influence of participant variables
- c. **Design** appropriate controlled conditions to minimize their effects, including random assignment

**2.8 Design quality (internal validity)**

- a. **Define** validity and **describe** conditions that enhance valid findings
- b. **Analyze** conditions that will enhance or detract from validity of conclusions
- c. **Evaluate** the validity of conclusions derived from psychology research

**2.9 Generalization(external validity)**

- a. **Describe** the relationship of research design to generalizability of results

- b. **Analyze** the generalizability of research findings based on strengths or weaknesses of research design
- c. **Generalize** research conclusions appropriately based on the parameters of particular research methods

### 2.10 Reporting research findings

- a. **Identify** the basic components of APA style
- b. **Explain** (in writing) the methods, results and conclusions of a data collection project
- c. **Write** all sections of a research report and a review type paper applying APA style

### 2.11 Research ethics

- a. **Describe** the basic principles of the APA code of ethics for research with human and animal participants, including the role of an IRB
- b. **Adhere** to the APA code of ethics in the treatment of human and nonhuman participants in the design, data collection, interpretation, and reporting of psychological research
- c. **Evaluate** the contributions and constraints entailed in adherence to APA code of ethics and make appropriate adjustments in design
- d. **Complete** an IRB application

### 2.13 Database skills

- a. **Identify** and **locate** relevant journals and databases in psychology
- b. **Develop** and **adjust** search strategies to represent adequate range of research
- c. **Create** efficient and effective search strategies to address research questions

### 2.14 Statistical skills

- a. **Describe** the differences between descriptive and inferential statistical analysis
- b. **Define** statistical significance and its role in interpreting research findings
- c. **Analyze** and **interpret** simple statistics from research results and in journal articles

### 2.15 Limits of scientific reasoning and evidence

- a. **State** how evidence is contextual and tentative
- b. **Discuss** the reasons why empirical findings and conclusions may change or require adjustment
- c. **Justify** the evolving nature of scientific findings

## **LEARNING GOAL 3: CRITICAL THINKING SKILLS IN PSYCHOLOGY**

**Respect and use critical and creative thinking, skeptical inquiry, and, when possible, the scientific approach to solve problems related to behavior and mental processes.**

## **LEARNING OUTCOMES**

### **3.1 Use of evidence in psychology**

- b. **Collect** and **use** scientific evidence in drawing conclusions and in practice
- c. **Evaluate** the quality, objectivity, and credibility of evidence of research findings in drawing conclusions and in practice

### **3.3 Argumentation skills**

- c. **Develop** sound, integrated arguments based on scientific reasoning and empirical evidence

### 3.5 Questioning skills

- a. **Explain** the appropriateness and relevance of questions with direction and guidance
- b. **Differentiate** independently between ill-defined and well-defined questions
- c. **Evaluate** and **modify** questions to eliminate ambiguity throughout the process of scientific inquiry

### 3.6 Creativity

- a. **Describe** elements of creativity and its role in solving psychological problems

## III. Class Policies

A. **Behave honorably.** I expect you to avoid cheating and that you bring to my attention your knowledge of cheating others might do. Remember that cheating involves both getting help and giving help on evaluated tasks that are supposed to be done independently (e.g., tests, quizzes, written projects).

B. **Arrive on time and no competitive talking.**

C. **Avoid leaving lecture early.** Not only is this distracting to your fellow students, it's distracting to me. I do understand that occasionally people must miss part of a class. **If you intend to do so, please let me know and then sit near the door if possible**, so you can slip out without distracting everyone.

D. **If you have questions, please ask.** You may try to see me after class, but don't get frustrated if there is not time. Best: come by my office during office hours or set up an appointment with me. You are my priority at DSC. We can find a time that works for both of us.

E. **Notes.** You are responsible for taking notes as you see fit.

## IV. Quiz Policy

A. YOU MUST DROP ONE of the five quizzes. **You cannot drop the Final Exam.**

B. **On the five quizzes, there will UNDER NO CIRCUMSTANCES be make-ups or early quizzes.** *If you cannot take the quiz at the time it is offered, you receive a zero.* Presumably you will drop that grade. If you miss a second quiz and have a legitimate excuse (legitimate means that you face dire circumstances like serious documented injury/illness) contact me and we will arrange for a make-up. The make-up will be different from the quiz taken by others in the course.

C. Quizzes will only cover the material since the previous quiz. Each quiz will consist of questions regarding material from the book, lecture/discussion, and any supplemental readings.

D. **The Final Exam.** The final exam is comprehensive and will be worth 100 points.

E. If you have a question about your score on a quiz, come by my office during office hours or set up an appointment with me. We can go over the exam to make sure it was scored correctly. You can also ask for clarification regarding exam questions.

**V. Earning Points in the Course**

**A. Quizzes:** Taken in class, each quiz will objectively assess your mastery of basic concepts and ideas associated with conducting research in psychology.

Total for Quizzes **200 pts.**

**B. Assignments:** To demonstrate your mastery of the major terms and concepts associated with research methods in psychology you will complete several assignments. Detailed instructions will be distributed with each assignment. Late assignments will not be graded.

Total for Assignments **50 pts.**

**C. Research Proposal/Presentation:** The research proposal will include an experimental component. More information about this project will be distributed by the third week of class. Presentations will be made during the last week of class. Proposals will adhere to APA style and include Title Page, Abstract, Introduction, Methods, Discussion, and Reference sections. Intro Draft = 25 pts., Methods Draft = 25 pts., Final Draft = 100 pts., Project Presentation = 50 pts.

Total for Research Proposal Project **200 pts.**

**D. Final Exam:** Taken in class on Friday April 27<sup>th</sup> from 12:30-2:30 p.m.

Total for Final Exam **100 pts.**

**Summary of Points Possible:**

Quizzes	200
Assignments	50
Research Proposal Project	200
Final Exam	100
<b>Total</b>	<b>550</b>

**VI. Grading Policy**

<u>Grade</u>	<u>Percent</u>	<u>Grade</u>	<u>Percent</u>
A	94% - 100%	C	74% - 76%
A-	90% - 93%	C-	70% - 73%
B+	87% - 89%	D+	67% - 69%
B	84% - 86%	D	64% - 66%
B-	80% - 83%	D-	60% - 63%
C+	77% - 79%	F	59% AND BELOW

## CLASS SCHEDULE

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**9 – 18 January:** Introduction, Characteristics of Science (Cozby, Chapter 1)

- Science vs. Pseudoscience, Scientific Method, Critical thinking
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**20 – 27 January:** The Research Process (Cozby, Chapter 2)

- Developing ideas, theories, hypotheses, and gathering information for research  
(27 January class will be held in the library classroom on the first floor across from the restrooms)
  - **Quiz # 1 (Ch. 1-2) in the testing center 28-31 January**
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**30 Jan. – 3 Feb.:** Conducting Ethical Research (Cozby, Chapter 3)

- Risk vs. Benefit, Deception, Informed Consent, Research with Humans and Animals
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**6 - 10 February:** Studying Behavior (Cozby, Chapter 4)

- Operational Definitions, Experimental & Non-Exp. Approaches, Independent vs. Dependent Variables, Causation, Validity
  - **Quiz # 2 (Ch. 3-4) in the testing center 11-14 February**
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**13 - 17 February:** Measurement Concepts (Cozby, Chapter 5)

- Reliability and Validity, Types of Data, Scales of Measurement
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**22 – 27 February:** Observing Behavior (Cozby, Chapter 6)

- Naturalistic Observation, Systematic Observation, Case Study, Archival Research
  - **Quiz #3 (Ch. 5-6) in the testing center 28 Feb.- 2 March**
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**28 February – 2 March: Research Project Consultation with Dr. Jones (No Class)**

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**5 – 9 March:** Survey Research (Cozby, Chapter 7)

- Designing & administering Surveys & Questionnaires, Presenting Data
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**19 – 23 March:** Experimental Design (Cozby, Chapter 8)

- Control, Confounds, Within & Between Subjects Designs, Validity and Reliability
  - **Quiz #4 (Ch. 7-8) in the testing center 24 – 27 March**
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**26 March – 4 April:** Conducting Experiments (Cozby, Chapter 9)

- Selecting Subjects, Designing & Conducting Field & Lab Research
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**6 – 13 April:** Complex and Quasi-Experimental Designs (Cozby, Chapter 10, 11)

- **Quiz #5 (Ch. 9-11) in the testing center 14 – 17 April**
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**16 – 18 April: Research Project Consultation with Dr. Jones (No Class)**

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**20 - 25 April: Proposal Presentations**

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**Final Exam: Taken in class on Friday April 27th from 12:30-2:30 p.m. (Covers chapters 1-11)**

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**STATEMENT ABOUT DMAIL**

Important class and college information will be sent to your Dmail account. You will be responsible for checking and responding to email (in a reasonable amount of time) in your Dmail account.

**DISCLAIMER**

Information contained in this syllabus, other than the grading scale and missed test policy may be subject to change with advanced notice, as deemed appropriate to the instructor.

**STUDENTS WITH SPECIAL NEEDS**

If you are a student with a medical, psychological or a learning difference and requesting reasonable academic accommodations due to this disability, you must provide an official request of accommodation to your professor(s) from the Disability Resource Center (DRC) **within the first two weeks** of the beginning of classes. Students are to contact the center on the main campus to follow through with, and receive assistance in the documentation process to determine the appropriate accommodations related to their disability.

You may call **(435) 652-7516** for an appointment and further information regarding the Americans with Disabilities Act (ADA) of 1990 per Section 504 of the Rehabilitation Act of 1973. The DRC is located in the **Student Services Center, Room #201 of the Edith Whitehead Building**.

**STANDARDS OF ACADEMIC CONDUCT**

In order to ensure that the highest standards of academic conduct are promoted and supported at the College, students must adhere to generally accepted standards of academic honesty, including but not limited to, refraining from cheating, plagiarizing, falsification, misrepresentation, and/or inappropriately colluding or collaborating. The College shall consistently hold students accountable for instances of academic dishonesty and apply appropriate consequences. Definitions for some types of academic misconduct follow:

Cheating: Includes but is not limited to the use of unauthorized materials, information, or study aids in any academic exercise; failing to observe the expressed procedures or instructions of an academic exercise; substituting for or impersonating someone else during a test or exam or other fraud; or receiving the content of a test or exam before it is administered.

Plagiarism: Includes but is not limited to the use of another's words or ideas as if they were one's own, including, but not limited to, representing, either with the intent to deceive or by the omission of the true source, part of or an entire work produced by someone other than the student, obtained by purchase or otherwise, as the student's original work or representing the identifiable but altered ideas, data, or writing of another person as if those ideas, data, or writing were the student's original work.

Inappropriate collaboration or collusion: Includes but is not limited to unauthorized or inappropriate collaboration between students or between a student and any other person when individual work is required.

Multiple Submissions: Includes but is not limited to the resubmission by a student of any work which has been previously submitted for credit in identical or similar form in one course to fulfill the requirements of a second course, without the informed permission/consent of the instructor of the second course; or the submission by a student of any work submitted for credit in identical or similar form in one course to fulfill the requirements of a concurrent course, without the permission/consent of the instructors of both courses.

Falsification / Fabrication / Misrepresentation: Includes but is not limited to the intentional and unauthorized invention of any data, information, or citation in an academic activity.

Facilitating Academic Dishonesty: Includes but is not limited to knowingly helping another student commit an act of academic misconduct or failing to report another student for academic misconduct.

Coercion Regarding Grading or Evaluation of Coursework: Includes but is not limited to issuing threats or offering favors or bribes toward an instructor to coerce the instructor to change a grade or otherwise evaluate the student's work by criteria not directly reflective of coursework.

Copyright Violation: Includes but is not limited to copyright and other violations of the College's policies. Such matters are adjudicated under the Student Behavioral Conduct section of this code.

### **DISRUPTIVE BEHAVIOR POLICY**

Instructors and students have a right to an educational environment that is supportive of the learning process. It is the responsibility of the instructor to create and maintain this environment. It is the responsibility of the student to act in a manner that is appropriate for the classroom and to adhere to established standards and expectations.

#### **What is disruptive behavior?**

Disruptive behavior may best be defined as any behavior that inhibits an instructor's ability to conduct class, or behavior that limits another student's ability to benefit from instruction – including conduct, speech, or activity that interferes with the learning activities of other students. Some examples of disruptive behavior may include:

- Physical violence, verbal abuse, or harassment
- Intoxication or illegal drug use
- Use of profanity
- Failing to respect others when expressing their own viewpoints
- Talking while the instructor or another student is talking
- Constant questions or interruptions that interfere with classroom presentation

If I believe you are behaving disruptively I will approach you and quietly ask you to leave the classroom. You should then expect that I will talk to you in the hall or ask you to come see me in my office. Depending on how you respond I will give you a second chance. If you engage in disruptive behavior a second time, I will drop you from the class.

**OTHER IMPORTANT DATES/DEADLINES**

Jan 9	Classwork Starts
Jan 11	Last Day to Add Without Signature
Jan 16	Martin Luther King Jr. Day
Jan 17	Drop/Audit Fee Begins (\$10 per class)
Jan 24	\$50 Late Registration/Payment Fee
Jan 30	Graduation Application Deadline
Jan 31	Pell Grant Census
Jan 31	Last Day for Refund
Jan 31	Last Day to drop without receiving a "W" grade
Feb 1	Courses dropped for non-payment
Feb 3	Last Day to ADD Classes
Feb 20	President's Day
Mar 2	Last Day to DROP/AUDIT Classes
Mar 12-16	Spring Break
Mar 19	Summer Registration open to Seniors (90+ earned credits)
Mar 20	Summer Registration open to Juniors (60+ earned credits)
Mar 21	Summer Registration open to Sophomores (30+ earned credits)
Mar 22	Summer Registration open to All Students
Apr 6	Last Day for Complete Withdrawal
Apr 16	Fall Registration open to Seniors (90+ earned credits)
Apr 17	Fall Registration open to Juniors (60+ earned credits)
Apr 18	Fall Registration open to Sophomores (30+ earned credits)
Apr 19	Fall Registration open to All Students
Apr 26	Classwork Ends
Apr 27	Final Exams
Apr 30, May 1-3	Final Exams
May 4	Commencement