

PSY 271 – Research Design and Statistical Analysis I Course Syllabus – Fall Semester, 2005

I. Course Instructor:

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II. Required Text:

Jackson, S. W. (2005). *Research methods and Statistics—A Critical Thinking Approach* (2nd ed.). Belmont, CA: Wadsworth.

III. Course Description and Objectives:

PSY 271 is the first half of the Psychology Department's two-semester integrated course in research methods and statistical analysis (yes, we'll be together for the whole year). The two courses (271 in the fall and 272 in the spring) are designed to introduce you to the wide range of methodologies used by research psychologists to investigate psychological phenomena and to the statistical analyses used to evaluate the outcome of research. At the end of this fall semester, you should be able to:

- Understand and use the attributes of scientific thinking and apply them to issues of interest for psychologists
- Understand the reciprocal relationship between theory and empirical research
- Understand and use these research methods:
 - observational research
 - survey research
 - correlational research
- Understand and use basic descriptive statistics as ways of summarizing data
- Understand the attributes of the normal curve and its relevance for statistical analysis
- Understand the essential logic of null hypothesis significance testing
- Use PsycINFO effectively to search for research in some topic area in psychology
- Use SPSS (software package for completing statistical analyses) to create data files, compute summary statistics, and create graphs
- Read and adequately summarize reports of psychological research in professional journals
- Write a comprehensive literature review of research in some specialized topic area in psychology

Because I believe that the best way to learn how to do science is to actually do some, there will be a laboratory component to the course and you will be collecting and evaluating data throughout both semesters. A large amount of class time will also be taken up with activities, computer exercises, and discussion. Consequently, there will be considerable portions of the text that will not be discussed in class. Nonetheless, you will be responsible for *all* assigned textbook—every word.

III. Course Schedule:

August 24 – September 16

Chapter 1. Thinking Like a Scientist
Chapter 2. Getting Started: Ideas, Resources, and Ethics
EXAM #1. September 16

September 19 – October 10

Chapter 3. Defining, Measuring, and Manipulating Variables
Chapter 5. Data Organization and Descriptive Statistics (pp. 89-105)

EXAM #2. October 10

October 17 – November 9

Chapter 5. Data Organization and Descriptive Statistics (pp. 106-121)

Chapter 4. Descriptive Methods

EXAM #3. November 9

November 11 – December 9

Chapter 6. Correlational Methods and Statistics

Chapter 7. Hypothesis Testing and Inferential Statistics (pp. 143-149)

FINAL EXAM. As Scheduled During Exam Week

IV. Course Requirements:

1. Semester exams. During the semester, you will take three exams, each comprised of objective, short answer, and problem questions. Each exam will cover two or three chapters in the text. Taken together, these exams will be worth **300** points. Each exam will be worth 75 points and the score on your best exam will be counted twice in the final weighting. That is, your point total on the exams will include four numbers—your three exam scores, and the score for your best exam of the three. *No exam score will be dropped.*
2. Final Exam. During final exam week, you will take a comprehensive final examination. Although it will place primary emphasis on material considered between Exam #3 and the final, it will also cover material for the entire semester. Like the three semester exams, it will include objective, short answer, and problem questions. The final exam will be worth **100** points.
3. Homework. Throughout the semester, you will complete a series of data collection, critical thinking, and statistical analysis exercises (e.g., showing that you can use SPSS and interpret the outcomes) as homework. Taken together, they will be worth **50** points. Each failure to complete (accurately) and turn in an assignment will cost you 5 of the 50 points.
4. Brief Lab Reports. For **50** points, you will complete two brief summaries (25 points each) of research conducted in class. More details will be forthcoming in a separate handout.
5. Literature Review. For your final **100** points, you will complete a review of the literature in a selected area of research in psychology. More details will be forthcoming in a separate handout.
6. Summary.

Exams.....	300 points
Final Exam.....	100 points
Homework.....	50 points
Lab Reports.....	50 points
Lit Review.....	100 points
Sum.....	600 points

Once a point total has been determined, letter grades for the course will be assigned as follows:

A = 94 – 100%	=	564-600 points
A- = 90 – 93%	=	540-563 points
B+ = 87 – 89%	=	522-539 points
B = 83 – 86%	=	498-521 points
B- = 80 – 82%	=	480-497 points
C+ = 77 – 79%	=	462-479 points
C = 73 – 76%	=	438-461 points
C- = 70 – 72%	=	420-437 points
D+ = 67 – 69%	=	402-419 points
D = 63 – 66%	=	378-401 points
D- = 60 – 62%	=	360-377 points
F = 0 – 59%	=	000-359 points

V. Miscellaneous:

Class Attendance. I expect to see you in class on a regular basis and I will keep a record of attendance. The most fundamental reason for coming to class is simple—it will have a direct effect on your grade. There is strong evidence that missing class is related to poor exam performance. This is especially true in my classes, because a substantial portion of exam material will be from topics covered in class. There will be no specific point penalty for missing class, however. You are adults—it's your decision about whether to come to class. The basic rule is that although you do not have to come to class, you are responsible for *every single thing* that occurs in class. In the words of a well-known American philosopher:

“Eighty percent of success is showing up” → Woody Allen

Deadlines. The homework assignments will be as announced in class. The other assignments will be due as follows:

Brief lab report 1	October 26
Brief lab report 2	November 18
Literature Review	December 9

Late penalties: Homework and data collection assignments will earn zero points if turned in late. For the brief lab reports, the late penalty will be 10 points per day; a late literature review will cost 25 points a day.

Academic Honesty. Cheating on an exam or plagiarizing on any of the written work will result in an automatic grade of F for the assignment in question. Fraudulently manufacturing data, an especially egregious offense for researchers, will yield an automatic grade of F for the course. A second offense in any of the above ethical violations will elicit a strong recommendation from me to the Department Head and the Dean that you be dismissed from the university.

Policy on Make-up exams. If you miss any of the semester exams *for an acceptable reason*, you may take a make-up exam. These exams will be given during the final week of class. Acceptable reasons for missing exams are limited to the following:

- illness that can be documented by medical personnel
- death or serious family illness that takes you away from campus
- participation in obligatory campus activities (e.g., athletics, student government)

All excused absences from exams must be accompanied by written documentation. Furthermore, if you miss an exam, you must produce the evidence of an excused absence within three days of the scheduled exam.

Classroom Climate. I think learners thrive in an environment where everyone contributes in positive ways to make learning interesting and fun. To those ends, here is what I expect as your contribution to creating a positive atmosphere:

- Actively read assignments before coming to class
- Be in your seat and ready to go when class starts (chronic latecomers run the risk of being embarrassed)
- Avoid having informal discussions during class time, regardless of whether it is me or another student addressing the group
- Avoid “packing up” five minutes before class is officially over
- Ask questions at any time if something is unclear or to raise issues for discussion, but do so without interrupting, if someone else has the floor
- Treat your peers (and me) in a fair, civil, and professional fashion
- Take reasonable measures to keep yourself awake and alert (i.e., never allow your head to touch the desk or your eyes to close for more than 10 seconds—consider that an operational definition of the behavior that will get you kicked out of class)
- Do not spend class time checking email or instant-messaging people

In turn, here is how I will contribute to a positive and energizing course climate. I will:

- Start and end class on time and come well prepared for each class
- Treat all students in a fair and civil fashion
- Return exams and written work promptly (typically within one or at most two class periods)
- Spend extra time with you if you need help with anything related to the course
- Observe my office hours (above) and generally be available to you outside of class