



## Science, Technology, Engineering, and Mathematics Education (STEM)

*Specialization leading to Master of Arts in Teaching and Learning*

### Program Requirements (9 hours)

#### Core Courses (9 hours)

EDUTL 6808	Multicultural & Global Perspectives on T&L (3)
EDUTL 6050	Multiple Perspectives on T&L (3)
EDUTL 6053	Balanced Assessment of T&L (3)

### Area of Study Required and Elective Courses

#### Required (3)

EDUTL 7741	Advanced Study of Learning & Cognition in STEM (3)
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#### Elective (12-14)

EDUTL 6892	Special Topics in Education (1-4)
EDUTL 7189	Advanced Field Placement (3)
EDUTL 7701	Mathematics T&L in Elementary & Middle Schools (3)
EDUTL 7706	Science & Early Childhood Education (3)
EDUTL 7711	K-6 Number & Algebra (2)
EDUTL 7712	K-6 Measurement & Geometry (2)
EDUTL 7713	K-6 Data Analysis & Probability (2)
EDUTL 7715	Learning Progressions in Mathematics Education (3)
EDUTL 7716	Conceptual & Procedural Knowledge in Math Education (3)
EDUTL 7717	Teaching Mathematics (3)
EDUTL 7718	Student Learning Processes in Mathematics (3)
EDUTL 7719	Providing Professional Development in Math Education (2)
EDUTL 7723	Learning Progressions in Science Education (3)
EDUTL 7724	Teaching Evolution in Schools (3)
EDUTL 7725	The Nature of Science & Implications for Science Teaching (3)
EDUTL 7726	STEM Education in Informal Settings (3)
EDUTL 7731	Multimedia Tools for STEM Education (3)
EDUTL 7732	Robotics & Automation for STEM Education (3)
EDUTL 7744	Problem Solving in STEM (3)
EDUTL 7745	Classroom Discourse in STEM Learning (3)
EDUTL 7749	History, Future, & Practical Applications of Concept Inventories in STEM Education (3)

Minimum hours: 30

For More Information:  
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Learning  
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### **Research Requirement (minimum of 3 hours)**

Select **ONE** of the T&L Research courses below or one that is approved by your faculty advisor (minimum of 3 credit hours)

EDUTL 6052 Classroom-Based Inquiry (3)

EDUTL 7010 Diverse Approaches to Research on T&L (3)

### **Final Examination (1-3)**

Students must select either a Thesis or Non-Thesis option and must be registered for at least 3 credit hours the term of graduation.

#### **Thesis**

EDUTL 7999 Thesis Research (3)

#### **Non-Thesis**

EDUTL 7193 Independent Study (1-3)

*Note: Students exact curriculum may vary depending upon program of study determined by student and advisor, and approved by the Graduate Studies Committee.*