



**2017-2018 PROGRAM REQUIREMENTS**  
**Award: Master of Arts in Education**  
**Program of Study: Applied Mathematics**

**About This Major . . .**

The Master of Arts in Education, Applied Mathematics is a 32-hour program.

All CMU program completers are expected to demonstrate proficiency in critical thinking, communication fluency, quantitative fluency, and specialized knowledge/applied learning. In addition to these campus-wide student learning outcomes, all recipients of an Applied Mathematics Graduate Certificate will be able to:

1. Employ mathematical, computational and/or statistical methods to address topics in applied mathematics (specialized knowledge/applied learning, quantitative fluency);
2. Create oral and written arguments, well-grounded in theories and methods of applied mathematics (communication fluency, quantitative fluency);
3. Formulate and evaluate hypotheses related to applied problems, issues, concepts, and perspectives (critical thinking, quantitative fluency).

In addition, the Master of Arts in Education graduate will be able to:

1. Create and deliver oral and written communication based on sound educational theory and research for public education. (Communication Fluency)
2. Evaluate and formulate education plans based on research, current issues, and public education stakeholders. (Critical Thinking and Specialized Knowledge)
3. Synthesize, evaluate, and refine information from an information base of scholarly resources. (Information Literacy)
4. Evaluate and articulate responses to moral, ethical, legal, and professional challenges for instruction. (Ethical Reasoning)
5. Employ statistically valid processes to analyze assessment data to evaluate student learning with respect to district, state, and federal goals. (Quantitative Fluency)
6. Work individually and collaboratively on research based change and innovation in education. (Specialized Knowledge and Applied Learning).

**Advising Process and DegreeWorks**

This document is intended for informational purposes to help determine what courses and associated requirements are needed to earn a certificate. Some courses are critical to complete in specific semesters while others may be moved around. Meeting with an academic advisor is essential in planning courses and discussing the suggested course sequencing. It is ultimately the student's responsibility to understand and fulfill the requirements for her/his intended certificate.

DegreeWorks is an online degree audit tool available in MAVzone. It is the official record used by the Registrar's Office to evaluate progress towards a certificate and determine eligibility for graduation. Students are responsible for reviewing their DegreeWorks audit on a regular basis and should discuss questions or concerns with their advisor or academic department head. Discrepancies in requirements should be reported to the Registrar's Office.

## **Graduation Process**

Students must complete the following in the first two months of the semester prior to completing their certificate requirements (for one semester certificates complete in the first week of class):

- Review their DegreeWorks audit and create a plan that outlines how unmet requirements will be met in the final semester.
- Meet with their advisor and modify their plan as needed. The advisor must approve the final plan.
- Submit the “Intent to Graduate” form to the Registrar’s Office to officially declare the intended graduation date and commencement ceremony plans.
- Register for all needed courses and complete all requirements for each degree sought.

Submission deadlines and commencement details can be found at <http://www.coloradomesa.edu/registrar/graduation.html>.

If your petition for graduation is denied, it will be your responsibility to apply for graduation in a subsequent semester. Your “Intent to Graduate” does not automatically move to a later graduation date.

## **INSTITUTIONAL GRADUATE DEGREE REQUIREMENTS**

The following institutional requirements apply to all CMU graduate-level degrees. Specific programs may have different requirements that must be met in addition to institutional requirements.

- Graduate certificates consist of a minimum of 5 credit hours. Master’s degrees consist of a minimum of 30 credit hours. Doctoral degrees consist of a minimum of 60 credit hours
- All credits in a graduate program must be minimally at the 500-level.
- At least fifty percent of the credit hours must be taken at CMU.
- Students must achieve a 3.00 cumulative GPA or higher in all CMU coursework.
- Students may not apply coursework with a grade lower than a “B” toward graduation requirements.
- A course may only be used to fulfill one requirement for each degree/certificate.
- Capstone exit assessment/projects (e.g., Major Field Achievement Test) requirements are identified under Program-Specific Requirements.
- The Catalog Year determines which program sheet and certificate requirements a student must fulfill in order to graduate. Visit with your advisor or academic department to determine which catalog year and program requirements you should follow.
- See “Requirements for Graduate Degrees and Certificates” in the catalog for a complete list of graduation requirements.

## **PROGRAM-SPECIFIC REQUIREMENTS**

- A bachelor’s degree from an accredited college is required, prior to beginning the program.
- A fully completed application including official transcripts is required prior to beginning the program.
- Acceptance into the Applied Mathematics graduate certificate program.
- 32 semester hours and capstone presentation are required for the Master of Arts in Education Degree in Applied Mathematics.
- It is recommended that students work closely with a faculty advisor when selecting courses and scheduling classes prior to registration.

**MASTER OF ARTS IN EDUCATION: APPLIED MATHEMATICS REQUIREMENTS** (32 semester hours, must pass all courses with a grade of "B" or better.)

**Required Courses** (9 semester hours)

- MATH 500 - Introduction to Graduate Studies in Applied Mathematics (3)
- MATH 510 - Applied Probability and Statistics (3)
- MATH 520 - Applied Numerical Methods (3)

**Elective Courses** (9 semester hours)

Select 9 credits from the following courses:

- MATH 530 - Applied Mathematical Modeling (3)
- MATH 540 - Applied Audio and Image Processing (3)
- MATH 550 - Mathematical Logic & Foundations in Mathematics (3)
- MATH 560 - Applied Number Theory (3)
- MATH 570 - Applied Cryptography (3)
- MATH 596 - Topics (1-3)

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**Master of Arts in Education Core Courses** (14 semester hours)

- EDUC 500 - Culture and Pedagogy (3)
- EDUC 501 - Educational Technology (2)
- EDUC 502 - Theory, Design, and Assessment of Curriculum (3)
- EDUC 503 - Introduction to Educational Research and Design (3)
- EDTL 513 - Information Based Educational Practice and Statistics (3)

- Capstone: The Master of Arts in Education requires the successful completion of the capstone competency. The capstone culminates in a professional presentation representing enduring understanding illustrating a synthesis of learning. This presentation must represent sufficient rigor to earn final approval from Colorado Mesa University to grant the Master of Arts degree in Education

## SUGGESTED COURSE SEQUENCING

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### **Year One, Summer Semester**

- EDUC 502 - Theory, Design, and Assessment of Curriculum (3)
- MATH 500 - Introduction to Graduate Studies in Applied Mathematics (3)

### **Year One, Fall Semester**

- EDUC 501 - Educational Technology (2)
- MATH 510 - Applied Probability and Statistics (3)

### **Year One, Spring Semester**

- EDUC 513 - Information Based Educational Practice and Statistics (3)
  - MATH 520 - Applied Numerical Methods (3)
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### **Year Two, Summer Semester**

- EDUC 500 - Culture and Pedagogy (3)
- EDUC 503 - Introduction to Educational Research and Design (3)
- Elective (3)

### **Year Two, Fall Semester**

- Capstone Presentation
- Elective (3)

### **Year Two, Spring Semester**

- Elective (3)
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