FROSTBURG STATE UNIVERSITY
DEPARTMENT OF EDUCATIONAL PROFESSIONS

Course Syllabus
EDUC 603 - Principles and Practices of Research

Spring 2021
January 25, 2021 through May 7, 2021

Delivered online via Canvas

Instructor: Curt Baker, Ed.D.
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GRADUATE COURSE CATALOG DESCRIPTION

Definitions of research; the research process; chronological development of educational research; library use and research literature; the research abstract; historical, descriptive and experimental types of research. Identification of researchable problems and the formulation of research designs, descriptive and inferential statistical techniques, style for writing the research report.

REQUIRED TEXTS


• Additional readings posted to Canvas.
RECOMMENDED TEXT:


REQUIRED TECHNOLOGY

- TaskStream account\(^1\)
- Webcam or other means of posting digital video

COURSE PURPOSE:

This course is one of the three Core courses for the Master of Education degree. As such, the audience is varied and the educational outcomes are focused around three areas: (1) an overview of research purpose, design, and practices; (2) applicability of research for the educational practitioners; and (3) informed consumption of peer-reviewed educational research so that professional educators can utilize data-informed practice.

COURSE DESIGN

This fully online course is asynchronous and self-paced. The learning modules are sequentially designed, and you should complete all components of one module before proceeding to the next. Each module is designed to take five to eight hours to complete but does not need to be completed in one sitting. Each module contains an ordered list of the activities you should complete as part of the module. These activities are designed to go in a particular order, and you should not complete any assignments before participating in the instructional activities listed before them. Additionally, to maximize on the benefits of collaborative learning, some modules include collaborative activities. If you are working at a faster pace than your peers, you may need to come back to some modules to participate in the exchange of knowledge as it develops over time. These particular types of activities will be flagged within individual modules.

COURSE OUTCOMES

<table>
<thead>
<tr>
<th>EDUC 603 Learning Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
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<tr>
<td>-------------------------------</td>
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<tr>
<td><strong>Content Knowledge</strong></td>
</tr>
</tbody>
</table>
| Understand the definition and nature of research | Recognize inductive and deductive reasoning in everyday cognition; able to contribute to discussion based on research and experience | Inclination to use and call for evidence-based reasoning and decision-making. Demonstrates self-awareness and the skills needed to relate to diverse groups. | a. Applied research action plan  
   b. Article annotation | 9c, 9h, 10e, 10f, 10h |

\(^1\) If you have not purchased a TaskStream account by the end of the semester, you will receive an incomplete in the course.
### EDUC 603 Learning Outcomes

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skill</th>
<th>Disposition</th>
<th>Assessment(s)</th>
<th>InTASC Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distinguish research definitions based on purpose: action/demonstration; application; causation/experimentation, evaluation, or development; knowledge of professional literature</td>
<td>Select most appropriate research methodology based on research purpose and question</td>
<td>Confidence in ability to differentiate research based on purpose; recognition of imperfect naming of most methods; value the scholarship of the reading profession; stay abreast of current issues in American education</td>
<td>a. Applied research action plan</td>
<td>9a, 10h</td>
</tr>
<tr>
<td>Research internal and external threats to reliability and validity</td>
<td>Assess risks and benefits to participants, settings, and procedures</td>
<td>Constant awareness, consideration, and recognition of possible threats to research efforts</td>
<td>a. Threats to validity in experimental research b. Applied research action plan</td>
<td>9e, 9m, 10h</td>
</tr>
<tr>
<td>General evaluation criteria for research reports</td>
<td>Referencing standards of research conduct, reporting and formatting; applies relevant research findings to practice</td>
<td>Use of standards to evaluate research; conduct, evaluate, and use inquiry to guide professional practice</td>
<td>a. Empirical article evaluation b. Literature review analysis c. Empirical juicer d. Applied research action plan</td>
<td>9a, 9b, 9c, 9d, 10h</td>
</tr>
<tr>
<td>Ethical considerations as a standard for the conduct of educational research; a comprehensive understanding of ethical standards and emerging issues</td>
<td>Apply ethical procedures in the conduct of educational research</td>
<td>Choose and practice ethical procedures for conducting research in education; applies and adheres to ethical and legal standards</td>
<td>a. CITI training b. Prospectus</td>
<td>9f</td>
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### The Process of Educational Research

<table>
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<tr>
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<tbody>
<tr>
<td>Distinguish among research designs based on data collection method / procedures / approach: characteristics of quantitative, qualitative, and mixed methods as an overarching precursor step in the conduct of educational research</td>
<td>Select appropriate research design (data collection method or approach) to study different research problems: existing data or records; surveys; observations, interviews for action; historical / narrative / descriptive case study/ ethnographic; comparative; correlational relationship and predictive; and causal/ experimental research</td>
<td>Confidence in ability to select appropriate approaches (designs / methods) for research processes; knows current methods of using data to inform decision making</td>
<td>a. Qualitative methods reflection b. Qualitative data collection c. Qualitative data coding / analysis d. Quantitative methods comparison e. Statistics assignments f. Prospectus g. Research paradigms discussion board</td>
<td>9c, 10h</td>
</tr>
<tr>
<td>Characteristics of a researchable problem and research hypothesis or question as the chronological starting first step of the research process</td>
<td>Efficiently identify research problems and questions for personal and organizational investigation; applies relevant research to inform practices</td>
<td>Recognize feasible research topics and problems depending on circumstances; engage in the design and implementation of research and inquiry</td>
<td>a. Research question analysis b. Creating a research problem assignment</td>
<td>10h</td>
</tr>
<tr>
<td>Knowledge</td>
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<td>InTASC Standards</td>
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<tr>
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</tbody>
</table>
| Literature review as the second step in the chronological development of educational research | Search, filter, and critically select literature related to a research problem using encyclopedias, dictionaries and glossaries, handbooks, books, databases (ERIC), journals, associations, meta-analyses, statistical abstracts | Use library resources as a basis for framing and informing research problems; use knowledge of profession | a. Empirical article evaluation  
b. Literature review analysis  
c. Applied research action plan  
d. Prospectus | 9a, 9b, 9d, 9n, 10f |
| Participant selection methods as the chronological third step in the research process; knows current methods of using data to inform decision-making | Select credible and representative sample of a target population as part of research design; can collect and use data | Recognize ethical considerations – risks and benefits, access limitations of participant selection, evaluate progress toward achieving goals | a. Considering sample selection  
b. Prospectus | 10h |
| Data collection from participants using existing data or selected instruments, protocols, or materials as a chronological fourth step in the research process | Utilize existing data with awareness of FERPA regulations; Lead larger scale analyses to select professional tools | Seek existing data to inform decisions; understanding of history, legal policies, ethical standards, and emerging issues to inform leadership in disciplinary area | a. Instrument examples  
b. Online survey creation  
c. Qualitative data collection | 9c, 9h, 10h |
| Qualitative and/or quantitative data analysis and interpretation as a chronological fifth step in the research process | Reading; describing; classifying into themes; analyzes and used data to enhance programs | Appreciate and employ iterative, reflexive processes for qualitative data interpretation | a. Qualitative data coding / analysis  
b. Interpreting statistical tables | 9c, 10h |
| Research reporting as the chronological sixth step in the research process | Organizing and compiling elements according to academic research report organization | Employ academic standards of research report writing | a. Empirical juicer  
b. Prospectus | 10h, 10i, 10s |
| Research abstract as the last chronological step in the reporting of research | Summarize research in a 200-word paragraph | Use as few words as possible to explain research results | a. Empirical juicer | 10h |
| Interpret and summarize historically shared knowledge | Demonstrate knowledge through inquiry, critical analysis, and synthesis of the subject; interpret patterns in data | Evaluate research and inquiry to identify effective practices; applies relevant research findings to improve practice | a. Empirical article evaluation  
b. Applied research action plan | 9b, 9d |

**Professional Practice Skills**

<table>
<thead>
<tr>
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<th>InTASC Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Become familiar with and critique research about professional development; know current methods of using data to inform decision making</td>
<td>Contribute to dialogue based on research and experience</td>
<td>Actively participate in professional development to increase professional knowledge</td>
<td>a. Applied research action plan</td>
<td>9b, 9d, 9n, 10k, 10s, 10t</td>
</tr>
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</table>
EDUC 603 Learning Outcomes

<table>
<thead>
<tr>
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</table>
| Research internal and external threats to reliability and validity       | Assess risks and benefits to participants, settings, and procedures | Constant awareness, consideration, and recognition of possible threats to research efforts | a. Threats to validity in experimental research  
   b. Applied research action plan  
   c. Prospectus                                                           | 10h                                                                          |
| Conduct, evaluate, and use inquiry to guide professional practice         | Personal interviewing for qualitative data collection                | Dialogue through questioning and listening                                    | a. Descriptive statistics in Excel  
   b. Applied research action plan                                           | 9c, 9h, 10g                                                                |
| Collect and analyze data related to a specific subject                    | Surveying for qualitative and quantitative data collection using paper and digital collection processes to present closed-ended dichotomous, scaled, and ranked measures, and open-ended responses | Conduct research and communicate results for appropriate purposes and audiences; analyzes information in a manner that produces valid inferences | a. Qualitative data collection  
   b. Descriptive statistics in Excel  
   c. Online survey creation  
   d. Interpreting statistical tables  
   e. Prospectus                                                              | 9c, 10h                                                                    |
| Data coding, checking, and cleansing                                      | Translating qualitative data into coded quantitative data            | Propensity to translate numbers to words and words to numbers as a means to think about information | a. Qualitative data coding / analysis  
   b. Prospectus                                                             | 10h                                                                          |
| Use appropriate forms of technology to display data                       | Techniques for checking data for completeness and correctness; dealing with missing data values through imputation and deletion | Check all data for correctness and take steps to correct or impute data    | a. Qualitative data coding / analysis  
   b. Descriptive statistics in Excel                                      | 10g, 10h                                                                  |

COURSE DELIVERY

1. COMMUNICATION

In an asynchronous online class, communication between the student and instructor must be frequent, open, and honest. To this end, the following communication channels are available and should be utilized:

a. Required one-to-one conversations with the instructor

   Every two-weeks, each student will have a live conversation (via Webex or telephone) with the instructor to discuss course-related matters. Each of these conversations will be approximately 30 minutes in duration and will be scheduled at a time mutually convenient to the student and instructor.
b. Optional direct conversations with the instructor

The content of this course is challenging, but you should not struggle unnecessarily through it. If you find yourself confused by any of the content after a reasonable amount of time engaged with it, you should email your course instructor to set up a one-on-one meeting between regularly scheduled conversations with the instructor, students should not hesitate to schedule a live conversation (via Webex or telephone) with the instructor at a time mutually convenient to the student and instructor.

c. Email

You must check your FSU email daily while enrolled in this course. If you know that you have a tendency to forget to check your FSU account, you should set up your FSU account to forward messages to an account you check daily.

I encourage you to reach out to me via email with questions. I make every attempt to reply to emails within 24 hours of receipt. I prefer that you email me directly at cdbaker@frostburg.edu but it is fine to send messages to me via Canvas. (Note: Messages sent to me via Canvas are forwarded to my FSU email address; however, I always worry about forwarding reliability.)

d. Discussion Board

You are encouraged to use the discussion board embedded in each module and labeled with the relevant module number (e.g., Module 1 Questions) to ask questions about course content and assignments. You should subscribe to these discussion boards so that you are notified when someone else participates.

2. ASSIGNMENT SUBMISSION

All assignments should be submitted through Canvas. All assignments should be professionally prepared and carefully edited for grammatical and spelling errors. The professor reserves the right to return assignments with significant grammar and spelling errors to you for revision before finalizing assessment of the submission. Assignments should be submitted as a Word or a PDF file unless otherwise noted on the assignment submission window.

3. ONLINE PARTICIPATION

Your instructor is able to track your participation on Canvas. You are expected to participate in each part of every module by watching all videos, reading all articles/linked websites, and contributing to all other course-related activities (except those marked as optional). At the discretion of the instructor, failure by a student to participate fully in Canvas may result in a deduction of up to 50 points (5% of total points possible) from the final course grade.
4. PACING

You will work through the modules sequentially at your own pace. The amount of time needed per module varies by topic, as well as by your individual learning preferences and needs. Many modules offer optional further learning activities, should you need extra help with a topic.

*Much of the content of this course builds upon learning from previous modules, so you must master one topic before moving on to the next. You will be expected to continually apply content from earlier modules to newer assignments. The instructor will monitor the progress and proficiency of the class as a whole, and will adjust course materials as necessary to achieve course objectives. For this reason, modules will be released during the first four weeks at the rate of one module per week. Thereafter, at the discretion of the instructor, modules may be released more frequently.*

5. ACHIEVEMENT REQUIREMENT

You must achieve a score equal to at least 80% of possible points on all learning activities within a module before submitting work for the next module. Should you score below 80%, you will need to remediate the activity. In the event you submit an assignment in need of remediation, the instructor will provide written guidance on the areas where remediation is necessary.

While you are waiting on feedback, you may begin the instructional activities (such as readings and screencasts) for the next module, and you may also begin drafting assignments for that module, but you should not submit any of the assignments until your prior work has been evaluated. I aim to have feedback to you within 3 days (72 hours) during the workweek.

6. REVISIONS

a. Remediation: If remediation is required on an assignment, you may continue to complete and submit revisions until you achieve a score 80% or greater. Once a score of 80% or greater is achieved, it will be recorded in the gradebook and will not be further revised.

b. Improvement: If, on your first submission, you achieve a score of 80% of possible points or greater, you may – at your option – revise and resubmit the assignment to improve your score. You may only submit one improvement submission per assignment, and the submission must be made before you submit any work for the next module. (For example, once you submit work for module three, you can no longer revise any assignments from module two to improve your score.)
7. ADEQUATE COURSE PROGRESS

a. By no later than Monday, February 1, 2021 at 11:59 p.m., you must complete all assignments for Module One. (This will affirm that you are able to use Canvas.)

b. Thereafter, the course is self-paced; however, without prior permission, you may not submit work for more than two modules in any week. (With 14 modules in the course, you will need to average completion of one module per week, so pace yourself accordingly.)

c. All work for the course must be submitted by Sunday, May 2, 2021 at 11:59 p.m. (Remember the “no more than two modules in any week” rule!) If you are unable to finish by the May 2 deadline, you may receive a grade of “Incomplete” if you have successfully completed 80% or more of the assignments for this course. To receive an “Incomplete,” a plan for completing remaining assignments must be agreed on or before May 2, 2021; otherwise, you will receive a score of zero for all missing work and your final grade for the course will be calculated accordingly.

COURSE MODULES

<table>
<thead>
<tr>
<th>MODULE</th>
<th>TOPICS</th>
</tr>
</thead>
</table>
| 1      | • Personal introductions  
|        | • Syllabus overview  
|        | • Introduction to educational research |
| 2      | • Academic writing  
|        | • APA style and citations |
| 3      | • Key terms in educational research  
|        | • Research problems and question |
| 4      | • Library searches |
| 5      | • Literature reviews  
|        | • Synthesizing articles |
| 6      | • Scientific research reports  
|        | • Participants and sampling  
|        | • Research sites  
|        | • Instruments  
|        | • Validity / Reliability |
| 7      | • Research plans |
| 8      | • Ethics and IRB |
| 9      | • Qualitative research designs |
| 10     | • Qualitative data collection and coding |
| 11     | • Quantitative research designs |
| 12     | • Descriptive statistics |
| 13     | • Excel for descriptive statistics |
| 14     | • Inferential statistics |
COURSE GRADING

The possible points for all assignments in this course, when added together, total to 1,000.

The final grade for this course will be awarded using the following point scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
<th>Points Range</th>
<th>% of Total Possible Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Excellent performance; High accomplishment</td>
<td>900 to 1,000 points</td>
<td>90% to 100%</td>
</tr>
<tr>
<td>B</td>
<td>Satisfactory performance, meets expectations</td>
<td>800 to 899 points</td>
<td>80% to 89.9%</td>
</tr>
<tr>
<td>C</td>
<td>Developing, but below the standard for graduate work</td>
<td>700 to 799 points</td>
<td>70% to 79.9%</td>
</tr>
<tr>
<td>F</td>
<td>Unsatisfactory performance</td>
<td>0 to 699 points</td>
<td>Less than 70%</td>
</tr>
</tbody>
</table>

COURSE POLICIES

1. FROSTBURG STATE UNIVERSITY POLICIES

All FSU policies are fully applicable for this course. For further information, please see: [http://www.frostburg.edu/fsu/assets/File/Administration/policies/policystatements.pdf](http://www.frostburg.edu/fsu/assets/File/Administration/policies/policystatements.pdf)

2. ACADEMIC DISHONESTY

The University considers academic dishonesty to be impermissible and subject to disciplinary actions.

“Academic dishonesty is defined to include any form of cheating and/or plagiarism. Cheating includes, but is not limited to, such acts as stealing or altering testing instrument; falsifying the identity of persons for any academic purposes; offering, giving or receiving unauthorized assistance on an examination, quiz, or other written or oral material in a course including looking at another person’s answer key or test or taking an online test with assistance from another person; or falsifying information on any type of academic record. Plagiarism is the presentation of written or oral material in a manner which conceals the true source of documentary material; or the presentation of materials which uses hypotheses, conclusions, evidence, data, or the like, in a way that the student appears to have done work which they did not, in fact do.”

(Code of Student Conduct, Frostburg State University)
3. CANVAS AND TECHNOLOGY

You are expected to use Canvas and other technological tools to a significant degree in this course. Tutorials on how to use Canvas and some additional helpful resources have been posted in the Orientation Guide. If you are unfamiliar with Canvas or other technologies used, it is your responsibility to access these resources, as well as other resources on YouTube or the websites for the technologies, to develop the necessary skills. You are welcome to call FSU’s Help Desk for support: (301) 687-7777.

4. DISABILITY

Frostburg State University is committed to making all of its programs, services, and activities accessible to persons with disabilities. Faculty will assist students with accommodations after confirming eligibility with Disability Support Services. You may request accommodations through the DSS Office. We want to be sure you receive appropriate accommodations as soon as possible.

5. ACCESSIBILITY STATEMENT

This course is designed to be welcoming to, accessible to, and usable by everyone, including students who have a variety of learning styles, have disabilities, or are new to online learning. Be sure to let me know immediately if you encounter material in this course that is not accessible to you. Also, let me know of changes that I can make to the course so that it is more welcoming and/or accessible to students who take this course in the future.

6. CONFIDENTIALITY AND MANDATORY REPORTING

Frostburg State University and its faculty are committed to maintaining a safe learning environment and supporting survivors of violence. To meet this commitment and comply with federal and state law, FSU requires all faculty and staff (other than the confidential employees in CAPS and Brady Health) to report any instances of gender-based harassment, sexual misconduct, relationship violence, or stalking against students. This means if you share your or another FSU student’s experience with gender-based harassment, sexual misconduct, relationship violence, or, stalking, I have a duty to report the information to the University’s Title IX Coordinator. The only exception to my reporting obligation is when such incidents are communicated during class discussion, as part of an assignment for a class, or as part of a University-approved research project.

Faculty and staff are also obligated to report allegations of child abuse and neglect to University Police and to Child Protective Services. This obligation extends to disclosures of past abuse even if the victim is now an adult and the abuser is deceased. My duty to report suspected child abuse and neglect extends to disclosures that are made as part of classroom discussions and in writing assignments.
If you or someone you know has experienced an incident of harassment or violence, please go to www.frostburg.edu/titleix to find information on reporting options and the resources and services available for support.

7. HEALTH AND SAFETY

Your health and safety are important. Therefore, during every physical in-person meeting of this course, everyone is required to follow state, local, and University public health mandates as outlined in the FSU Social Compact. Everyone must wear a face mask that covers their nose and mouth, respect posted signage, and practice good social distancing by remaining at least 6 feet away from others. The Code of Student Conduct notes that following these health and safety protocols constitute complying “with a reasonable request from authorized University personnel in the performance of their official duties,” and failing to do so is a Code of Student Conduct violation. Students who do not comply with these mandates will be asked to leave class. Students who refuse to leave will be referred to the Dean of Students and may be administratively removed from the class if found to be responsible for Code of Conduct violations. (Please note that no physical in-person meetings are presently scheduled or anticipated for this course.)