

**University of Florida
College of Public Health & Health Professions
Department of Behavioral Science and Community Health**

Course Syllabus

**PHC6700: Social & Behavioral Research methods
Spring 2008**

Instructor Information

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Course Overview

The purpose of this course is to introduce students to social and behavioral research methods used in the field of public health. Students will gain expertise in reading, evaluating and testing data from various forms of research. The focus will be on the practical application of health and behavioral data. The content focuses on the theoretical foundations of measurement, types of research design (qualitative / quantitative), study construction for large and small scale projects, analysis, validity and reliability assessment, survey /questionnaire design, and content analysis. The classes will incorporate readings, lectures, in-class discussion, practical labs and student presentations.

Course Timetable: 3hrs per week (2 hrs in person lecture format, 1 hr tutorial)

Course Objectives

1. To increase exposure to and knowledge of research methodology in public health with emphasis on social behavioral applications.
2. To identify and understand the role of research and measurement in social outcomes research.
3. To develop skills in hypothesis development , sampling, and application of the concepts of validity and reliability
4. To broaden knowledge of qualitative and quantitative designs and their application and interpretation in community and health environments.
5. To apply basic concepts of data gathering, management, accuracy, precision, and testing and reproducibility to measured health data.
6. To critically assess research concepts in published research papers from a variety of social and behavioral areas.

Texts:

1. Leedy P.D, Ormrod JE (2005). Practical Research: Planning and Design. 8th Eds.
2. Creswell JW (2003) Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (2nd Edition).California. Sage Publications.
3. Cosby PC. (2006). Methods in Behavioral Research. 9th Eds. Boston. McGraw Hill International;
4. Burg BL. Qualitative Research Methods for the Social Sciences (6th Edition)
5. Newman WL. (2002) Social Research Methods: Qualitative and quantitative approaches.6th Eds. Boston: Allyn & Bacon.
6. Hully SB, Cummings SR. (2006). Designing Clinical Research- an epidemiologic approach. Baltimore. Williams & Wilkins.

Suggested reading

- Fletcher RH, Fletcher SW, Wagner EH. Diagnosis in Clinical Epidemiology: the essentials (3d print). Baltimore, Media: Williams & Wilkins 1996. Chapter 3: 43-74
- Fowler FJ. Survey Research methods. Newbury Park, CA: Sage Publications, 2001
- Maxim PS. Quantitative research methods in the social sciences. New York. Oxford University Press
- Wooden KE, Schneider JC. The CRAIS Guide to monitoring clinical research. 2003

Note: Some additional reading will be provided with class notes.

Course requirement/ evaluation/ grading**Tutorials /Computer Labs and homework exercises (40%)**

Each student is required to attend and complete all work activities assigned for tutorial sessions. These sessions will be practical application of materials covered in the lectures. There will be a combination of research exemplars, computer data, and videotaped subject interviews for analysis (with most classes you will be provided with datasets for you to use for the computer data analysis). In the case of assignments for these applied sessions, all work must be clearly written /printed and provided to the tutorial instructor at the start of each following class.

Research project (40%)

The student (or small group) will be asked to choose one of the following:

1. To develop a research project on a health topic. Students will present an overview of their project to the class using MS power point prior to completion. A written presentation of this project will be required one week following the presentation
2. The student (or small group) will construct a critical analysis / review of a piece of literature provided. Students will present an overview of their project to the class using MS power point prior to completion. A written presentation of this project will be required one week following the presentation.

All Reports should contain the following:

- a. A hypothesis statement
- b. A rationale- the theoretical framework that forms a basis for the question

- c. Sampling frame
- d. Participants
- e. Measurement techniques (validity/ reliability)
- f. Methods for administration of the study
- g. Control for Bias
- h. Control for confounding
- i. Plans for analysis
- j. Expected outcomes
- k. Statement/ evaluation of impact

The final manuscript report (completed individually) must include a researched introduction to the health topic chosen and may be no less than 5 typed pages in length.

Class participation (20%)

Students are expected to attend every class meeting. Students are expected to have read all assigned readings prior to class and be prepared to participate in discussions. Students will be evaluated on the quality and quantity of their participation.

Statement of University's Honesty Policy

Academic Integrity – Students are expected to act in accordance with the University of Florida policy on academic integrity (see Graduate Student Handbook for details).

As a member of the University of Florida community, each of us is bound by the academic honesty guidelines of the University and the Code of Student Conduct, printed in the Student Guide and published on the University website. The Honor Code states: “We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.” Cheating, plagiarism, other academic dishonesty or conduct violations in any form is unacceptable and inexcusable behavior that can result in dismissal from the College and/or University. If you have any questions or need any clarifications whatsoever, please ask your instructor.

Policy related to class attendance or other work

You will be expected to attend and be prepared to participate in all class sessions and participate in discussions and activities. .At a bare minimum, you are responsible for coming to all class sessions. Of course, unanticipated circumstances may arise (illnesses, emergencies, even deaths in our lives and communities). Please notify your instructor immediately (preferably in person or via telephone and not via email) if such events occur. Personal issues with respect to class attendance or fulfillment of course requirements will be handled on an individual basis. You will only be allowed to make up points from class sessions individually if your absence warrants a medical excuse or similar documentation (consistent with the College policy). **There will be no “make-up exams” without an official medical or similar emergency.** Examinations missed or turned in late for any other reasons will receive a grade of “zero.”

Statement related to accommodations for students with disabilities

If you require academic accommodations, you must first register with the Dean of Students' Office. The Dean of Students' Office will provide you with documentation that you must provide to me as the faculty member for this course at the time you request the accommodation. The College and the instructor are committed to providing reasonable accommodations to students with special needs in order to assist students in their coursework.

Counseling and mental health services: Students in need of counseling and mental health services are encouraged to explore the Student Health Care Center, <http://www.shcc.ufl.edu> , (352)-392-1161, or the University of Florida Counseling Center, <http://www.counsel.ufl.edu> , (352)-392-1575

Course Schedule:

Date	Topic	Text Supplementary Readings
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Jan 10th

Course overview and introduction
to research

Leedy Ch. 1-2

Tutorial: *Review of the basics of measurement*

Jan 17th

Purpose statements
Causal relationships
Bias
Confounding

Leedy Ch. 3
pp181-182

1. Ottenbacher K (1995) Why rehabilitation research does not work as well as we think it should. Arch Phys Med Rehabil; 76: 123- 129.
2. Kelsey JL, Thompson WD & Evans AS (1986) Methods in observational epidemiology Oxford University press, New York. Chaps 1.
3. Choi C, Noseworthy L (1992) Classification, direction, and prevention of bias in epidemiologic research. JOM; 34(3) :265 – 271.

Tutorial: *Identifying threats to validity*

Jan 24th

Quantitative vs. Qualitative designs
Differentiation and design overview

Leedy Ch. 10& 7

Tutorial: *Exploring research design*

Jan 31st

Sampling, randomization
Reliability of measurement
 Procedures for estimating reliability
 Reliability Coefficients

Neuman Ch 8
Leedy Ch 2: pp-27-28
Cosby: Ch 5

1. Fletcher RH , Fletcher SW & Wagner EH. (1988) Clinical epidemiology: the essentials Baltimore, Williams & Wilkins. Chpt 3
2. Jaeschke R, Guyatt G, Sackett DL. (1994) Users guide to the medical literature. III. How to use an article about a diagnostic test. A. Are the results of the study valid? JAMA; 271: 389-91.
3. Jaeschke R, Guyatt G, Sackett DL. (1994) Users guide to the medical literature. III. How to use an article about a diagnostic test. B. What were the results and will they help me in caring for my patients? JAMA; 271:703 - 7.

Tutorial: *How long is a piece of string?*

Feb 7th

Introduction to Validity

Leedy: Ch5

Criterion Related / Concurrent Validity

Accuracy, precision, & bias,

Cosby: Ch 5.

Construct & predictive Validity

1. Cockburn J & DeLuise T (1992) Some issues regarding reliability and validity. *Health Promotion Journal of Aust*; 2 (2): 49-54
2. Haas M (1991) Statistical methodology for reliability studies. *J Manip & Phys Ther*, 14 (2): 119 – 132.

Tutorial: *Is that really a piece of string?*

Feb 14th

Quantitative designs in depth

Leedy Ch 10

Quasi experimental designs

Cosby Ch 11

Pre- post/ Cross Sectional

Cohort study

Tutorial: *Design at your own risk*

1. Sackett DL, Rosenberg W, Gray M, Haynes B, Richardson S (1996) Evidenced based medicine: What it is and what it isn't. *BMJ*; 312: 71-72.
2. Greenhalgh T (1997) How to read a paper: getting your bearings (deciding what the paper is about). *BMJ*; 315: 243-246.
3. Oxman A, Sackett D, Guyatt G. (1993) Users guide to the medical literature. I. How to get started. *JAMA*; 270 (17): 2093 – 5.
4. Kelsey JL, Thompson WD & Evans AS (1986) *Methods in observational epidemiology* Oxford University press, New York. Chaps 4. Prospective Cohort Studies 1: Planning and execution.

Feb 21st

Quantitative designs

Leedy Ch 10

Experimental

Group designs, RCT, Nof 1

1. Miettinen O (1985) The case control study valid selection of subjects. *J Chron Dis*; 38 (7) : 543-548.
2. Schlesselman J (1985) Valid selection of subjects in case-control studies. *J Chron Dis* ; 38(7): 549 – 550.
3. Stephenson J, Imrie J (1998) Why do we need randomised controlled trials to assess behavioural interventions? *BMJ*; 316: 611-613
4. Yusuf S, Collins R, Peto R. (1984) Why do we need some large, simple randomized trials? *Stat in Med*; 3: 409-420.

Tutorial: $A + b = y/Z^{15}$

Feb 28th

Descriptive, Single case design

Leedy Ch 10

Cosby Ch 11

1. Robey, R. R., Schultz, M. C., Crawford, A. B., & Sinner, C. A. (1999). Single-subject Clinical -outcome research: Designs, data, effect sizes, and analyses. *Aphasiology*, 13, 445–473.
2. Arnold, B. L. (1997). Single-subject research as an alternative to group research. *Athletic Therapy Today*, 2(3), 19-20.
3. Barlow, D. H., & Hersen, M. (1985). *Single case experimental design: Strategies for studying behavior change* (2nd ed.) New York: Pergamon.

Tutorial: *The power of one*

March 6th

Introduction to Qualitative design

(guest lecture)

No tutorial

March 13th

spring break

No class

March 20th

Qualitative designs
Field, content analysis

Leedy Ch 7

Tutorial: *How bright is the sun?*

March 27th

Ecological
Survey research

Leedy Ch 9

Cosby Ch 7

1. Abramson JH (1979) *Survey methods in community medicine* Churchill Livingstone
Moser CA, Kalton G (1971).

Tutorial: *Asking people about things!*

April 3rd

Making statistics work for you
Effect size
Error, Power
Analyzing Results

Leedy Ch 11

Cosby Ch 12

Tutorial: *I have the power! (or do I?)*

April 10th

Research ethics
Writing Research
(A-Z) of Grant development

Cosby Ch 3
Leedy Ch 6 & 12

1. Katz R, Campagnolo D, Golberg G, Parker J, Pine Z, Whyte J. (1995) Critical evaluation of clinical research. Arch Phys Med Rehabil; 76: 82 – 93

Tutorial: *Making sense of all that work*

April 17th

Student presentations

April 24th

Student presentations

Course Project due by May 1st

Additional Reading list

3. Cockburn J & DeLuise T (1992) Some issues regarding reliability and validity. Health Promotion Journal of Australia; 2 (2): 49-54
4. Choi C, Noseworthy L (1992) Classification, direction, and prevention of bias in epidemiologic research. JOM; 34(3):265 – 271.
5. Fletcher RH, Fletcher SW & Wagner EH. (1988) Clinical epidemiology: the essentials Baltimore, Williams & Wilkins. Chapter 3
6. Abramson JH (1979) Survey methods in community medicine Churchill Livingstone
7. Cronbach, L.J. and Meehl, P.E. (1955) Construct validity in psychological tests. Psychological Bulletin, 52, 281-302
8. Messick, S. (1989). Validity. In R. L. Linn, (ed.), *Educational Measurement*. New York: Macmillan Publishing Company, pp. 13-103.
9. Armitage P (1971) Statistical methods in medical research Oxford, Blackwell
10. Fleiss JL (1981) Statistical methods for rates and proportions New York, John Wiley & Sons.
11. Gardner MJ, Altman DG (1989) Statistics with confidence. Belfast, Universities Press
12. Sackett DL, Haynes RB, Guyatt GH, Tugwell P (1991) Clinical Epidemiology: a basic science for clinical medicine. Boston, Little, Brown and Company.
13. Campbell DT & Stanley JC. (1966) Experimental and quasi experimental designs for research. Chicago, Rand McNally
14. Cohen J (1988) Statistical power analysis for the behavioural sciences 2nd Rev Ed. Hillsdale NJ, Lawrence Erlbaum.

15. Lipsey MW (1990) Design sensitivity: Statistical power for experimental research Newbury Park CA, Sage.
16. Friedman LM, Furburg CD, DeMets DL. (1985) Fundamentals of clinical trials (2nd Ed) Littleton MA, PSG
17. Kraemer HC, Thieman S (1987) How many subjects? Statistical power analysis in research. Newbury Park, Sage
18. Abramson JH (1979) Survey methods in community medicine Churchill Livingstone.