

**Sam Houston State University
College of Education
Department of Educational Leadership & Counseling**

**ASE/CNE 579 Methods of Research
Spring 2008**

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

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Office Hours: 10:00am – 5:00pm (M, TH, W)

3:00pm – 5:30pm (T)

By Appointment (F)

Required Texts:

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

American Psychological Association. (2001). *Publication Manual of the American Psychological Association* (5th ed.) Washington, DC: American Psychological Association.

SPSS (statistical package) (Version 12) to be included with text and student guide. All of this package may be bought through SHSU Bookstore.

Course Description:

Study is made of types and methods of educational research, the collecting, analyzing, and sharing of data with the public. The student is expected to complete a research project or filed study utilizing appropriate methods of education research. Credit 3 hours.

Objectives:

Objectives and competencies will be noted within the course calendar. This was done to ensure that students have covered topics in this course that will prepare them for exit and certification examinations as well as licensing requirements. This course was designed to meet these objectives and competencies:

Professional Standards Matrix:

CA = CACREP (Counselor Accreditation for Counseling & Related Educational Programs)

SB = SBEC Standards (State Board for Educator Certification – Standards for the School Counselor Certification –TExES Texas Examinations of Educator Standards)

NA = NCATE (National Council for Accreditation of Teacher Education. These will cover standards for school counselors and principals.)

The class calendar will note how the class activity, topic, or assignments will fulfill the objective or competency required. The above objective and competency abbreviations will be used.

Course Objectives The student will:

1. Demonstrate an understanding of the research process and methodology.
2. Identify and define a researchable problem, review related literature, and state the problem in terms of testable hypotheses or researchable questions.
3. Produce a research plan, and state reasons for its importance.
4. Demonstrate an understanding of the basics of sampling theory and related subject selection techniques.
5. Demonstrate knowledge of criteria for evaluation and selection of test instruments and can apply this knowledge to a research problem.
6. Describe the procedures involved in each of the types of research and can discriminate between the types of research. Use a type of research design to complete a research project.
7. Select and calculate, as appropriate, the following statistics: mean, standard deviation, z-scores, t tests, ANOVA, Chi Square, and Pearson Product Moment Correlation. Use a statistical package such as SPSS for calculating these statistics.
8. Identify research problems requiring statistical application and will demonstrate an understanding of the results.
9. Make critical evaluations of published research and judge the generalizability of a given study.
10. Develop the ability to use library resources for research purposes.
11. Learn to distinguish research and research reviews and other opinion-based writings.
12. Use technology for assignments (Blackboard, e-mail, Power Point, SPSS, internet, Interactive Telecommunication via Video, etc.
13. Learn a proper style for writing research material (APA style is required).
14. Use ethical procedures in conducting research.

IDEA Objectives Identified by SHSU:

- a. Gain factual knowledge (terminology, classifications, methods, trends) [Essential]
- b. Develop skills in expressing oneself orally and in writing [Essential]
- c. Learn how to find and use resources for answering questions or solving problems [Important]
- d. Learn how to analyze and critically evaluate ideas, arguments, and points of view [Important]

Standards Matrix

| Date/Objectives/ Learning Outcomes (CO = Course Objective) | Activities | Performance Assessment | Professional Standards (SBC – State Board for Counselors, SBP – State Board for Principals) |
|--|---|--|---|
| <p>1. CO = Demonstrate an understanding of the research process and methodology. CA= 8a. Research and Program Evaluation - Studies that provide an Understanding of research methods, statistical analysis, needs assessment, and program evaluation, including the importance of research and opportunities and difficulties in conducting research in the counseling profession. 8f. Ethical and legal considerations. IDEA- a,c,d</p> | <p>Introductions Review Syllabus Overview of Course</p> <p>Read textbook chapters as assigned Class Activity: Getting to Know the Class Questionnaire</p> | <p>Participate in class discussion of assigned chapters</p> <p>Quizzes and final exam</p> | <p>SBC - Domain II, 007</p> <p>SBP - Domain 1 002 (8) NA - 1,2 CA – K 8a, 8f</p> |
| <p>2. CO = Identify and define a researchable problem, review related literature, and state the problem in terms of testable hypotheses or researchable questions. Develop the ability to use library resources for research purposes. CA - 8b. Research Methods such as qualitative, quantitative, single case designs, action</p> | <p>Review Chapter 1 Introduction to Educational Research</p> <p>AND</p> <p>Training by SHSU Librarian on remote access to library resources</p> | <p>Participate in class discussion of assigned chapters</p> <p>Abstract 10 articles for your initial literature review</p> <p>quizzes and final exam</p> | <p>CA -K 8b, K 8f SBC- Domain III 010 SBP - Domain II 004(2) NA-Standard 2, 4</p> |

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| <p>research, and outcome based research 8f. Ethical and legal considerations. IDEA- a, c, d</p> | | | |
| <p>3. CO = Produce a research plan and state reasons for its importance. CA = 8c. Use of technology and statistical methods in conducting research and program evaluation, assuming basic computer literacy. CA= 8d. Principles, models, and applications of needs assessment, program evaluation, and use of findings to effect program modifications. 8f. Ethical and legal considerations IDEA- a, c, d</p> | <p>Ch. 2 Selecting and Defining a Research Topic -Hypotheses and Research Questions</p> <p>Ch. 3 Preparing and Evaluation of a Research Plan</p> <p>Complete Ethical Procedures in Conducting Research (on-line training) Web address for training is provided in Class Schedule</p> | <p>Participate in class discussion of assigned chapters</p> <p>Abstracts for literature review</p> <p>Write hypothesis or research questions for research study</p> <p>Certification of completion for ethical procedures training</p> | <p>CA -K 8c, 8d K 8f SBC -Domain I (003) SBC - Domain III (007)</p> <p>SBP - Domain II 004(4), 004(5)</p> <p>NA - Standards II (3, 4)</p> |
| <p>4. CA= 8d. Principles, models, and applications of needs assessment, program evaluation, and use of findings to effect program modifications. 8f Ethical and legal considerations. IDEA- a, b, c, d</p> | <p>Review Ch. 6 Describe the major steps involved in conducting a descriptive research study.</p> | <p>Participate in a discussion of sampling techniques, bias, and quantitative/qualitative sampling strategies</p> | |

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| <p>5. CO = Produce a research plan and state reasons for its importance. CA = 8d. Principles, models, and applications of needs assessment, program evaluation, and use of findings to effect program modifications. 8f Ethical and legal considerations. IDEA- a, c, d</p> | <p>Same as Course Objective 4</p> | <p>Selection of appropriate sample for research project</p> <p>Quizzes and final exam</p> | <p>CA -K8d, K 8f</p> <p>SBC - Domain I (002) SBC-Domain III (007) SBP -Domain I</p> <p>001(5); 003 (2 & 3)</p> <p>SBP - Domain II 005(5)</p> <p>NA -I (2,4)</p> |
| <p>6. CO = Demonstrate an understanding of the basics of sampling theory and related subject-selection techniques. CA = 8e. Use of Research to improving counseling effectiveness 8f Ethical and legal considerations. IDEA- a, c, d</p> | <p>Review Ch. 7 Identify the major steps in conducting Correlational Research</p> <p>Selecting Instruments, Instrument Development, & Obtaining Consent</p> | <p>Participate in discussion of assigned chapters</p> <p>Quizzes and final exam</p> | <p>CA -K 8c, K 8e, K 8f</p> <p>SBC - Domain III (007)</p> <p>SBP - Domain I 001 (4 & 5)</p> <p>SBP - Domain II 004 (2 & 4)</p> <p>NA - Standards 1, 2, 4</p> |
| <p>7. CO - Demonstrate knowledge of criteria for evaluation and selection of test instruments and can apply this knowledge to a research problem of their own. CA - 8e. Use of research to improving counseling effectiveness. 8f Ethical and legal considerations. IDEA - a, c, d</p> | <p>Ch. 8 Causal-Comparative Research Describe the differences between causal-comparative and correalational research</p> <p>Develop a survey related to your study</p> | <p>Participate in class discussion of assigned chapters</p> <p>Quizzes and final exam</p> <p>Completed survey</p> | <p>CA K 8c, K 8f</p> <p>SBC- Domain III (007)</p> <p>SBP Domain II 005 (5 & 11)</p> <p>NA – Standards 1, 2, 4</p> |

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| <p>8. CO =Describe the procedures involved in each of the types of research and can discriminate between the types of research. Use a type of research design to complete a research project. CA = 8d. Principles, models, and applications of needs assessment, program evaluation, and use of findings to effect program modifications. 8f Ethical and legal considerations. IDEA -a, c, d</p> | <p>List basic steps in conducting Experimental Research</p> <p>Review methods for collecting your data</p> | <p>Participate in class discussion of assigned chapters</p> <p>Draft of your methods for collecting data</p> <p>Draft instruments that will be used to collect data</p> | <p>CA -K8c, K8f SBC - Domain III (007) SBP - Domain II 004 (5) NA - Standards 1, 2, 4</p> |
| <p>9. CO - Select and calculate, as appropriate, the following statistics: mean, standard deviation, z-scores, t tests, ANOVA, Chi Square, and Pearson Product Moment Correlation. Use a Statistical package such as SPSS For calculating these statistics. 8c. Use of technology and statistical methods in conducting research and program evaluation, assuming basic computer literacy. 8f Ethical and legal considerations. IDEA- a, b, c, d</p> | <p>APA Style and Writing the First Draft</p> <p>Become familiar with SPSS</p> | <p>Participate in class discussion of assigned chapters</p> <p>Enter survey data into SPSS</p> | <p>CA - K8e, K8f SBC -Domain III (009) SBP - Domain II 003(9) NA 1, 2, 4</p> |
| <p>10. CO -Use a type of</p> | <p>SPSS Software</p> | <p>Complete SPSS</p> | <p>CA -K 8c,</p> |

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| <p>research design to complete a research project. CA - 8c. Use of technology and statistical methods in conducting research and program evaluation, assuming basic computer literacy. 8f Ethical and legal considerations. IDEA- a, c, d</p> | <p>Activity Review Ch. 14 Descriptive Statistics Review Ch. 20 Action Reserach</p> | <p>Worksheet: Coding Data, Descriptive Statistics, SPSS Worksheet, Data Analysis, Correlations</p> | <p>K 8f SBC -Domain III SBP - Domain II 007(2) NA 1 2,4</p> |
| <p>11. CO - Select and calculate, as appropriate, the following statistics: mean, standard deviation, z-scores, t tests, ANOVA, Chi Square, and Pearson Product Moment Correlation. Use a statistical package such as SPSS for calculating these statistics. CA - 8c. Use of technology and statistical methods in conducting research and program evaluation, assuming basic computer literacy. 8f Ethical and legal considerations. IDEA -a, c, d</p> | <p>SPSS Software Ch. 15 Inferential Statistics</p> | <p>Complete SPSS Worksheet #2: Inferential Statistics, <i>t</i>-tests of independent means, <i>t</i>-tests of paired samples, chi square, Pearson Product Moment Correlation, ANOVA</p> | <p>CA -K8c, K 8f SBC - Domain III (007) SBP - Domain II 004(5) NA 1, 2,4</p> |

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| <p>12. CO - Select and calculate, as appropriate, the following statistics: mean, standard deviation, z-scores, tests, ANOVA, Chi Square, and Pearson Product Moment Correlation. Use a statistical package such as SPSS for calculating these statistics.</p> <p>CA-8c. Use of technology and statistical methods in conducting research and program evaluation, assuming basic computer literacy.</p> <p>8f Ethical and legal considerations.</p> <p>IDEA-a, b, c, d</p> | <p>Statistics Work Night- bring data from your research project.</p> <p>One-on-one Meetings- final opportunity to get feedback on project prior to presentation and submittal.</p> | <p>Work on statistics related to your research project to find out where you have questions- bring data, laptop with SPSS, and questions to class next week.</p> <p>Work on your research project and presentation. Review rubric for presentation requirements.</p> | <p>CA -K 8c, K8f SBC - Domain III (007) SBP - Domain II 004 (5) NA 1, 2, 4</p> |
| <p>13. CO- Learn a proper style for writing research material (APA is required).</p> <p>CA -8f Ethical and legal considerations.</p> <p>IDEA a, b, c, d</p> | <p>Final research project Oral presentations</p> | <p>Oral presentation - Power point of research project including salient points highlighted</p> <p>Final research report due (APA format)</p> | <p>CA- K8f SBC Domain III (007) SBP Domain II 007(2) NA 1, 2, 4</p> |
| <p>14. CO - Learn a proper style for writing research material (APA is required).</p> <p>CA - 8f Ethical and legal considerations.</p> <p>IDEA - a, b, c, d</p> | <p>Final written research Report due</p> | <p>Oral presentation - Power point of research project including salient points highlighted</p> <p>Final research report due (APA format)</p> | <p>CA- K8f SBC Domain III (007) SBP Domain II 007 (2) NA 1, 2, 4</p> |

Web addresses for standards:

CACREP: <http://www.counseling.org/cacrep/2001standards700.htm>
SBEC: Standards for the School Counselor Certificate

[http://info.sos.state.tx.us/pls/pub/readtac\\$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=19&pt=7&ch=239&rl=15](http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=19&pt=7&ch=239&rl=15)
NCATE: <http://www.ncate.org>

FOR YOUR INFORMATION

- Format for papers will be located on Blackboard. Exemplary papers are also located on there as models to follow. Please check Blackboard daily for instructions on web site changes, web site links, information, etc.
- 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 294 1720.
- Academic **honesty** is expected in this class. Plagiarism is a violation and will result in course failure.
- Attendance **Spring & Fall attendance policy**. Students are permitted to miss one class (3 hours) with no penalty, but a call/e mail to the professor of the class is expected. A second absence will require that the student submit a letter to the Department of Educational Leadership & Counseling Faculty explaining the circumstances of the absence. The faculty will decide if the second absence should be excused. If it is not excused, a deduction of a letter grade for the course will occur. Subsequent absences will result in automatic letter grade reductions. Assignments are due as specified regardless of absences.
- **Religious Holidays**. An institution of higher education shall excuse a student from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. A student whose absence is excused under this subsection may not be penalized for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused within a reasonable time after the absence. 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.
- **Late assignments** will be penalized by one letter grade for each 24 hour period they are not turned in.
- Unless otherwise noted, assignments are due in hard copy on 8.5 by 11" paper.
- The syllabus is subject to change pending notification.
- Every semester each student will have an academic evaluation for which you will receive a grade.
- All cell phones and other electronic devices must be turned off including vibration. (No lab tops without permission from faculty.)

Means of Evaluation

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| Quizzes | - | 75 points |
| Research Paper | - | 125 points |
| Final Exam | - | 100 points |
| Participation | - | 15 points |
| Assignments | - | <u>35 points</u> |
| Total Points | | 350 points |

Grading Scale

A = 350 – 315

B = 314 - 300

C = 299 – 284

D = 283 – 269

D = 268 and below

Ethical Safeguards

Complete the training required to conduct research with human subjects at the web address below.

<http://www.cancer.gov/clincialtrials/learnng/page3>

Tentative Class Schedule

| Date | Activity and Assignments |
|-------------|---|
| January 22 | Introductions Review syllabus, textbook, course objectives, and assignments Getting to Know the Class Questionnaire (Complete in class) Assignment: (1) Read chapter 1 (2) Read Research Reports on pp. 21-24 and 25-31 (3) Activity #1 (4) Activity #2 |
| January 29 | Discuss Chapter 1 and Research Reports Training by SHSU Librarian on remote access to library resources Review Activity #1 Assignment: (1) Read Ch. 2 (2) Activity #3- (3) Study organization of the APA Manual. Be prepared to Share your understanding of the guide and its purpose. (4) Activity #4 |
| February 5 | Discuss Chapter 2 Assignment: (1) Read Ch. 3 (2) Activity #5 (3) Activity #6 |
| February 12 | Discuss Chapter 3 Review concepts from Protection of Human Subjects training Review SHSU process (Office of Research and Sponsored Programs) Discuss Administrator responsibilities related to research in schools: FERPA/Buckley Amendment, National Research Act of 1974 Assignment: (1) Read Chs. 4 and 6 (2) Read APA Ch 4 (3) Activity #7 |
| February 19 | Discuss Chapters 4 and 6 Quiz APA Chapter 4 Assignment: (1) Read Chs. 5 (assigned sections) and 7 (2) Read APA Chapter 2 (3) Activity #8 |
| February 26 | Discuss Chapters 5 and 7 Assignment: (1) Read Chs. 8 (2) Activity #9 (3) Activity #10 |

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| March 4 | Discuss Chapters 8 Discuss purpose, significance and research questions in class Assignment: (1) Read Chapter 11 (2) Activity #11 (3) Activity #12 |
| March 11 | Spring Break |
| March 18 | Discuss Chapter 11 Go to Computer lab to use SPSS- Activity #13 Assignment: (1) Read Chapters 12 and 20 (2) Activity #14 |
| March 25 | No Class – Work on Research Project |
| April 1 | Discuss Chapters 12 and 20 Go to Computer lab to use SPSS – Activity #15 Bring draft of paper – Individual Meetings Assignment: (1) Read Chapter 14 |
| April 8 | Discuss Chapters 14 Qualitative or Quantitative Methodology Assignment: (1) Read Chapter 15 (2) Develop qualitative research(s) question based on results of research project |
| April 15 | Discuss Chapter 15 Discuss qualitative research question(s) in class Review for final exam |
| April 22 | Research Project Report Presentations and Report (Activity #16 and #17) |
| April 29 | Research Project Report Presentations and Report (Activity #16 and #17) |
| May 6 | Final Exam |

Activities

Activity #1: Think of 3 problems you might want to research. Write out the topic, significance of the issue to education (how the results of the study could improve the knowledge base), and target population (who would be included in the study)

Activity #2: Major Sections of Research. Locate and read two research articles and identify the following for each article:

- Topic
- Procedures
- Method of analysis
- Major conclusions

Activity # 3: Abstracts. Abstract 10 articles for initial literature review. DO NOT copy the abstract you get with the journal article write your own. Examples of abstracts can be found on page 303 of the Study Guide and pages 21, 25, 267, 290, and 531 of the textbook. Follow APA format for citing references (Reference List Section of APA Manual). Must be typed. One of the articles must be a qualitative research article. (A)

Activity # 4: Write hypothesis/research questions for problems considered in Activity #1

Activity # 5: Review US News/World Report ranking of grad schools. Review variables. As a consumer, what variables do you think should have been used? Write a 1-2 pp review explaining your thoughts and opinions. Your report will be graded for organization, mechanics, and evidence of thought.

Activity #6: Select the topic area for your research project. Write the introduction and rationale for the topic. (Explain topic or program and setting/demographics, etc. and why you have selected the topic.)

Activity #7: Complete Ethical Procedures in Conducting Research (on-line training).

From the SHSU Homepage: Go to links and click Research and graduate studies; click Compliance information; read directions and click "Human Participant Protections Education for Research Teams"; click "Enter" button. (Takes you to Cancer Research Website) Read directions. When you get to course registration, click the bottom option, "Completion Certificate only, no continuing, education credits. (No Charge)" in order to complete course without having to pay the charge. Submit copy of completion certificate to verify completion.

Activity #8: Write the literature review for your research topic using the 10 abstracts assigned in Activity #3 – due 2/26.

Activity #9: Prepare a draft of the purpose statement for your research study, the significance, and the research question(s).

Activity #10: Complete school district or agency application for approval to do research. Complete form, submit to district/agency, and once approved, bring a copy to class. (This form must be completed before completing activity #11 and collecting your research.)

Activity #11: Application for Human Subjects. From the SHSU Homepage: go to Links; click Research and graduate studies; click Digital Library forms; click SHSU Human Subjects Form; click save. Be sure to print a copy and maintain for yourself in case the university doesn't receive or misplaces them.

Activity #12: Developing a Survey Develop a survey related to your study. The Survey must have at least ten questions formatted in a Likert style response system or a response choice set of at least three choices (no true/false or yes/no answers). Administer the survey to at least 25 people. Use the strategies in class to work on achieving a response rate of at least 80%. Results from the survey will be later analyzed statistically. Submit a copy of survey.

Activity #13: SPSS Worksheet #1: Coding Data; Descriptive Statistics. SPSS Worksheet; Data Analysis Correlations.

Activity #14: Write first draft of paper using the articles you abstracted. Use APA format. Follow format in text pg. 528-538 or in the APA manual. The only exception is that you will double space. Your first draft will be corrected and feedback will be given. The corrections are due within the week and they must be turned in with the original paper. **Due 4/1.**

Activity #15: SPSS Worksheet #2: Inferential Statistics; t-tests of independent means, t tests of paired samples, Chi square, Pearson Product Moment Correlation, ANOVA. (G) (4pts.)

Activity #16: Oral Presentation of Research Project Criteria:

- Visuals (Power Point, Posters, Overhead transparencies)
- Salient points highlighted, use headings of research project
- Presentation Style (motivated, voicing clearly, pacing, tone)
- Summarize subject content

Activity #17: Final Research Report Criteria:

- APA format
- Criteria for Content is the General Evaluation Criteria (text pgs. 541-548)
- Grammar, Mechanics, Spelling
- Natural flow of report including transitions
- All components of research report included