



PROGRAM REQUIREMENTS OVERVIEW

Degree: Master of Arts in Education

Program of Study: Applied Math

About This Degree . . .

The Master of Arts in Education, Applied Mathematics program 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. Employ mathematical, computational and/or statistical methods to address topics in applied mathematics (specialized knowledge/applied learning, quantitative fluency);
3. Create oral and written arguments, well-grounded in theories and methods of applied mathematics (communication fluency, quantitative fluency);
4. 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).

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 in Applied Mathematics.
- No class grade lower than a “B” will be counted toward the degree.
- Applicants must hold a valid Professional Colorado Educator License. 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 (32 semester hours)

Course No	Title	Sem.hrs	Grade	Term
Required Courses (9 credits)				
MATH 500	Intro Grad Applied Math	3	_____	_____
MATH 510	Applied Probability & Stats	3	_____	_____
MATH 520	Applied Numerical Methods	3	_____	_____
Elective Courses (Select 9 credits from the following courses)				
MATH 530	Applied Math Modeling	3	_____	_____
MATH 540	Audio & Image Processing	3	_____	_____
MATH 550	Math Logic & Foundations	3	_____	_____
MATH 560	Applied Number Theory	3	_____	_____
MATH 570	Applied Cryptography	3	_____	_____
MATH 596	Topics	1-3	_____	_____
Master of Arts in Education Required Core Courses (14 credits)				
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 & Design	3	_____	_____
EDTL 513	Information Based Educational Practice/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 FOR MASTER OF ARTS IN EDUCATION:
APPLIED MATHEMATICS**

This is a recommended sequence of course work. Certain courses may have prerequisites or are only offered during the Summer, Fall or Spring semesters. It is the student's responsibility to check with the mathematics department for course offerings and availability.

FIRST YEAR

<u>Summer Semester</u>		<u>Hours</u>	<u>Fall Semester</u>		<u>Hours</u>
MATH 500	Intro Grad Studies Appl Math	3	MATH 510	Applied Probability & Statistics	3
EDUC 502	Theory, Design, & Assessment of Curriculum	<u>3</u>	EDUC 501	Educational Technology	<u>2</u>
			5 credits		
6 credits					
<u>Spring Semester</u>		<u>Hours</u>			
MATH 520	Applied Numerical Methods	3			
EDTL 513	Information Based Educational Practice/Statistics	<u>3</u>			
			6 credits		

SECOND YEAR YEAR

<u>Summer Semester</u>		<u>Hours</u>	<u>Fall Semester</u>		<u>Hours</u>
MATH 5XX	Elective	3	MATH 5XX	Elective	<u>3</u>
EDUC 500	Culture & Pedagogy	3			
EDUC 503	Introduction to Educational Research	<u>3</u>			
			3 credits		
9 credits					
<u>Spring Semester</u>		<u>Hours</u>			
MATH 5XX	Elective	<u>3</u>			
Capstone Presentation					
			3 credits		