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PSYC 120.01: Introduction to Psychological Research Methods

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Introduction to Psychological Research Methods
Psychology 120, Section 01 – Spring 2003

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Class Meetings:
TR 9:40 – 11:00
Jour 304

Office Hours:

Tuesday: 1 – 2:30; Thursday: 11:00 – 12:30; & by appointment

Course Objective:

The primary objective of this course is to provide students with a basic understanding of psychological research methods. We will start with an examination of some of the important characteristics of science: induction and deduction, the importance of theories, and the necessity for empirical observations. We will also consider the main methods that psychologists use to gain information about psychological concerns. For example, we will discuss the experimental method, the correlational (relational) method, and some quasi-experimental methods. You will be expected to know the advantages and disadvantages of each method. In addition, you will be expected to know the technical vocabulary that goes with each of these methods (e.g., internal and external validity, independent and dependent variables, confounding). Additionally, we will examine three widely used experimental designs, including between-subjects, within-subjects, and mixed designs; you will be expected to be familiar with the characteristics and advantages and disadvantages of each. In addition to design, statistics are an integral part of the research process and you will be exposed to the basics of descriptive and inferential statistics. You will be expected to know what these statistical tools do for us and how they help us make rational decisions about data. Finally, we will also consider ethical issues in conducting psychological research.

Overall, your mastery of the topics described above will be assessed with tests based on multiple-choice, true-false and some short-answer questions. The questions will tap your knowledge of the meaning of technical terms and your ability to apply these terms in particular situations.

Required Text:


Ray, W.J. (2003). *Methods toward a science of behavior and experience* (7th ed.). CA: Thomson/Wadsworth.

Optional Workbook:

Zelezny, L. C. (2003) *Methods in action: Study guide and activities workbook for Ray's methods toward a science of behavior and experience*. (7th ed.). Thomson/Wadsworth.

On-line Research Methods Resource Center:

The publisher of your textbook, Thomson/Wadsworth, offers several online student resources. In particular, their web site features key terms and online self-quizzes for every chapter, as well as 10 workshops for Research Methods. To access these student resources on the Ray companion site, go to:

- <http://psychology.wadsworth.com>
- Under "Select a course", click on "Research methods and statistics."
- Scroll down to the icon for Ray's text, "Methods toward a science of behavior and experience" and click on the icon to the left of the book. The icon looks like this: 
- You should now have access to self-quizzes, key terms, etc. To access the Research Methods workshops simply click on "Workbook" under Course Resources and then scroll down to the Research Methods workshops. These are more detailed overviews of topics, including experimental method, reliability, validity, surveys, between versus within designs, etc.

Course Requirements:

Selected readings: A listing of dates and reading assignments is attached (see Class Schedule). Students are expected to have read the material by class on the day specified. Timely completion of reading assignments will help facilitate class discussion and students' understanding of lecture. In addition, exams will be based on the material presented in the book and in class.

Class participation: Students are required to attend all classes and to participate actively in class discussions. Please note that keeping up to-date with the readings will be an important part of your preparation for class. In addition, up to five 1-point, in-class extra credit assignments may be given at the discretion of the instructor randomly throughout the semester. These points are available **ONLY** to those students in attendance and cannot be made up at a later date, regardless of the reason for a missed class. There will be no exceptions.

Exams: There will be three exams during the course of the semester, plus an optional, cumulative final. You are **required** to take all three exams scheduled during the semester; however, if you opt to take the final, you will be allowed to drop your lowest exam grade. Note that exams from previous semesters cannot be used as study material. You will, however, be provided with sample questions before each exam.

Exams will be primarily multiple choice and true-false, with some short answer questions. Again, note that exams will be based on the material in the book AND material presented in class.

Make-up exams will NOT be given except in documentable emergency situations.

Grading:

Exams (3)

3 @ 100 = 300 points total

Letter grades will be assigned based on the following breakdown:

<u>POINTS</u>	<u>GRADE</u>
269 – 300	A (90-100%)
239 – 268	B (80-89%)
209 – 238	C (70-79%)
179 – 208	D (60-69%)
0 – 178	F (0-59%)

Notes:

1. Cheating will NOT be tolerated and may result in a final course grade of an 'F.'
2. March 10 is the last day to drop classes. After that date, no petitions to drop the course will be signed and no Incompletes will be given except in a **documentable** emergency situation.
3. Students with disabilities are responsible for declaring their disability to the instructor at the beginning of the semester if they require accommodations. Such students are also responsible for arranging for any necessary accommodations with Disability Services for Students. The instructor will work collaboratively with the student and DSS to provide these accommodations.
4. Departmental and University policies regarding Incompletes do not allow changing "Incomplete" grades after one year has passed since the "I" was granted.
5. The website for the Department of Psychology (<http://www.umt.edu/psych/>) has important information pertaining to psychology major and minor requirements, admission requirements, Psyc 100, supervised research, etc. If you are a psychology major, or are thinking about becoming one, this is important information for you to review. In addition, the website provides links to sites with information on graduate school admissions, graduate programs, and careers in psychology. If you are at all interested in pursuing graduate study in psychology, use these links as a starting place for your research on existing programs.

Class Schedule

Tuesday	Thursday
January 28 Course Overview / Introduction Chapter 1	30 Overview of methods Chapters 1 & 2
February 4 Developing hypotheses Chapter 3	6 Developing hypotheses
11 Measurement & Descriptive Statistics Chapter 4	13 Inferential statistics Chapter 5
18 Inferential Statistics	20 Review
25 EXAM	27 Basics of experimentation Chapter 6
March 4 Experimental control Chapter 7	6 Between-subjects design Chapter 8
11 Between-subjects design	13 Within-subjects design Chapter 9
18 Within-subjects design	20 Quasi-experimental designs Chapter 11
March 24 – 28 Spring Break	
April 1 Quasi-experimental designs & Review	3 EXAM
8 Small N designs Chapter 12	10 Survey research methods Chapter 13

Tuesday	Thursday
15 Survey research methods	17 Other designs: Behavioral genetic & developmental
22 Ecology of research Chapter 10	24 Ethics Chapter 14
29 Interpreting the results of research & Review Chapter 15	May 1 EXAM
6 Class Wrap-Up	8 Final Review
12 – 16 Final Exam Week Final Exam: Thursday, May 15, 8:00 – 10:00	