

975--- **STEM K-8. Due to content being competency driven, college/university recommendation may be required.**

(1) Authorization. The holder of this endorsement is authorized to teach science, mathematics, and integrated STEM courses in kindergarten through grade eight.

(2) Program requirements. Be the holder of the teacher—elementary classroom endorsement.

Completion of a minimum of 12 semester hours of college-level science.

Course #	Course Title	Institution	Semester Hr.	Year Completed

Completion of a minimum of 12 semester hours of college-level math (or the completion of Calculus I) to include coursework in computer programming.

Course #	Course Title	Institution	Semester Hr.	Year Completed

Completion of a minimum of 3 semester hours of coursework in content or pedagogy of engineering and technological design that includes engineering design processes or programming logic and problem-solving models and that may be met through either of the following:

- **Engineering and technological design courses for education majors;**
- **Technology or engineering content coursework.**

Course #	Course Title	Institution	Semester Hr.	Year Completed

Completion of a minimum of 6 semester hours of required coursework in STEM curriculum and methods to include the following essential concepts and skills:

- **Comparing and contrasting the nature and goals of each of the STEM disciplines;**
- **Promoting learning through purposeful, authentic, real-world connections;**
- **Integration of content and context of each of the STEM disciplines;**

STEM K-8 Endorsement Worksheet

- **Interdisciplinary/transdisciplinary approaches to teaching (including but not limited to problem-based learning and project-based learning);**
- **Curriculum and standards mapping;**
- **Engaging subject-matter experts (including but not limited to colleagues, parents, higher education faculty/students, business partners, and informal education agencies) in STEM experiences in and out of the classroom;**
- **Assessment of integrative learning approaches;**
- **Information literacy skills in STEM;**
- **Processes of science and scientific inquiry;**
- **Mathematical problem-solving models;**
- **Communicating to a variety of audiences;**
- **Classroom management in project-based classrooms;**
- **Instructional strategies for the inclusive classroom;**
- **Computational thinking;**
- **Mathematical and technological modeling.**

Course #	Course Title	Institution	Semester Hr.	Year Completed

Completion of a STEM field experience of a minimum of 30 contact hours that may be met through the following:

- **Completing a STEM research experience;**
- **Participating in a STEM internship at a STEM business or informal education organization;**
or
- **Leading a STEM extracurricular activity.**

Course #	Course Title	Institution	Semester Hr.	Year Completed