



EDCI 631-79 Research Design and Data Analysis
Online Delivery
Summer 2017
Chadron State College
3 Credit Hours

EDCI 631 Intro to Graduate Study Develop competencies in producing and utilizing research to improve professional practice. Quantitative and qualitative methods will be presented. Quantitative methods will be the primary emphasis, including basic statistical methods. Students will produce a research plan and literature review (*Chadron State College 2013-2014 General Catalog Graduate*, p. 63).

- A. Instructor:** Dr. Jesse Sealey, Associate Professor of Education
- B. Office:** Location: Old Admin 113
Hours: As posted and by appointment
E-mail: jsealey@csc.edu
- C. Prerequisite:** Graduate status
- D. Purpose:** Understand basic research design and the use of data in defining and testing hypotheses. Develop positive attitudes toward utilization of empirical processes and application of data to practical problems. Develop expertise in research methodologies to enable student to function in a professional environment, improve educational practice, and/or continue graduate education.
- E. Method of Instruction:** A combination of guided reading, discussion of assigned readings and topics, mastery quizzes, participation in writing and development of research project (research question(s)/hypothesis, literature review and research plan).

NSCS Board Policy 4141:

For this three-credit, sixteen-week course, students should expect to budget an average of 9 hours per week as the reading, viewing, reflecting, and writing requirements will require this amount of time. Specific indications for expected time on task are included in the instructions for each assignment and forum discussions. These time expectations indicate how much time students should

devote to completing these tasks to attain associated learning outcomes, so it is recommended that students pay close attention to these guidelines.

Learning Activity	Hours Per Week
Readings	2.5
Discussions	2
Project-Based Learning	2
Research-Based Learning	2
Assessments	.5

****Disclaimer:** The completion of the minimum time commitment does not ensure a passing grade. Achievement of the course competencies must be demonstrated.

- F. Student Outcomes/Objectives:** The student will be able to:
1. Comprehend fundamental research design, statistical, and stylistic concepts;
 2. Apply common descriptive, comparative, and predictive statistical procedures appropriately to selected data;
 3. Graph statistical data;
 4. Create an original research problem, develop an integrated literature review, and propose a related research plan in a format consistent with the Publication Manual of the American Psychological Association (6th Ed.—SECOND PRINTING);
 5. Develop professionally as a "Visionary Leader."

This course is a required core course in both the Education Administration and Curriculum and Instruction masters programs. The Program Outcomes are cross-referenced with Chadron State College's Conceptual Framework for the Education Unit. Intended Program Outcomes for both programs follow:

Education Administration Program Outcomes:

1. Lead and organize the collaborative development, articulation, implementation, and stewardship of a school or district vision of learning supported by the school community. (Communication, thinking skills, human relations/diversity)
2. Lead and promote a positive school culture, providing an effective standards based instructional program, applying best practice to student learning, and designing comprehensive professional growth plans for staff based on identified needs. (Methodology/technology, professionalism, assessment, thinking skills, human relations/diversity)
3. Lead and promote the success of all students by managing the organization, operations, and resources in a way that promotes a safe, efficient, and effective learning environment. (Communication, thinking skills, methodology/technology, professionalism)
4. Demonstrate the knowledge, ability and dispositions to promote the success of all students by collaborating with families and other community members, responding to diverse community interests and needs, and mobilizing community resources. (Communication, methodology/technology, human relations/diversity)

5. Demonstrate the skill, knowledge, and ability to promote the success of all students by acting fairly, with integrity, and in an ethical manner. (Human relations/diversity, communication, professionalism)
6. Demonstrate the skill, knowledge, and ability to respond to, and influence the larger political, social, economic, legal, and cultural context. (Professionalism, thinking skills, human relations/diversity)
7. Demonstrate the ability to accept genuine responsibility for leading, facilitating, and making decisions typical of those made by educational leaders. (Communication, thinking skills, methodology/technology, professionalism, assessment, and human relations/ diversity)

Curriculum & Instruction Program Outcomes

1. Develop and implement curriculum based on central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches; diverse learner needs and abilities; cognitive and developmental levels; and community and curricular goals. *(methodology/technology; human relations/diversity)*
2. Develop and implement curriculum using a variety of instructional strategies to encourage students' development of critical thinking, problem solving, and performance skills. *(methodology/technology; thinking skills)*
3. Design and facilitate a learning environment that encourages individual and group motivation, positive social interaction, and active engagement in learning. *(methodology/technology; professionalism, assessment)*
4. Demonstrate cultural awareness, gender sensitivity, and racial and ethnic appreciation in fostering an inclusive learning environment. *(human relations/ methodology/technology)*
5. Communicate clearly using listening, writing, speaking, and media skills in a manner that is consistent with and responsive to the specific audience. *(communications; professionalism)*
6. Utilize assessment strategies and data to improve student learning and social development at the individual and program level. *(assessment; methodology/technology)*
7. Improve instruction based on reflective practice and research-based "best practices." The candidate will continuously seek to grow as a professional educator. *(professionalism; methodology/technology)*

foster relationships with school colleagues, parents, and agencies of the larger community based on an understanding of the impacts of philosophy, sociology, political and legal forces on public education. *(professionalism; communication/ human relations/diversity)*

Visionary Leader Conceptual Framework

Component	Activity
Leadership	
Develop positive, professional associations with class members in order to complete group tasks.	
Thinking Skills	
Analyze research literature to identify design components, appropriateness of statistical procedures, and worthiness of findings. Select, define, and describe steps of a research problem.	
Human Relations/Diversity	
Work with group members to develop research skills through problem solving tasks. Learn to critique group members' research efforts in a positive and constructive manner.	

Assessment

Review professional literature; collect and interpret data; draw valid conclusions based on data.

Communication

Prepare research manuscript that reflects the APA style and is understandable to the reader.

Methodology/Technology

Demonstrate knowledge of various types, methods, and purposes of research; and statistical procedures used in research problems.

Professionalism

Interpret the ethical and moral issues involved in research design and project completion.

CSC Education Unit Intended Program Outcomes: The intended program outcomes are as follows:

- 1) **CSC/InTASC Standard #1: Learner Development.** The teacher candidate understands how learners grow and develop, recognizing that patterns of learning and development vary individually within and across the cognitive, linguistic, social, emotional, and physical areas, and designs and implements developmentally appropriate and challenging learning experiences. (Methodology)
- 2) **CSC/InTASC Standard #2: Learning Differences.** The teacher candidate uses understanding of individual differences and diverse cultures and communities to ensure inclusive learning environments that enable each learner to meet high standards. (Inclusive Learning Environments)
- 3) **CSC/InTASC Standard #3: Learning Environments.** The teacher candidate works with others to create environments that support individual and collaborative learning, and that encourage positive social interaction, active engagement in learning, and self-motivation. (Communication)
- 4) **CSC/InTASC Standard #4: Content Knowledge.** The teacher candidate understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and creates learning experiences that make the discipline accessible and meaningful for learners to assure mastery of the content. (Specialty Studies)
- 5) **CSC/InTASC Standard #5: Application of Content.** The teacher candidate understands how to connect concepts and use differing perspectives to engage learners in critical thinking, creativity, and collaborative problem solving related to authentic local and global issues. (Thinking Skills)
- 6) **CSC/InTASC Standard #6: Assessment.** The teacher candidate understands and uses multiple methods of assessment to engage learners in their own growth, to monitor learner progress, and to guide the teacher's and learner's decision making. (Assessment)
- 7) **CSC/InTASC Standard #7: Planning for Instruction.** The teacher candidate plans instruction that supports every student in meeting rigorous

learning goals by drawing upon knowledge of content areas, curriculum, cross-disciplinary skills, technology, and pedagogy, as well as knowledge of learners and the community context. (Methodology)

- 8) **CSC/InTASC Standard #8: Instructional Strategies.** The teacher candidate understands and uses a variety of instructional strategies to encourage learners to develop deep understanding of content areas and their connections, and to build skills to apply knowledge in meaningful ways. (Methodology)
- 9) **CSC/InTASC Standard #9: Professional Learning and Ethical Practice.** The teacher candidate engages in ongoing professional learning and uses evidence to continually evaluate his/her practice, particularly the effects of his/her choices and actions on others (learners, families, other professionals, and the community), and adapts practice to meet the needs of each learner. (Professionalism)
- 10) **CSC/InTASC Standard #10: Leadership and Collaboration.** The teacher candidate seeks appropriate leadership roles and opportunities to take responsibility for student learning, to collaborate with learners, families, colleagues, other school professionals, and community members to ensure learner growth, and to advance the profession. (Leadership)

G. Topics:

1. Introduction to educational research
2. Selecting and defining a research topic
3. Preparing and evaluating a research plan
4. Selecting a sample
5. Selecting measuring instruments
6. Descriptive/survey research
7. Correlational research
8. Causal-comparative research
9. Experimental research
10. Single subject experimental designs
11. Descriptive statistics
12. Inferential statistics
13. Post-analysis considerations
14. Overview of qualitative research
15. Qualitative research: Data collection
16. Narrative research
17. Ethnographic research
18. Qualitative research: Analysis
19. Mixed Methods
20. Action research
21. Preparing a research report
22. Evaluating a research report

H. Required Texts: YES, YOU DO NEED THESE—PURCHASE YOUR OWN—YOU WILL USE THEM!

Gay, L.R., Mills, G.E., & Airasian, P.W. (10th ed.). (2012). *Educational research: Competencies for analysis and applications*, 9th Edition. Upper Saddle River, NJ: Pearson Education, Inc.

Publication Manual for the American Psychological Association (6th edition—SECOND PRINTING, not first printing—there are errors). (2009). Washington, DC: American Psychological Association.

J. Course Requirements and Evaluation

1. Read, study, and evaluate the assigned text chapters. Chapter quizzes will be completed on-line and the results automatically entered into the on-line grade book. Quizzes may be re-taken until the score is perfect. Quizzes will not be required on Chapters 19, 20, 21, and 22. You may choose to take the exams on these chapters for your own learning. The textbook website and companion materials have additional practice quizzes and learning aids.
2. Complete individual written assignments (Task 1, library assignment, and topic statement).
3. Select and define an appropriate research problem. Conduct a rigorous review of literature (paper #1). Develop a research plan for conducting an empirical study based on the research question(s) (paper #2).
4. Submit two graduate quality papers for grading.
“The Literature Review” (paper #1) will define the research problem and describe the results of the literature review. Components of this paper will include:
 - (1) title page;
 - (2) abstract;
 - (3) table of contents;
 - (4) introduction;
 - (5) integrated review of literature
 - (6) hypothesis or research question(s); and
 - (7) references.**“The Research Plan” (paper #2)** will propose a research design appropriate to the problem stated in the first paper. Components of the second paper will build on the Literature Review (paper #1) and will include sections:
 - (8) methods—be specific
 - What type of study design will you use (descriptive, correlational, causal-comparative, or experimental)? Defend your choice and why it is appropriate for your study. Cite your text or your reference sources.
 - Who will your participants be? Consider ethics section in you text and outline your procedures—remember your participants ages, potential participant risk, participant anonymity, depth of personal information gathered, and audience for information dissemination (see #10 below)
 - How will you disseminate information to potential participants (cover letter, waivers, etc);
 - (9) data collection plan—HOW will you collect your data—consider participant anonymity ;

(10) data analysis plan

- Which data analysis tool is appropriate—correlation, t-test(s), ANOVA, Scheffe, Chi Square, or other appropriate tool
- How will you use the information **and** who will be the audience(s) [i.e., thesis, report within the school/agency, publication, presentation or poster session, etc.]?

(11) references.

5. **All written work will be consistent with the Publication Manual of the American Psychological Association (6th ed.—second printing).**

6. **When saving work to post on the class site, please save it as: first initial (hyphen)-surname (hhypnen)-assignment name-(and number)
Example: lhunn-articlereview-1 this saves hours of time! Thank you in advance for your help!**

Grading Scale: 90-100=A; 89-80=B; 79-70=C

K. Attendance: Attendance is required. Your presence online is important for your own learning and well as your contribution to the work of the class. Attendance includes submitting on-line quizzes according to the schedule, submitting written work on or before the due dates and participating as required in individual and group activities. Full credit can be earned on work submitted on or before the due date. Late assignments may result in lower grades.

Assignments: Assignments are due on or before the specified date. **Late work will not be accepted.** If you anticipate being absent, arrange to have the assignment submitted before the due date. Article analyses must be submitted on the due date as the answer key will be posted.

The individual written papers [These papers include Task 2, Integrated Literature Review (paper #1), and the Research Plan (paper #2).] will be submitted in the appropriate Forums as Word attachment files. 6TH EDITION APA (SECOND PRINTING) FORMAT IS YOUR ACCEPTABLE FORMAT. Please be sure your attachments will print properly as formatting is a major part of the grading. Improper formatting will result in lower grades.

J. Tentative Schedule

Please complete reading assignments and the online quiz for the assigned chapter(s).			
Week/date	Reading/ Quiz	Assignment	Assignment Due date
WK 1 - 6/5	Introduction & Chapter 1	Chapter 1 Tasks Upload using Forums. Mastery Quiz	6/11/17
	Chapter 2	Library Assignment Mastery Quiz	
WK 2 - 6/12	Chapters 3&4 Preparing a research plan. skim chapters 21&22	Topic statement—check your text for verbiage format Mastery Quiz	6/18/17
	Chapter 5	Mastery Quiz	
WK 3 – 6/19	Chapter 6	Mastery Quiz Task 2 (p. 100-102)	6/25/17
	Chapter 7& Chapter 12	Mastery Quiz Task 2 Due	
WK 4 – 6/26	Chapter 8& Chapter 12	Mastery Quiz Literature Review (paper #1) DUE ON OR BEFORE 7/2/16	7/2/17
WK 5 – 7/3	Chapter 9	Mastery Quiz	7/9/17
	Chapter 10& Chapter 13	Mastery Quiz IRB Assignment Due	
WK 6 – 7/10	Chapter 11&Chapter 13	Mastery Quiz	7/16/17
	Chapter 21 & 22	Research proposal (paper #2) DUE ON OR BEFORE 7/16/17	
WK 7 – 7/17	Chapter 14, 15, 16, 17& Chapter 18	Mastery Quiz	7/23/17
	Chapter 19 & Chapter 20		
WK 8 – 7/24	Final Exam	FINAL EXAM DUE 7/26/17	7/26/17

Expected Professional Classroom Behavior:

1. Demonstrate respect for professor and peers.
2. Make choices which demonstrate a commitment to teaching.
3. Accept responsibility for self and choices made.
4. Do not plagiarize from any source, including lesson plans, quotations and on any other assignment.
5. Complete assignments in the expected manner as described on course syllabus.
6. Assume responsibility for content of syllabus and submit work in a timely manner.
7. Appear to be engaged throughout each class session. This includes participating in class activities and discussions, as well as answering questions when asked.
8. Attend class regularly, arrive at class on time, and stay for the complete class session.
9. Turn cell phone off prior to class, put it away, and do not text message.
10. Be reflective and continually evaluate the effects of your choices and actions on others (students, peers, professors).

Academic Honesty - Students are expected to conduct themselves in conformity with the highest standards with regard to academic honesty. Violation of college, state, or federal standards with regard to plagiarism, cheating, or falsification of official records will not be tolerated. Students violating such standards will be subject to discipline, as per campus policies articulated in the Student Handbook. The full copy of the student handbook can be found at http://www.csc.edu/publications/csc_student_handbook.pdf. Academic Policies, including academic dishonesty, can be found between pages 32-34.

Attendance Policy – The College assumes that students will seek to profit from the instructional program and will recognize the importance of attending every class meeting of courses for which credit is expected. Responsibility for notifying faculty of absences, and for arranging potential make-up, rests with the students.

Civility – Civil behavior enhances the academic setting, and is expected at all times. Courtesy and respect for others are essential elements of the academic culture. The academic environment welcomes a difference of opinion, discourse, and debate within a civil environment.

Netiquette – Netiquette refers to the use of common courtesy in online communication. To foster civility in the course environment, use the following guidelines in all course communications (email messages, discussions, etc.):

- Clearly label posts and emails: course, assignment or post topic, name, and other relevant subject headings
- Use capital letters sparingly. THEY LOOK LIKE SHOUTING.

- Forward emails only with a writer's permission.
- Be considerate of others' feelings and use language carefully.
- Cite all quotations, references, and sources.
- Use humor carefully. It is hard to "read" tone; sometimes humor can be misread as criticism or personal attack. Feel free to use emoticons like :) for a smiley face to let others know you are being humorous.
- Use complete sentences and standard English grammar to compose posts. Write in proper paragraphs. Review work before submitting it.
- Text speak, such as "ur" for "your" or "ru" for "are you" etc., is only acceptable when texting.

Nondiscrimination Policy/Equal Educational Opportunity Policy: Chadron State College is committed to an affirmative action program to encourage admission of minority and female students and to provide procedures which will assure equal treatment of all students. The College is committed to creating an environment for all students that is consistent with nondiscriminatory policy. To that end, it is the policy of Chadron State College to administer its academic employment programs and related supporting services in a manner which does not discriminate on the basis of gender, race, color, national origin, age, religion, disability, sexual orientation, gender identity, or marital status. *Student requests for reasonable accommodation based upon documented disabilities should be presented within the first two weeks of the semester, or within two weeks of the diagnosis, to the disabilities contact person (432-6268; Crites 011).*

Disclaimer: This syllabus and schedule is articulated as an expectation of class topics, learning activities, and expected student learning. However, the instructor reserves the right to make changes in this schedule that, within my professional judgment, would result in enhanced or more effective learning on the part of the students. These modifications will not substantially change the intent or outcomes of this course and will be done within the policies and procedures of Chadron State College.

CSC Mission & Master Academic Plan (MAP)

Mission Statement

Chadron State College (CSC) will enrich the quality of life in the region by providing educational opportunities, research, service and programs that contribute significantly to the vitality and diversity of the region.

MAP Priorities, 2014-2018

CSC is committed to the achievement of tasks/projects that align with the following Priorities:

- 1) Continue to implement and improve the Essential Studies Program (ESP).
- 2) Define, develop, and promote co-curricular experiences that foster undergraduate and graduate student engagement.
- 3) Create and implement a strategic vision(s) for teaching and learning technologies, teaching and learning center (TLC) and the library learning commons (LLC).
- 4) Evaluate campus-wide processes for student recruitment, advising and retention; recommend a plan for continuous improvement.
- 5) Study, create, and implement a strategic vision for the graduate studies program.
- 6) Evaluate campus-wide processes for faculty and staff recruitment and retention; recommend a plan for continuous improvement.