MS Ed in Childhood Education 1-6 - Science, Technology, Engineering and Mathematics Specialization (STEM)

STEM Specialization (13ST)
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Students enrolled in the Master of Science in Education Childhood Education 1-6 program may choose to specialize in Science, Technology, Engineering, and Mathematics (STEM). The planned outcome of the STEM track is the ability to enable children to successfully meet the demands of the highly technological world in which they are growing up and will need to find jobs. This includes nurturing critical thinking skills and problem-solving abilities by thinking/acting like scientists and engineers. The Next Generation Science Standards (NGSS) and the NYS Common Core State Standards (CCSS) in Mathematics serve as a guide for course development and completion. This specialization will NOT lead to certification as a STEM Education teacher.

Admission Requirements
Candidates for admission to the program need to:

• Hold a current elementary or childhood teaching certificate from New York State. A copy of this certificate must be submitted as part of the application process. (Note: Students may be accepted into the program "pending" receipt of their teaching certificate if the teaching certificate is being processed by NYSED or if the student is nearing completion of an approved teacher education program.)

• Have earned an undergraduate cumulative grade point average of 3.0 or higher;

• Complete an admission application using the link above and provide official transcripts of all college/university coursework.

• Submit three letters of recommendation on professional letterhead from professionals addressing the competency of the candidate. At least one letter should come from a professor with whom the candidate has taken undergraduate course work;

• Earn a satisfactory score on the Graduate Record Examination

Application Deadlines
• Summer Admission - Applications must be complete by May 1
• Fall Admission - Applications must be complete by July 31

Code Title Credits
Liberal Arts and Science Core (9 Credits)
Select 9 credits by advisement ¹ 9
Elementary Content Core (15 Credits)
EED550 Advanced Child Development 3
Select one of the following: 3
EDS581 Race and Gender in Education
EDS537 Issues in Multicultural Education

SPE572 Tchg. Learners of Culturally/Linguistically Diverse Backgrounds
SED566 Education Across Borders: International Ideas and Experience
SED701 Inquiry into Teaching, Learning, and School: Part I 3
SED702 Inquiry into Teaching, Learning, and School: Part II Every Semester 3
SPE565 Teaching in Inclusive Classrooms ² 3

Pedagogical Core (12-15 Credits)
The pedagogical core is developed from the student's choice of a specialization track and additional graduate education elective(s).
Possible courses to be selected through advisement:

EED735 Workshop in Environmental/Outdoor Education and Mathematics
EED709 Workshop in Teaching Science and Literacy in the Elementary School
EED716 Science, Math, and Engineering for Young Children
EED707 Workshop in Teaching Mathematics and Technology in the Elementary School
SED560 Technology in the Classroom

Total Credits 36-39

¹ This is a continuation of undergraduate content and aligned with specialization tracks. Courses will be selected with advisement from respective departments from one of the following content areas:
• Science, Mathematics, Technology
• Social Studies
• Languages other than English
• English/Language Arts

Students may also choose, under advisement, to substitute graduate electives in Liberal Arts or Science and/or Fine and Performing Arts (up to 6 credits) to continue in their undergraduate academic major.

² Course required for students who have not had a previous course to prepare them to work with students with special needs.

Requirements for Completion of the Degree
Candidates are required to:

• Develop a plan of study with an advisor after matriculating into the program;
• Complete prescribed course work and other requirements within three years of matriculation;
• Maintain a cumulative average of 3.0 or better, with no more than two grades below B-.
• Complete "Dignity for All Students Act" (DASA) Training;

A typical four-semester program for a full-time student would consist of two summer sessions, one fall semester, and one spring semester. There is some flexibility in planning sequences of courses, depending on course availability.