

Psychology 610: Quantitative Research Design and Analysis Fall, 2008

Instructor:

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Course Web Site: <http://psyc610.stasson.org>

Competence Statement:

The student will understand the concepts, theories and practices associated with the design and analysis of quantitative applied psychological research well enough to apply this knowledge at an intermediate to advanced level.

Course Objectives:

- 1) Understand the role of quantitative research methodologies in applied psychology.
- 2) Know the roles of sampling, measurement, reliability, and validity in research design and evaluation of research.
- 3) Increase understanding of statistics and their utility in applied/basic research, program evaluation and community based research.
- 4) Be able to develop a plan for applied research involving quantitative measures and know the steps necessary for appropriate analysis and interpretation of results.

Required Texts/Resources:

Green, S. B. & Salkind, N. J. (2008) Using SPSS for Windows and Macintosh (5th edition). Prentice Hall.

Additional Readings will be Assigned on a weekly basis

We will use the Software Program SPSS, available in University Computer Labs (you may also get a “student version” for use at home)

Students must have and use a “Net Direct” computer account (and University e-mail).

Assignments:

- 1) Two Exams (each worth 100 points)
- 2) Group or Individual Research Projects/Proposal (worth a total of 100 points)
- 3) Regular Homework assignments (worth a total of 100 points)
- 4) In class participation and assignments (worth a total of 100 points)

Evaluation/Grades: 90% overall expected for a grade of “A”; at least 80% for “B”

Tentative Course Schedule

Topics will vary slightly depending on class members' interests and experiences. The first several meetings are "set" and subsequent sessions will be mapped out or modified as the course projects are selected. Exam dates: October 14 and December 2.

Tuesday, August 26

Topics: Introductions, orientation to the course, overview of quantitative research and evaluation; what are research and evaluation, and why do we do them? Terminology, history, measurement, and overview. Exploration of research topics. What is SPSS?

Reading Due in advance: None (the only time this happens)

Assignment Due: None (another rarity)

Tuesday, September 2

Topics: Overview of project design using quantitative measures. Library research and resources. "Traditional" research design

Readings due in advance:

Units 1-2 in Green and Salkind (SPSS) book. (Install SPSS, if applicable)

Chapter 1 from Shadish, Cook, & Campbell (2002 -- copy provided in class).

Zechmeister, E. B., & Shaughnessy, J. J. (1992). Practical Introduction to Research Methods in Psychology (Unit 1, pp. 1-11). This is a very, very basic review of concepts you should have covered in a previous methods course (Provided in class).

Salkind (2003). Chapter 3: Selecting the Problem and Reviewing the Research. Pp. 39-83 in the book Exploring Research. (Will be discussed later, expected to be mostly review).

Assignment due at start of class: Written idea regarding one possible project and answers to questions, and more – see weekly assignment sheet

Tuesday, September 9

Topics: Validity in Research Design; instrument selection/development; descriptive data analysis

Readings due in advance:

Chapters 2 and 3 in the Shadish, Cook, & Campbell (2002 – copy provided).

Units 3-5 in Green and Salkind (SPSS) book.

Human Subject Protection information – available online, see weekly assignment sheet for details

Assignment due at start of class: (See weekly assignment sheet)

Tuesday, September 16

Topics: Reliability, and Measurement in Quantitative Design; instrument selection/development; descriptive data analysis

Readings due in advance:

Lessons 31 and 37 in Green and Salkind (SPSS) book.

Salkind (2003). Chapter 5: Measurement, Reliability, and Validity. Pp. 101-123 in the book Exploring Research.

One or two research articles from the literature (see weekly assignment sheet)

Assignment due at start of class: (See weekly assignment sheet)

Tuesday, September 23

Topics: Assessing Validity and Reliability. Inferential statistics and data analysis

Tuesday, September 30

Topics: Two-Group Design and Analysis

Tuesday, October 7

Topics: Three-Group Design and Analysis

Tuesday, October 14

First Exam

Tuesday, October 21

Topics: Survey Construction and Analysis

Tuesday, October 28

Topics: "Two-Way" Research Designs and Analysis

Tuesday, November 4

Topics: Multivariate Designs I

Tuesday, November 11

Topics: Multivariate Designs II

Tuesday, November 18

Topics: Disseminating Research Results

Tuesday, November 25

Topics: Review and Catch-up

Tuesday, December 2

Second Exam