

**ASE 579 METHODS OF RESEARCH
Fall 2007
Sam Houston State University
College of Education
Department of Educational Leadership & Counseling**

This is a required course for students in the Master's Degree in Counseling, Educational Administration, and Educational Leadership.

Contact Information: **Dr. Rebecca M. Bustamante**
Teacher Education Center, Rm. 319
P.O. Box 2119, Huntville, TX 77341
Phone: 936-296-1174/4946; Fax: 936-294-3886
E-Mail: bustamante@shsu.edu

TIME: Wednesdays: 6:00 – 8:50 pm (Aldine Cohort)

PLACES: Grantham Academy Library

REQUIRED TEXTS:

Gay, L.R. & Airasian, P. *Educational research: Competencies for analysis and applications* (8th ed.). Upper Saddle River, NJ: Prentice Hall.

Gay, L.R. & Airasian, P. *Student guide to accompany educational research: Competencies for analysis and application* (8th ed.). Upper Saddle River, NJ: Prentice Hall.

American Psychological Association. (1994). *Publication manual of the American Psychological Association* (8th ed.) Washington, DC: American Psychological Association.

** Additional articles and website activities may also be required.

OTHER REQUIRED TOOLS:

1. Students should have access to a reliable Internet connection and be familiar with basic Microsoft software programs including Word, PowerPoint, and Excel. In addition, students will need to establish a SHSU student email account (see http://www.shsu.edu/~ucs_www/) in order to utilize the reference collections and SPSS software via a remote connection.
2. Blackboard: Students will be expected to utilize Blackboard for assignments, discussion boards, and announcements. Please visit <http://www.shsu.edu/administrative/training/guides/blackboard.html> for training guides and on-line tutorials.
3. Please become familiar with the resources managed by the Newton Gresham Library by visiting the website: <http://library.shsu.edu/>

COURSE DESCRIPTION: This course is designed to guide graduate students in the College of Education in the process of inquiry through an introduction to quantitative and qualitative research methodology.

COURSE OBJECTIVES:

Students will:

1. Understand basic research concepts.
2. Locate academic literature and research using a variety of resources.
3. Be able to understand data and research relevant to educational leadership.
4. Understand the purpose of both quantitative and qualitative methodology.
5. Describe various data collection methods (e.g. experimental, descriptive, correlational, naturalistic).
6. Become familiar with some of the most commonly used data analysis techniques.
7. Understand the importance of ethics in research and the proper procedures to protect participants.
8. Appreciate the relationship between theory, research, and practice.
9. Demonstrate application of above concepts by conducting a research project.

IDEA OBJECTIVES:*Essential:*

- Gaining factual knowledge (terminology, classifications, methods, trends).
- Learning how to find and use resources for answering questions or solving problems.
- Developing skill in expressing oneself orally or in writing.

Important:

- Learning to *apply* course material (to improve thinking, problem solving, and decisions).
- Learning to *analyze* and *critically evaluate* ideas, arguments, and points of view.

This course meets various professional standards for research and data-based decisions including those for SBEC, CACREP, and ELCC.

UNIVERSITY AND COURSE REQUIREMENTS

- ✓ If you are a student with a **disability** that may affect your academic performance, please contact the professor as soon as possible or you may contact the Director of the Counseling Center as chair of the Committee for Continuing Assistance for Disabled Students at (936) 294-1720.
- ✓ **Dropping the Class/Withdrawing from the University:** If you need to adjust your schedule by dropping this course, please follow university procedures to officially drop the class. If you fail to officially drop the class, a failing grade will be assigned at the end of the course (Academic Policy Statement 990407). If a student resigns (officially withdraws) between the 1st class day and the 12th class day (4th class day in the summer) no record of the resignation will appear on the student's academic record. If a student resigns after the 12th class day (4th class day in summer) but before mid-semester, a record of the resignation will appear on the student's academic record. If a student resigns after eight weeks in the fall or spring or after the first two weeks of a summer session the mark of WP (withdrew passing) or WF (withdrew failing) will be recorded on the student's academic record for each course for which the student was enrolled. To resign (officially withdraw) from the university, a student must either report to the Registrar's Office to complete a Resignation Request or submit a letter stating his or her intent to resign.

- ✓ Academic **honesty** is expected in this class. Plagiarism is a violation and will result in course failure.
- ✓ **Attendance** is taken for all class meetings. Please **notify me in advance** if you will be absent or tardy. According to the university policy, regular and punctual class attendance is expected and faculty will keep a record of student attendance. Each faculty member will announce to his/her classes the policies for accepting late work. *The policy for this class is as follows: Assignments are due as stated and late work at the graduate level will be considered unacceptable. The student may petition the instructor in writing for consideration of an extenuating circumstance.* Students must provide appropriate reasons for missing or delaying major assignments or examinations. A student will not be penalized for three or fewer hours of absences [*one class period*] when examinations or other assigned class work have not been missed; however, a student may be penalized for more than three hours of absences at the discretion of the instructor (Academic Policy Statement 800401). *For this class, assignments and quizzes are due as stated, regardless of class attendance. More than one absence will result in a reduced grade.*
- ✓ **Religious Holidays.** A student who plans to miss a class or required activity to observe a religious holy day should inform the professor in writing prior to planned absence.

ASSIGNMENTS/ASSESSMENTS/PROJECTS

EVALUATION/GRADES:

A Total of 100 points can be gained through the individual and group activities in this course. Grades will be determined at the professional discretion of the instructor. “A” grades should “exceed expectations.” “B” grades “meet expectations.” Guidelines, rubrics, and/or examples will be provided for each assigned activity.

GRADING SCALE:

A = 90% — 100%
B = 80% — 89%

C = 70% –79%
D = 60% – 69%

F = <59

ASSESSMENTS/ ACTIVITIES

1. Basic Research Terms and Concepts (ethics certificate, survey pre-test, quizzes) (35%)

These assessments include completion of an on-line ethics course, weekly quizzes, and other assigned activities designed to enhance your understanding of basic principles and concepts.

2. Understanding and Analyzing Research Data and Reports (mini-project) (15%)

You will be given a previously prepared educational research report and asked to analyze its content, strengths, and shortcomings by applying your knowledge of research. You will practice a similar activity in class prior to carrying out this assignment. This project will be done in pairs and a summary of your findings will be presented to the group.

3. Research Team Study (35%)

As a class team of researchers, we will work on one topic related to educational leadership. Each person will have different roles as we go through the research process and will be responsible for writing their portion of a final research report.

4. Mini-final exam (15%)

You will be given two research scenarios and asked to respond to some questions to demonstrate how you might apply the concept learned in class. These questions will be similar in format to those on the state standardized test and the comprehensive exam for principal certification.

GUIDELINES FOR WRITTEN WORK

- Typed, double-spaced in a 12-point classic font (Arial or Times New Roman) with one-inch margins.
- Use APA format.
- Number every page.
- Use a cover page. NO folders or plastic report covers.
- Staple pages in the left corner.

Topic Outline**Unit 1: Research, Inquiry, and Tools for Research**

What is Research? Tools of Research

Sources of Knowledge

Nature of Scientific Inquiry

Types of Educational Research

Tools of Research: Library, Computers, Measurement, Statistics, Thought, Language

Educational Research Report Formats

NCLB and scientifically based research

The Coleman Study

Unit 2: Ethics & Safeguards

Ethical Issues in Research

IRB procedures

Protection of Human Subjects training

<http://www.cancer.gov/clinicaltrials/learning/page3>

[Human Participant Protections Education for Research Teams](#)

Unit 3: Research Topics, Questions and Problems

Questions that Researchers ask

Research problems and Sources for Problems

Quantitative Purpose statements, research questions, & hypotheses

Variables in Quantitative Research

Qualitative Purpose Statements & Research Questions

Unit 4: Locating and Reviewing Literature

Why Review Related Literature?

Linking the study's significance to related literature

Finding sources using keywords

http://tegrity.shsu.edu/tegrity/library/library_databases/class/default.htm

Utilizing the Internet

http://library.shsu.edu/research/instruction/internet_tutorial/tut_home.html

Utilizing the Library databases

http://library.shsu.edu/research/instruction/infotutorial/tut_home.html

Evaluating Primary Sources

Abstracting

Unit 5: Academic Writing

General guidelines (Gay Chapter 21 & APA Chapters 1-4)

Format & Style

Mechanics

In-text citations APA pp207-214

References

Reporting the Literature

Unit 6: Planning your Research Study

The basic format of research reports

Research methodology

The nature of data in research

Validity of research method

Organizing a research proposal

Types of educational measures: tests, questionnaires, observations, interviews

Foundations of Measurement

Scale of Measurement (NOIR)

Validity and Reliability of scores

Unit 7: Subjects, Participants, and Sampling

Random sampling

Sampling for Quantitative studies

Sampling for Qualitative studies

Volunteers

Sampling Size
Sampling Bias and Sampling Error

Unit 8: Research Designs

Descriptive Research
Questionnaires
Interviews
Correlational Research
Relationships
Predictions
Ex-post facto research (causal-comparative research)
Experimental research
Control
Threats to validity
Extraneous variables

Unit 9: Descriptive Statistics

Scales of Measurement & relationship to statistics
Normal Curve
Standard Scores
Graphs & frequency distributions
Measures of central tendency
Measures of variability
Measures of correlation

Unit 10: Data Analysis & Inferential Statistics

Standard error
Null hypothesis
Tests of Statistical Significance: What & Why
Type I and II Errors
Exploratory Data Analysis

The t test, ANOVA, Chi square
Effect Size
Limitations
Conclusions and Implications

Unit 11: Qualitative Research

Qualitative research process
Qualitative research ethics
Data collection techniques
Data analysis techniques

Unit 12: Action Research & Program Evaluation

Action research characteristics
Action research techniques
Program Evaluation designs
Mixed Methods Research Designs