EAF 508: APPLIED EDUCATION RESEARCH
SPRING 2009

Instructor: John K. Rugutt
Office Hours: After class as needed and by appointment
323 DeGarmo Building
Class Meets: Tuesday 5:30-9:20pm, Room: Joliet Professional Development Alliance (PDA) Building
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Required Text:
ISBN: 1590474171

Recommended Texts:


Additional required readings and assignments will be available on Blackboard.

Course Objectives:
The purpose of this course is to prepare educational practitioners to use key concepts and methods of quantitative (main focus) and qualitative educational research to carry out strategic data-driven inquiry for school improvement. Specifically, the purpose is to present technical and analytical tools needed to assess school district and unit performance and to conduct research on educational problems and issues. Using recent texts focused on research methods, web/internet resources, and the instructor’s resources, participants will learn about different
ways of measuring educational and school processes, as well as strategies for conducting data-based inquiries within their own institutions. Specifically, as a result of participating in this course, students will learn how to:

1. Use quantitative (main focus) and qualitative data to assess how well their schools are meeting goals and standards;
2. Use statistics and graphic data displays to describe student achievement levels and other variables;
3. Use statistics to examine differences between and among groups;
4. Use statistics to examine relationships between variables;
5. Report and display data in ways that are understandable to parents, teachers, and students;
6. Perform basic statistical analyses and data displays using SPSS (a statistical analysis program).

Students will develop these skills through reading assignments, lectures, class discussions, in-class/online activities, and assigned projects.

Course Requirements:

1. Participate in all class activities, complete all assigned readings, and be prepared to discuss them in class;
2. Complete the assignments by the due dates;
3. Complete a final research paper and deliver presentation of the paper (may be in-class or through Blackboard).

A. Class Participation/Attendance. It is important to note that attendance and active participation in class will be part of your grade. Further, work on data analysis using computers will primarily be an in-class activity, so attendance is particularly crucial. Being sick will not count as an absence. You will receive a maximum of 15 points for class participation and attendance. Class participation and attendance will include student’s active involvement in all class activities, completion of all assigned readings, and being prepared to discuss them in class; completion of assignments by the due dates; completion of a final research paper and delivering presentation of the paper either in class or through online as will be communicated to you by the course instructor during the course of the semester.
B. Assignments. Each student will complete two assignments that together form the foundation for completing required final research project for this class. This process will also include a process for using data to address a major problem/goal your school is trying to solve/achieve or a major research problem of your interest but based on data provided by the instructor.

Drawing upon those assignments, your report will outline the problem or goal you chose to address, the literature review of the key variables, the data that were analyzed, the analysis techniques that were used, and the kinds of judgments and decisions that can be made from those analyses. Link your findings to prior research synthesized in the literature review of your variables. Don’t just copy and paste Assignments 1 & 2 together. The assignments need to tie together the two assignments in a coherent fashion and go further to reflect a “big picture” view of the issues. (Minimum 13 pages single spaced, 26 pages double spaced).

Note: The completion of the above assignments and the final research report can also be used to meet the requirement for your superintendent certification and the NCATE Standards (see end of the syllabus for details). You will need to upload your final report to the appropriate WebCT/Blackboard certification site.

Grading

The following point allocation will be used to determine final grades for the class:

1. Class attendance and participation 15 points
2. Assignments 1 & 2 (each 5 points) 10 points
3. Midterm 25 points
4. Final Project 20 points
5. Presentation of Final Project 5 points
6. Final Exam 25 points

Letter grades will be assigned in accordance with the following scheme:

<table>
<thead>
<tr>
<th>Points</th>
<th>Letter Grade</th>
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<tbody>
<tr>
<td>90-100</td>
<td>A (Exceptional Performance)</td>
</tr>
<tr>
<td>80-89</td>
<td>B (Above Average Performance)</td>
</tr>
<tr>
<td>70-79</td>
<td>C (Average Performance)</td>
</tr>
<tr>
<td>60-69</td>
<td>D (Below Average Performance)</td>
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<tr>
<td>0-59</td>
<td>F (Failing)</td>
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</table>
ISU Policies and Full Inclusion:

"Written or other work a student submits in a course must be the product of his/her own efforts: plagiarism, cheating, or other forms of academic dishonesty are prohibited.” Cases of suspected copying, cheating, or plagiarism are referred to Student Dispute Office for a University hearing.

Any student needing to arrange a reasonable accommodation for a documented disability should contact Disability Concerns, 350 Fell Hall, (309) 438-5853 (voice), (309) 438-8620 (TDD)

Note: Academic Component of Program and University Grading Criteria

- Instructors develop their criteria for grading, including attendance, participation, products, writing quality, etc.
- Instructors individually determine what assignments to use and the criteria upon which these are graded.
- The EAF Department faculty have met and have collectively agreed upon the general course content. However, individual faculty have the freedom to focus on unique components, develop different assignments, and assign grades using different criteria.
- The summative course assessment ranges from A to F.
- For a student to be in good academic standing, one needs to maintain AT A MINIMUM, a 3.0 GPA.
- Although the one may earn a “C” for a course, this is a below-average grade for graduate studies and implies a deficiency in University academic performance. The expectation is that at the master’s level one’s GPA should be around 3.5 and at the doctoral level above 3.5.
- The minimum overall GPA to graduate from a graduate-level program is 3.0 (B).
- Revision options are up to the individual instructor.
Topical/Content Outline...Subject to Change

The instructor reserves the right to make changes to the course syllabus as necessary. It is the student’s responsibility to keep up with changes to the syllabus. The changes will be reflected in class activities, projects and assignments that will be posted to the assignment section of Blackboard.

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Assignment</th>
<th>Chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>01/13</td>
<td>Introduction to the course and student familiarization of course requirements</td>
<td></td>
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<tr>
<td>2</td>
<td>01/20</td>
<td>Basic Concepts in Research and Data Analysis Frequency Distributions</td>
<td>NLE*, Ch1 Appendix A Other**</td>
<td></td>
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<tr>
<td>3</td>
<td>01/27</td>
<td>Data Input, Working with Variables and Observations Normal Distribution</td>
<td>NLE, Ch3 &amp; 4* Other</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>02/03</td>
<td>Exploring Data Normal Distribution</td>
<td>Assignment #1</td>
<td>NLE, Ch5 Other</td>
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<tr>
<td>5</td>
<td>02/10</td>
<td>t Tests: One Sample, Independent Samples and Paired Samples</td>
<td>NLE, Ch8 Other</td>
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<tr>
<td>6</td>
<td>02/17</td>
<td>t Tests: One Sample, Independent Samples and Paired Samples</td>
<td>NLE, Ch8 Other</td>
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<tr>
<td>7</td>
<td>02/24</td>
<td>One-Way ANOVA with one Between-Subjects Factor</td>
<td>Assignment #2</td>
<td>NLE, Ch9 Other</td>
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<tr>
<td>8</td>
<td>03/03</td>
<td>Midterm Examination !!!</td>
<td>Online</td>
<td></td>
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<tr>
<td>9</td>
<td>03/10</td>
<td>Spring Break</td>
<td>No Class</td>
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<tr>
<td>10</td>
<td>03/17</td>
<td>Factorial ANOVA with Two Between-Subjects Factors</td>
<td>NLE, Ch10 Other</td>
<td></td>
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<tr>
<td>11</td>
<td>03/24</td>
<td>Factorial ANOVA with Two Between-Subjects Factors</td>
<td>NLE, Ch10 Other</td>
<td></td>
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<tr>
<td>12</td>
<td>03/31</td>
<td>Correlation: Measures of Bivariate Association Non-Parametric Statistics: Chi-square Distributions</td>
<td>Project Presentation</td>
<td>NLE, Ch6 Other</td>
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<tr>
<td>13</td>
<td>04/07</td>
<td>Final Examination !!!</td>
<td>Final Project Due</td>
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Note: * A Step-by-Step Approach to Using SAS System for Univariate and Multivariate Statistics  
** Notes from the instructor
Student Required NCATE Research Projects

Students will use publicly available data from national (NCES), state (ISBE, ILSI, IBHE) or local community (Census) websites to help provide data for school. The objective of this project is for the student to develop a research project that has a data analysis component. This project will require student to use data that addresses a question or problem that is relevant to their educational setting. These projects can include: The analysis of student achievement in their school as measured by the Illinois Standards Achievement Test (ISAT) or the Prairie State Achievement Exam (PSAE). The project will include the information necessary to constitute a School Improvement Plan for the student’s particular setting. The analysis of the effects of a particular instructional practice in the school, for instance, the impact of ability grouping on student achievement or the impact of an after school tutoring program on student achievement. The analysis may include analysis of particular trends in the district or school, where appropriate, e.g., enrollment increase or decline over a period of time, increase or decrease of state and local funding. Other projects as approved by the instructor.

NCATE Standards

**Standards 2, 2.2, & 2.2a:** Candidates demonstrate an understanding of a variety of instructional research methodologies and can analyze the comparable strengths and weaknesses of each method.

**Standards 2, 2.3, & 2.3d:** Candidates understand how to use appropriate research strategies to profile student performance in a district and analyze differences among subgroups.

**Standards 4, 4.1, & 4.1b:** Candidates demonstrate an ability to use public information and research-based knowledge of issues and trends to collaborate with community members and community organizations to have a positive affect on student learning.