CI 500, Introduction Research Methods in Education

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OBJECTIVES/ORGANIZATION

I. Objectives

- The student will evaluate and synthesize research.
- The student will demonstrate a basic understanding of research concepts and principles.
- The student will compare and contrast specific methods for conducting research.

II. Requirements

A. Required Reading

3. Reports prepared by students in class
4. Research reports and other materials handed out regularly in class meetings

B. Oral/Written Reports

1. Each student will be given material to read/study on which a report will be made to the class: a) an oral report to the class, b) a written report.
2. Write a paper on the topic “Mathematics Teacher Education” [Midterm and Final paper]
The paper must be typewritten, double spaced and written carefully; correct spelling, correct grammar, complete and related sentences, transitions between paragraphs, appropriate “sectioning” and complete documentation (APA style). Staple in upper left corner and put your name, course number, and date in upper right corner — no cover sheets or plastic covers. Keep a Xerox copy for yourself.

C. Each student will keep a complete, neat notebook on all required readings, lectures, discussions, etc. Keep all this in a large three inch, 3-ring notebook—an inexpensive one is OK—(available in the Bookstore).

D. Come to all scheduled class meetings, participate in class discussions.

E. Required a LiveText account for this course.

III. Assessment/Evaluation

Students will be assessed based on:

GRADING CRITERIA

Class Report 110 points
Attendance 20 points
Midterm paper 30 points
Evaluation of Notebook 40 points
Final paper 50 points

GRADING SCALE

A 90%-100%
B 80%-89%
C 70%-79%
D 60%-69%
F 0%-59%

IV. Recommended Memberships in Professional Organizations:

A. American Educational Research Association (AERA)

B. National Council of Teachers of Mathematics (NCTM), National Council of Teachers of English (NCTE), National Science Teachers Association (NSTA).
V. FINAL PAPER

Final paper should be 3,000 words in length (excluding references, tables, charts, graphs and figures). References should be included (if applicable) at the end of the paper; references are not included in the overall word count. The paper must address all three elements described below. The paper should deal explicitly with the following elements, preferably in this order:

1. Objectives or purposes
2. Perspective(s) or theoretical framework
3. Methods, techniques, or modes of inquiry
## VI. Tentative Calendar

<table>
<thead>
<tr>
<th>Part I</th>
<th>Date</th>
<th>Topic</th>
<th>Notes</th>
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<tbody>
<tr>
<td>8/25</td>
<td>Class begin</td>
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<tr>
<td>9/1</td>
<td>Developing a Research Proposal Ethical, Legal, and Human Relation Issues</td>
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<td>9/8</td>
<td>Reviewing the Literature</td>
<td>Reading 1 due</td>
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<tr>
<td>9/15</td>
<td>Statistical Techniques Selecting a Sample</td>
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<td>Part II</td>
<td>9/22</td>
<td>Collecting Research Data with Tests and Self-Report Measures</td>
<td>Reading 2 due</td>
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<td>9/29</td>
<td>Collecting Data with Questionnaires and Interviews</td>
<td>Reading 3 due</td>
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<td>10/6</td>
<td>Midterm Presentation</td>
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<tr>
<td>10/13</td>
<td>Collecting Data through Observation and Content Analysis</td>
<td>Reading 4 due</td>
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<td>10/20</td>
<td>Quantitative Research Design 1</td>
<td>Reading 5 due</td>
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<td>Part III</td>
<td>10/27</td>
<td>Quantitative Research Design 2</td>
<td>Reading 6 due</td>
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<td>11/3</td>
<td>Quantitative Research Design 3</td>
<td>Reading 7 due</td>
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<td>Part IV</td>
<td>11/10</td>
<td>Qualitative Research Design 1</td>
<td>Reading 8 due</td>
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<tr>
<td>11/17</td>
<td>Qualitative Research Design 2</td>
<td>Reading 9 due</td>
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<tr>
<td>11/24</td>
<td>Thanksgiving</td>
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<tr>
<td>12/1</td>
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<tr>
<td>12/8</td>
<td>Final Presentation</td>
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SAFETY AWARENESS FACTS AND EDUCATION
Title IX makes it clear that violence and harassment based on sex and gender is a Civil Rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, etc. If you or someone you know has been harassed or assaulted, you can find the appropriate resources here:
http://safe.siu.edu

MILITARY COMMUNITY
There are complexities of being a member of the military community and also a student. Drill schedules, calls to active duty, complications with GI Bill disbursement, and other unforeseen military and veteran related developments can complicate academic life. If you are a member of the military community and in need of accommodations please visit Veterans Services at http://veterans.siu.edu/

ADDITIONAL RESOURCES:
ADVICEMENT: http://advisement.siu.edu/
SIU ONLINE: https://online.siu.edu/

SYLLABUS ATTACHMENT
Fall 2016

Office of the Provost: http://pvcaa.siu.edu/

FALL SEMESTER HOLIDAYS
Labor Day Holiday 09/05/2016
Fall Break 10/09—10/11/2016
Veterans Day Holiday 11/11/2016

WITHDRAWAL POLICY — Undergraduate only
Students who officially register for a session must officially withdraw from that registration in a timely manner to avoid being charged as well as receiving a failing grade for those classes. An official withdrawal must be initiated by the student, or on behalf of the student through the academic unit, and be processed by the Registrar’s office. For the proper procedures to follow when dropping courses and when withdrawing from SIU visit: http://Registrar.siu.edu/students/withdrawal.php

INCOMPLETE POLICY — Undergraduate only
An INC grade may be assigned when, for reasons beyond their control, students engaged in passing work are unable to complete all class assignments for the course. An INC must be changed to a completed grade within one full semester (undergraduates), and one full year (graduate students), from the close of the term in which the course was taken or graduation, whichever occurs first. Should the student fail to complete the remaining course requirements within the time period designated, the incomplete will be converted to a grade of F and such grade will be computed in the student’s grade point average. For more information visit: http://Registrar.siu.edu/grades/incomplete.php

REPEAT POLICY
An undergraduate student may, for the purpose of raising a grade, enroll in a course for credit more than once. For students receiving a letter grade of A, B, C, D, or F, the course repetition must occur at Southern Illinois University Carbondale. Effective for courses taken Summer 2013 or later, only the most recent (last) grade will be calculated in the overall GPA and count toward hours earned. This policy will be applied to all transferrable credit in that only the last grade will be used to calculate grade point average. Only those courses taken at the same institution are considered repeats under this policy. See full policy at http://Registrar.siu.edu/students/repeattcasses.php

GRADUATE POLICIES
Graduate policies often vary from Undergraduate policies. To view the applicable policies for graduate students, please refer to the graduate catalog at http://gradschool.siu.edu/about-us/grad-catalog/

DISABILITY POLICY
Disability Support Services provides the required academic and programmatic support services to students with permanent and temporary disabilities. DSS provides centralized coordination and referral services. To utilize DSS services, students must contact DSS to open cases. The process involves interviews, reviews of student-supplied documentation, and completion of Disability Accommodation Agreements. http://disabilityservices.siu.edu/

PLAGIARISM
Student Conduct Code http://srr.siu.edu/student-conduct-code/

SIU'S EARLY WARNING INTERVENTION PROGRAM (EWIP)
Students enrolled in courses participating in SIU’s Early Warning Intervention Program might be contacted by University staff during a semester. More information can be found at the Core Curriculum’s Overview webpage: http://corecurriculum.siu.edu/program-overview/
Teacher Education Program

The Teacher Education Program (TEP) at Southern Illinois University Carbondale is fully accredited by the National Council for the Accreditation of Teacher Education/ Council for the Accreditation of Educator Preparation (NCATE/CAEP) and by the Illinois State Board of Education. Spanning the entire university, the Teacher Education Program is administered through the College of Education and Human Services and includes majors from the College of Education and Human Services, the College of Science, the College of Liberal Arts, and the College of Agricultural Sciences. Teacher education programs approved by the State Educator Preparation and Licensure Board (SEPLB) are offered at the undergraduate level in early childhood education, elementary education, special education, secondary education, and in majors and minors that lead to the special certificate to teach K-12 art, music, physical education, and foreign languages.

Teacher Education Conceptual Framework: Preparing Reflective Educational Leaders

The conceptual framework identified by Southern Illinois University Carbondale’s College of Education and Human Services reflects the professional community’s commitment to preparing reflective educational leaders at both the undergraduate and graduate levels. Reflective educational leaders are able to review, reconstruct, reenact, and critically analyze their own and their students’ performances as a means to formulate explanations with evidence. A reflective educational leader fosters his/her professionalism in practice when he/she values students’ myriad identities, equips students with the literacies required to participate in a democratic society, and engages stakeholders to make this learning accessible, rigorous, and relevant.

Our conceptual framework views the professional development of teachers and other educational personnel to be an evolutionary and maturational process. Our goal is to prepare a competent, reflective educational leader, ready to assume the responsibilities of educating individuals but with full awareness that his or her induction into the profession continues throughout the duration of his or her professional career. We believe that our teacher candidates not only practice reflective thinking but also become practitioners of reflective action. We believe that effective teaching is characterized by interactions with students to present subject matter, followed by informed reflection on these interactions and presentations. Teachers should make decisions among methods and content based on their competence in both subject matter and pedagogy, rather than acting as technicians following a predetermined curriculum. All unit programs are aligned to the Illinois Professional Teaching Standards as well as standards from their respective content areas.

The model below represents the three major tenets of SIU’s Teacher Education Program: Literacies, Identities, and Engagement:
Literacies:

*Reflective educational leaders* understand the vast array of literacies students need to function in today’s modern society. This includes knowledge of reading, writing, and aural communication within the content area as well as media, scientific and quantitative literacy (Chessin & Moore, 2004; Crowe, Connor, & Petscher, 2009; Cunningham & Stanovich, 2001; Delpit, 1995; Kear, Coffman, McKenna, & Ambrosio, 2000; Leinhardt & Young, 1996; McKenna & Kear, 1990; Moje, 2008; Perry, & Delpit, 1998; Shulman, 1987; Schwartz, 2005; Wilson, 2006; Wineburg, 2001).

Identities:

*Reflective educational leaders* understand the diverse characteristics and abilities of all students and how these students develop and learn within the context of their social, economic, cultural, linguistic, and academic experiences. Using these experiences they create instructional opportunities to maximize student learning (Brown, 2005; Cramer, 2006; Epstein, 2009; Irvine, 1997; Olsen, 2010; Rose & Meyer, 2002; Vygotsky, 1962/1996; Washburn, Joshi, & Binks-Cantrell, 2011).

Engagement:

*Reflective educational leaders* are ethical and reflective practitioners who exhibit professional engagement by providing leadership in the learning community and by serving as advocates for students, parents or guardians, and the profession (Amatea, Daniels, Bringman, & Vandiver, 2004; Bemak, & Chung, 2008; Hiebert, Morris, Berk, & Jansen, 2007; Keys, Bemak, Carpenter, & King-Sears, 1998; Lach & Goodwin, 2002; Ladson-Billings, 1995; McCann & Johannessen, 2008; Ratts, DeKruyf, & Chen-Hayes, 2007).

Dispositions
The professional attitudes, values, and beliefs demonstrated through verbal and nonverbal behaviors (dispositions) as educators interact with students, families, colleagues, and communities should support student learning and development. These dispositions are:

The candidate demonstrates professionalism:
- dependability and reliability
- honesty, trustworthiness, ethics
- enthusiasm, love of learning and commitment to the profession

The candidate values human diversity:
- shows respect and sensitivity to the learning needs and abilities of all individuals
- shows respect and sensitivity to the diverse cultures, languages, races, and family compositions of all individuals
- strives for best practices to address diverse learning needs and abilities of all individuals
- strives for best practices to address diverse cultures, languages, races, and family compositions of all individuals
- collaborates with diverse peers, professional colleagues, staff and families

The candidate develops professionally:
- engages in ongoing acquisition of knowledge
- engages in development of research-based practices
- assesses own performance and reflects on needed improvements