



Guidelines for the Capstone Independent Study/Research Project

Master of Science in Mathematics Education

The capstone project is the culminating experience of the M.S. in Mathematics Education; it is required of each student in the high school track and recommended for students in the middle school track. Your project will focus on an idea that links mathematics to its teaching and learning. It will involve independent reading and study, reflection, writing, and perhaps action research. It will connect what you have learned in the program to your future as a mathematics educator.

You may satisfy this requirement by completing one of the following courses:

- EDMA 579 Independent Study
- EDUC 597 Action Research Project.

EDMA 579 INDEPENDENT STUDY

The faculty in the program have prepared a Blackboard site with general information, suggested topics, help with research and writing, and examples of exemplary projects. When you are ready to begin a project, ask your academic advisor to give you access to the Math Education Research site on Blackboard.

When may I enroll in this course?

- You must have completed 21 credits in mathematics and education courses towards the degree by the time you begin your project.

How do I find a topic?

- We have a list of suggested topics from which you may choose, or you may propose a topic of your own. Your topic should combine mathematics and its teaching and learning.

How many credits will I earn?

- Most students earn 3 credits.
- Under unusual circumstances, a student may enroll in 6 total credits, over two (not necessarily consecutive) semesters.
- No student may attempt more than 3 credits of EDMA during one semester or summer.

How do I sign up for the project?

- With your advisor, choose a faculty supervisor for the project and a committee to oversee your work.
- Submit a Permission to Enroll form (available on the Grad School website), including a written course proposal. Your topic must be approved by your faculty supervisor and by the program director.
- Enroll in EDMA 579 in the appropriate semester

How many hours should I spend on the project?

- During the regular school year, you should spend an average of 9-10 hours per week – equivalent to taking a three-credit course in which you spend 3 hours in the classroom and 6-7 hours outside class each week.
- During the summer, you are encouraged to spread your work out over both summer terms. Grades for all summer independent studies are due at the end of the second term. Many students find the summer an ideal time to complete the capstone project.

How often will I meet with my supervisor?

- During a fall or spring semester, you will meet every two weeks.
- During a summer session, you may meet more often.
- A committee will direct your research and grade your final paper. During the semester, you must meet with each of the other readers of your paper at least once.
- You will submit several intermediate drafts of your final paper to your supervisor during the semester.
- During a semester in which we have several students completing projects, we will arrange a time for you to share your research with each other.

What are the final outcomes of the project?

- You will submit short papers or assignments during the semester.

- As you work, prepare an *annotated bibliography* of the helpful resources you find. You will submit it with your final paper.
- Your final paper, typed, double-spaced, is due to each member of your committee, including your faculty supervisor, on the last day of classes for the semester. Use APA style. (See the Blackboard site for assistance on APA style, including citations, and the annotated bibliography.)
- In addition, you will submit a short version of your paper to the *Banneker Banner*, the journal of the Maryland Council of Teachers of Mathematics. This paper is also due to your project supervisor on the last day of classes. After your supervisor has had an opportunity to provide feedback and you have edited the article to your mutual satisfaction, you will submit it to the editor of the *Banner*. You should also consider presenting your work at the annual fall meeting of MCTM.
- You must acknowledge the Graduate School in any publications that result from the capstone research. For example, a footnote in your *Banneker Banner* article may say, "Research reported in this paper was completed in a capstone project for the master's degree in mathematics education in the Graduate School of Hood College."

EDUC 597 - Action Research Special Project

Catalog description: Implementation of an action research special project in learning and teaching. Choice is made individually with the course instructor. The action research work is completed in two semesters, beginning in the fall and ending in the spring with a presentation of the findings. It is expected that students will complete a thorough literature review of their topics, clarify a hypothesis about a solution to a learning and teaching classroom problem, collect baseline data related to the problem, design an intervention program, monitor the intervention program being implemented, test the effect of their proposed solution and reflect and generalize about future actions.

How do I complete this project?

- In the *fall semester*, enroll in EDUC 597. (You must have the permission of the instructor.)
- Prerequisite: Completion of at least 21 credits toward the degree.
- Although this is a 3-credit course, it actually meets for two semesters. You will complete a project and present the results at a round-table event in the spring semester.
- You should be aware that the other students in this class have had research experiences in previous classes, and you may have some catching-up to do. In particular, we recommend that you complete EDUC 577 Introduction to Educational Research before you take EDUC 597.

EDMA 579 Capstone Project Summary Sheet

Name _____

Title _____

Supervisor: _____

Other committee members:

Submitted:

- Final version of paper
- Annotated bibliography, including photocopies of first pages of sources
- Article for *Banneker Banner*

Date: _____

Signatures:

Student

Supervisor

Committee members

Program director

Dean of the Graduate School