PROFESSIONAL MASTER OF ARTS IN ELEMENTARY MATH, SCIENCE, AND TECHNOLOGY EDUCATION

Department: College of Liberal Arts and Sciences (https://catalog.bradley.edu/graduate/liberal-arts-sciences/)

Sherri Morris,
Program coordinator

The Professional Master of Arts (PMA) degree program in Elementary Math, Science, and Technology Education is a professional master's degree for elementary (K-8) teachers. With a primary focus on building teachers' science, technology, engineering, and mathematics (STEM) content knowledge and skills, the program offers teachers learning experiences that will allow them to enhance their competence as teachers of mathematics, science, and technology. The program's goal is to prepare teachers who are leaders in Math, Science, and Technology Education who are committed to providing all students the best educational opportunities possible. Graduates of the program will be able to:

- demonstrate significant growth in their math and science content mastery
- integrate technologies as tools of math and science instruction
- design and implement inquiry-based approaches to instruction that respond to the needs of a diverse student population
- translate real-world events and phenomena into effective instructional practices
- use various forms of assessment to inform their work in the classroom
- exhibit the attributes of self-efficacy consistent with being a life-long learner related to being a math, science, and technology educator
- use research to inform practice
- provide service to the education community as a teacher leader.

Admission Requirements

Applicants must meet all entrance requirements of Graduate Education and hold current teacher certification. Students progress through the program as a cohort. A new cohort will begin no more than once per calendar year. Check with Graduate Education for the next cohort start date.

Degree Requirements

The program requires 33 hours of graduate-level courses to be completed in 33 months. Students are expected to successfully complete a STEM Education Project (MST 685 Stem Education Project) that integrates appropriate demonstrations of research and leadership skills and inquiry-based teaching and learning as part of the comprehensive assessment of their learning in the program.

Electives

Code	Title	Hours
MST 630	Teaching Science Using Robotics Platforms	3.0
MST 631	The Science of Foods and Nutrition	3.0
MST 632	The Science of Matter	3.0
MST 633	Pharmacology and the Human Brain	3.0
MST 634	Crime Scene Science	3.0
MST 635	The Science of Global Climate Change	2.0-3.0
MST 636	The Science of Computer Games	3.0
MST 637	Scientific Myths and Misconceptions	2.0-3.0
MST 639	Special Topics	1.0-3.0

Course	Title	Hours
First Year		
Summer		
Select one of the following:		3.0
MST 600	Investigative Math, Science, and Technology for Educators: Energy	
MST 601	Investigative Math, Science, and Technology for Educators: Motion	
MST 609	Investigative Math, Science, and Technology for Educators: Special Topics	
MST 610	Math Through Inquiry	3.0
MST 611	Directed Research in Science and Math Internship	1.0
MST 612	Introduction to Teacher Leadership	1.0
	Hours	**8**
Fall		
Elective (to be determined)		3.0
	Hours	**3**
Spring		
MST 650	Inquiry-Based Curriculum: Developement & Analysis	3.0
	Hours	**3**
Second Year		
Summer		
Select one of the following:		3.0
MST 620	Topics in Investigative Math, Science, & Technology For Educators II: Evolution	
MST 621	Investigative Math, Science, & Tech. for Educators: Environmental Science	
MST 629	Investigative Math, Science, & Tech. for Educators: Special Topics	
MST 660	Research in Math and Science	2.0
	Hours	**5**
Fall		
MST 670	Action Research: Methods and Practice	3.0
	Hours	**3**
Spring		
Elective (to be determined)		3.0
	Hours	**3**
Third Year		
Summer		
MST 680	Nature of Inquiry and Innovation	3.0
MST 681	Advanced Teacher Leadership	2.0
MST 685	Stem Education Project	1.0
	Hours	**6**
Fall		
MST 685	Stem Education Project	2.0
	Hours	**2**
	Total Hours	**33**