



OTRP *online*

office of teaching resources in PSYCHOLOGY

PSY 2110 - RESEARCH DESIGN & ANALYSIS I FALL 2006

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WHAT IS THIS COURSE ABOUT?

Research Design & Analysis I is the first course in a two-course sequence required for Psychology majors. The second course, Research Design & Analysis II (Psy 2120) should be taken the semester after this course. The purpose of this sequence of courses is to teach you how to design, conduct, analyze, and understand scientific research, as well as to orient you to the Psychology major. General Psychology (Psy 1100) is a prerequisite for this course.

WHAT AM I SUPPOSED TO LEARN?

Below is a description of what you will be expected to learn in this course. See page 6 of this syllabus for information about how Psy 2110 contributes to your degree program.

1. Understand the basis of scientific reasoning and problem-solving.
2. Understand and apply descriptive and correlational research methods.
3. Select and interpret appropriate statistical analyses for these research methods.
4. Demonstrate the ability to use computers for statistical analysis purposes as well as for preparing written research reports.
5. Locate, read, and interpret primary source research material.
6. Understand and apply the language of the science of psychology in written research reports.
7. Consider career and graduate education alternatives for Psychology graduates.

HOW WILL I LEARN THIS?

- Read the textbook.
- Attend class and participate.
- Attend labs and complete lab assignments.
- Write and revise an APA format research report.
- Complete homework assignments and research activity reports.

IS THIS A HARD CLASS?

Yes. This class requires you to learn to think in a different way (scientifically) and to master a very different writing style. Some people also have a high level of anxiety about covering statistics, although the math in this class is no higher than introductory algebra. On the other hand, if you stick with it and put effort into your work, you are likely to do well. If at any time you feel that you are struggling in the course or need help with the course in any way, please come to see me. I will gladly provide whatever help you need; you are not imposing on me.

HOW WILL I BE GRADED?

Four Exams (100 points each). These exams will include conceptual parts, which will be closed-book, closed-notes, and will include multiple-choice and short answer questions. Exams 3 and 4 will also include open-book, open-note computational parts, which will measure your ability to select, compute, and interpret statistics.

Homework (20 points total). You will have 10 short homework assignments throughout the semester. These will be announced in class. On each assignment, you will earn 2 points if it is completed correctly or 1 point if you completed it but it is not correct. Although the homework is not worth a large number of points, these assignments will help you prepare for exams.

Lab Activities (50 points total). In order to earn credit for a lab activity you must be present for the entire lab and also participate in the lab. If you are late or if you leave early, you will not receive credit.

Group Participation (10 points). You will be working in a group of about three students to complete a research project. Much of this work will occur during lab times, but you will also need to work on the research outside of lab times. Each person in the group will turn in an evaluation of the group members and these evaluations will be used to determine your participation grade.

Five Research Activity Reports (4 points each). The format for these reports is available on the course website. These reports will help you get used to understanding and writing about research. You may report on any of the following research activities:

- Reading a *primary source research article* (reporting original, empirical research). These must be in academic journals, not popular magazines, newspapers, or websites. If you are not sure you have an acceptable article, just ask me.
- Attending a *research presentation*. Any opportunities to attend research presentations will be announced in class.
- *Observing or participating in a research study*. You may sign up at cmsu.experimentrak.net

Research Report (100 points). This will be a written APA format report of a research project conducted with a group of students. The report will be written individually. We will cover APA format in class. The scoring rubric is available on the course website. If you do not participate in your group at a satisfactory level, you will receive a grade of zero on the report.

HOW IS MY COURSE GRADE DETERMINED?

<u>Points Earned</u>	<u>Grade</u>
540 or more	A
480-539	B
420-479	C
360-419	D
below 360	F

WHAT DO I NEED TO GET AT THE BOOKSTORE?

- ✓ The required textbook, Jackson's *Research Methods and Statistics – A Critical Thinking Approach* (2nd Ed.). This is the same book we will use in Research Design & Analysis II.
- ✓ The CMSU Undergraduate Psychology Major Manual.
- ✓ I recommend purchasing the *Publication Manual of the American Psychological Association* (5th Ed).
- ✓ The packet of class notes.

WHAT ELSE DO I NEED FOR THIS CLASS?

- ✓ An inexpensive calculator with basic arithmetic functions including square root.
- ✓ I recommend purchasing a three ring binder for your notes packet and other handouts.
- ✓ You may need to purchase some inexpensive supplies for your research projects.

HOW DO I TURN IN REPORTS?

All reports must be emailed to me at kreiner@cmsu1.cmsu.edu. Save your report in Microsoft Word or in Rich Text Format (RTF), and email it to me as an attachment. The name of the file should include your first initial and last name (e.g., gspelvin.doc). Always keep at least one backup copy of your report. I must receive your report in my email account by midnight on the due date. Keep in mind that email is not always transferred instantaneously; if you send it before midnight and I receive it in my account after midnight, it is still late.

IS THERE A PENALTY FOR LATE ASSIGNMENTS?

Late homework assignments and research activity reports will not be accepted for credit. A penalty of 10% per day will be deducted for late research reports.

WHAT IF I MISS CLASS OR LAB?

You will be allowed to make up missed exams or labs if you were unable to attend due to participation in a required University activity or serious illness of yourself or an immediate family member. In either case, you should present written evidence of the reason for your absence no later than the first day you return to class and arrange to make up the work. If you do not contact me about making up the work until later, or if you are absent for some other reason, you may not be allowed to make up missed work.

WHAT BEHAVIOR IS APPROPRIATE IN CLASS?

Please be respectful and considerate toward your classmates. Distracting or disruptive behavior makes it difficult to learn. Please turn off cell phones and pagers, or put them in silent mode if you must have them on. If you might need to leave early or arrive late, please sit near the door. You are encouraged to join in class discussions, but please do not talk while I am talking or while another student is talking. Insulting, belittling, or other offensive behavior toward your classmates is not acceptable.

WHAT DO I NEED TO KNOW ABOUT ACADEMIC HONESTY?

You are responsible for understanding university regulations concerning academic honesty. Please see your CMSU Student Planner/Handbook for these regulations. Although your research project will be a group project, you are required to write your report individually. You may not copy work from other students or allow other students to copy your work. If there is anything of which you are unsure regarding academic honesty, please ask me.

RESEARCH ETHICS

We will cover research ethics in class. It is your responsibility to make sure that you understand ethical and legal requirements related to the research activities that you do. Failure to follow ethical requirements (e.g., collecting research data without prior approval from the Human Subjects Review Committee) will be treated as a violation of the academic honesty policy.

WHAT IF I NEED SPECIAL ACCOMMODATIONS?

If you have a documented disability, please contact the Office of Accessibility Services, Union 220, (660) 543-4421, to arrange accommodations.

EARLY ALERT PROGRAM

As a part of CMSU's commitment to building a positive learning community that supports the success of every student, I participate in the CMSU Early Alert Program. That means that if I notice you are struggling with the course, I will refer you to the Early Alert Program so that they can work with you to help you have a successful experience in this course.

LIBRARY

You may access your library account, the online catalog, and electronic databases from James C. Kirkpatrick Library's website at <http://library.cmsu.edu>. For research assistance, you may contact the Reference Desk:

Phone: 543-4154

AIM: JCKLReference

Email: reference@libserv.cmsu.edu

RefChat: <http://library.cmsu.edu/chat>

DATE	TOPIC	READING	LAB ACTIVITY
Thu. Aug. 24	Introduction		Pre-test
Tue. Aug. 29	Scientific Method	Chapter 1	Analysis of Claims Exercise
Thu. Aug. 31	Overview of Methods; Outline of a Research Project	Chapter 1	Group Introductions & Topic
Tue. Sep. 5	How to do a Literature Search	Chapter 3	Literature Search & Paraphrase Exercises
Thu. Sep. 7	Measurement; Reliability & Validity	Chapter 3	Observational Project Group Work
Tue. Sep. 12	Review		Observational Project Group Work
Thu. Sep. 14	EXAM 1		Observational Project Protocol
Tue. Sep. 19	Research Ethics: "Do Scientists Cheat?"		Observational Project Protocol
Thu. Sep. 21	Ethical Treatment of Human Subjects	Chapter 2	Research Ethics Exercise
Tue. Sep. 26	Observational & Survey Research	Chapter 4	Observational Project Group Work
Thu. Sep. 28	Human Subjects Forms		Observational Project HS Forms
Tue. Oct. 3	Archival, Physical Traces, and Case Study Research	Chapter 4	Survey Question Exercise
Thu. Oct. 5	Career Planning for Psychology Majors	APA Careers in Psychology website	Career & Degree Plan Worksheets
Tue. Oct. 10	Graduate School Q & A		Visit to Career Services Union 302
Thu. Oct. 12	Review		Survey Question Compilation
Tue. Oct. 17	EXAM 2		Observational Project Practice
Thu. Oct. 19	APA Format	Chapter 14	Write Survey Method Section
Tue. Oct. 24	APA Format	Chapter 14	APA Format Exercise
Thu. Oct. 26	Frequency Distributions	Chapter 5	SPSS: Data Entry and Frequencies
Tue. Oct. 31	Frequency Distribution Statistics		Frequency Distribution Practice
Thu. Nov. 2	Central Tendency	Chapter 5	SPSS: Descriptives
Tue. Nov. 7	Variability	Chapter 5	Analysis of Survey Data
Thu. Nov. 9	Normal Distributions; z-Scores	Chapter 5	Practice with z-Scores
Tue. Nov. 14	Review; Research Report Due		Research Report Help
Thu. Nov. 16	EXAM 3		Degree Plan Review
Tue. Nov. 21	Correlational Research	Chapter 6	Observational Project Discussion
Tue. Nov. 28	Correlation Coefficients	Chapter 6	SPSS: Correlation
Thu. Nov. 30	Regression		Correlation & Regression Practice
Tue. Dec. 5	Regression		SPSS: Regression
Thu. Dec. 7	Last Day to Submit Research Activity Reports		
Thu. Dec. 14	Review; Research Report Revision Due		
Thu. Dec. 14	FINAL EXAM (EXAM 4), 11-1		Self-Assessment

Department of Psychology Student Learning Outcomes Matrix for BS

Learning Outcomes	PSY 1100	PSY 2110	PSY 2120	PSY 2130	PSY 3130	PSY 3220	PSY 3340	PSY 4110	PSY 4310	PSY 4440
Demonstrate and integrate knowledge of the major concepts, theoretical perspectives, empirical findings, and historical trends in psychology.	I	I D A	R D A	I D A	I D A	I D A	I D A	I D A	I D A	D D A
Understand and apply basic research methods in psychology, including research design, data analysis, and interpretation.	I	I D A	R D A	I D A	I D A	I	R	A		R
Value and use critical and creative thinking, including the scientific method, to address problems related to behavior and mental processes.	I A	I D A	R D A	I D A		I	D	D A*		R
Appropriately apply knowledge and skills acquired in the psychology curriculum to personal, social, and organizational issues.		I		I*	I*	I	D A		I	R
Value and apply empirical evidence, cope with ambiguity, and behave legally and ethically in research and applied settings.	I	I, D A	R, D A	I	I		D			D A
Understand and apply the language of the science of psychology, through effective speaking, reading and writing.	I	I, D A	R, D A	I, D A*	I D	I, D		D A	I	D A
Demonstrate the ability to acquire and disseminate information and use computers and other technology for a variety of purposes.		I D A	R D A		I	I		D A		D A
Recognize, understand, and respect individual differences and the complexity of sociocultural and international diversity. Demonstrate knowledge about how these factors affect applied and scholarly work.	I	I A	D A	I	I*	I	D A	D A	I	D A
Demonstrate knowledge about realistic occupational, career, and advanced educational opportunities appropriate to the discipline and develop a feasible plan to pursue those opportunities.	I	I D		I				I D A		R

I = "Introduce" "I" is used when the learning outcome is introduced, but not emphasized in the course.

D = Developed "D" is used to indicate extensive discussion, treatment and/or application of the learning outcome in the course.

A = Assessment "A" is used to indicate the students' knowledge and/or skills related to the learning outcome are measured & evaluated in the course.

R = REVIEW "R" indicates that material is just being reviewed from a previous course

RESEARCH DESIGN & ANALYSIS GROUP PARTICIPATION REPORT

NAME _____ GROUP _____

Please rate each group member including yourself on each of the three criteria. You may add additional comments on the back. Use the rating scales described below. Please try to rate as objectively as you can.

Attendance

- E - attended all group meetings or made up for absences; was on time and stayed the whole time
- F - missed a few meetings or was not always on time and left early sometimes
- P - missed numerous meetings; or habitually late or left before work was completed

Work

- E - did fair share or more of work; did things on time and work was high quality
- F - did less than fair share; did not always have work completed when agreed upon
- P - did very little of the work; work that was done was poor quality

Cooperation

- E - worked well with other group members; provided some leadership but also let others decide
- F - some difficulty working with other group members
- P - worked poorly with other group members; negative attitude

Name	Att.	Work	Coop.	Comments
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Research Design & Analysis I Research Activity Report

Name _____

Date of Activity _____

APA Format Reference (for research article or presentation):

Name and Title of Research Project (for research participation/observation):

Research Design and Variables:

Hypothesis:

Conclusions (for research article or presentation):

Your Comments on the Research:

Research Design & Analysis I – Research Report Rubric

NAME _____

TOTAL SCORE _____

____ General Formatting (5 points)

margins
double-spacing
short title & page number
order of pages
section headings
appendices, tables, figures formatted correctly

____ Title Page (3 points)

Running Head
 Content
 Length
 Format
Title Block
 Title Content
 Authors with Middle Initials
 Institution

____ Abstract (7 points)

Description of Topic
Number and Type of Participants
Type of Research Method and Variables
Main Statistical Results
Conclusion about Hypothesis
Organization
No Inappropriate Information
Concise
Scientific Wording
Format
Grammar & Spelling

____ Introduction(20 points)

Description of Topic and Importance
Literature Review
 Comprehensive Coverage
 Appropriate Citations
 Understandable Descriptions
 Avoided Quoting
Specific Hypothesis
Organization
No Inappropriate Information
Concise
Scientific Wording
Format

Grammar & Spelling

_____Method (20 points)

Method is Appropriate for Testing Hypothesis

Participants

Number

Type

Selection Method

Demographics

Materials

Procedure

Organization

No Inappropriate Information

Concise

Scientific Wording

Format

Grammar & Spelling

_____Results (20 points)

Data Tabulation

Descriptive Statistics

Organization

No Inappropriate Information

Concise

Scientific Wording

Format

Grammar & Spelling

_____Discussion (20 points)

Statistical Outcome and Relation to Hypothesis

Limitations/Problems

Comprehensive

Specific

Correct Wording

Related to Literature

Specific Suggestions

Status of Theories (Basic Research)

Applications (Applied Research)

Future Research

Organization

No Inappropriate Information

Concise

Scientific Wording

Format

Grammar & Spelling

_____References (5 points)

Reference for Each Citation

No Uncited References

Alphabetical

Format