

MSED IN CHILDHOOD EDUCATION 1-6 - SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS SPECIALIZATION (STEM)

Program Overview

Program Coordinator	Lindsey Russo, (845) 257-3116, russol@newpaltz.edu
Program ID	13ST
Credits	36
Program Length	The MSED can be completed in one year if enrolled full-time, but students must complete degree within 5 years
Modality	In-person
Full-time/Part-time	Full-time
Transfer Credits	6
Capstone	Practicum
License/Certification	NYSED Professional Childhood Education 1-7

Program Description

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;

Application Deadlines

Rolling Admissions	Fall Admission
Rolling Admissions	Spring Admission

Accepting on a rolling basis until the program is full.

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	3
Every Semester		
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).		12-15
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.

Graduate Checklist

- Apply for graduation via my.newpaltz.edu under "Graduation" tab according to the schedule in the [academic calendar](#).
- Resolve any pending admission conditions (outlined in your acceptance letter) and/or missing documents if applicable.

- Review your progress report via my.newpaltz.edu to ensure that you have completed all program requirements.
- Remember that only two grades below a B- may be applied to your plan of study
- Contact your advisor if you need to amend your plan or process transfer credit.
- Ensure that you are in good academic standing with a GPA (Grade Point Average) of 3.0 or higher.
- Pass your capstone or culminating assessment.
- Complete your degree within the specified time limit outlined in the Program Overview.
- Engage in ongoing professional learning;
- Use evidence to continually reflect on the learning process and adapt practice to meet the needs of each learner;
- Demonstrate commitment and communication skills to facilitate collaboration with learners, families, colleagues, other school professionals, and community members to ensure learner growth.

5. Instructional Practice & Assessment:

- Plan instruction that supports every student in meeting learning goals by drawing upon content knowledge, state/national standards, curriculum, learning theory, and evidenced-based practices;
- Understand and implement multiple methods of assessment and evaluation for the purposes of monitoring progress, engaging learners in their own growth, and guiding instructional decisions.

6. *STEM Pedagogy:

- Demonstrate the ability to enable children to successfully meet the demands of the highly technological world they are growing up in and which they will need to find jobs in;
- Nurture critical thinking skills and problem-solving abilities by thinking/acting as scientists, mathematicians, engineers, and inventors (technology);
- Utilize NYS Science Learning Standards, International Society for Technology Education Standards, and NYS Next Generation Mathematics Standards to guide the creation of meaningful STEM learning experiences.

*Learning outcomes pertains to the STEM specialization track in the MSEd Childhood 1-6 program.

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.

Program Learning Outcomes

Childhood Education 1-6 (MSEd)

Candidates who successfully complete all required components of the MSEd Childhood 1-6 Program at SUNY New Paltz will:

1. **Content Knowledge:** Understand the central concepts and tools of inquiry to create learning experiences that make content accessible and meaningful for all learners.
2. **Application of Content:** Engage learners in critical thinking, the connections across disciplines, and collaborative problem solving related to authentic local and global issues.
3. **The Learner & Learning:**
 - Apply knowledge and understanding of individual differences, diverse cultures, and culturally responsive pedagogy to design and implement developmentally appropriate learning experiences and inclusive environments;
 - Create learning experiences that encourage and support individual and collaborative learning, positive social interaction, and active engagement in learning.

4. Professional Learning & Ethical Practice: