Core Requirements (17 hours)

Teaching & Learning Required Courses (8 hours)
- EDUTL 8003 Theorizing and Researching Teaching and Learning (4)
- EDUTL 8015 Diversity and Equity in Education (4)

Multicultural Education and Diversity in Education Requirement (3 hours)
Alternative courses may be available, consult your advisor
- EDUTL 6808 Multicultural and Global Perspectives on Teaching and Learning (3)

Research Methods (6 hours)
More advanced courses may be taken, consult your advisor
- EDUTL 6052 Classroom-Based Inquiry: MA (3)
- ESQREM 6625 Introduction to Educational Research (3)

Specialization Requirements (15 hours)
Students must meet with a faculty advisor within the first two semesters to plan a program of study. With the approval of a faculty advisor and the Graduate Studies Committee, the program of study may deviate from the curriculum below depending on scholarly and research interests.

Required Courses (15 hours)
- EDUTL 8711 Current Issues and Trends in STEM Education (3)
- EDUTL 8721 Advanced Study of Thinking, Learning, and Assessment in Mathematics Education (3)
- EDUTL 8731 Teaching and Teacher Education in STEM Education (3)
- EDUTL 8741 History of Curriculum in STEM Education (3)
- EDUTL 8751 Survey and Critical Analysis of Research in STEM Education (3)

Apprenticeship (3-6 hours)
Consult your faculty advisor
- EDUTL 8998 Research Apprenticeship in Teaching and Learning (3-6)

Applied Project (3 hours)
Consult your faculty advisor
- EDUTL 8999 Research (3)

Note: Students exact curriculum may vary depending upon program of study determined by student and advisor, and approved by the Graduate Studies Committee.
**Elective Courses (not required)**

EDUTL 7701  Mathematics Teaching and Learning in Elementary and Middle Schools (3)  
EDUTL 7706  Science and Early Childhood Education (3)  
EDUTL 7711  K-6 Number and Algebra (2)  
EDUTL 7712  K-6 Measurement and Geometry (2)  
EDUTL 7713  K-6 Data Analysis and Probability (2)  
EDUTL 7715  Learning Progressions in Mathematics Education (3)  
EDUTL 7716  Conceptual and Procedural Knowledge in Mathematics Education: Theory, Research, and Controversy (3)  
EDUTL 7717  Teaching Mathematics (3)  
EDUTL 7718  Student Learning Processes in Mathematics (3)  
EDUTL 7719  Providing Professional Development in Mathematics Education (2)  
EDUTL 7723  Learning Progressions in Science Education (3)  
EDUTL 7724  Teaching Evolution in Schools (3)  
EDUTL 7725  The Nature of Science and Implications for Science Teaching (3)  
EDUTL 7726  STEM Education in Informal Settings (3)  
EDUTL 7731  Multimedia Tools For STEM Education (3)  
EDUTL 7732  Robotics and Automation for STEM Educators (3)  
EDUTL 7741  Advanced Study of Learning and Cognition in STEM (3)  
EDUTL 7744  Problem Solving in STEM (3)  
EDUTL 7745  Classroom Discourse in STEM Learning (3)  
EDUTL 7749  History, Future, and Practical Applications of Concept Inventories in STEM Education (3)  
EDUTL 8890  Advanced Seminar (1-4)  
FABENG 7220  (Food, Agricultural, & Biological Engineering) College Teaching in Engineering (2)