



Integrative Science, Technology, Engineering, and Mathematics Education is defined as: “technological/engineering design based pedagogical approaches used to *intentionally* teach the content and practices of science, technology, engineering and mathematics education *through* the content and practices of technology/engineering education. Integrative STEM Education is equally applicable at the natural intersections of learning within the continuum of content areas, educational environments, and academic levels” (Wells & Ernst, 2012/2015).

Graduate Certificate Program* Integrative STEM Education (I-STEM ED)

Admission Requirements

Bachelor’s degree, 3.0+ GPA (min.) in final 60 SH of BA degree program; Undergraduate Transcripts; Resume

Certificate Requirements

To be awarded the “Integrative STEM Education Graduate Certificate” students must successfully complete 12 semester hours (SH) of coursework (four courses) offered by the Integrative STEM Education Program at Virginia Tech as follows:

Complete the following Integrative STEM Education Core Courses

EDCI 5804: I-STEM Education Foundations (3 SH - Fall Semester)

EDCI 5814: I-STEM Education Pedagogy (3 SH - Fall Semester)

EDCI 5774: Readings in STEM Education (3 SH - Fall and Spring Semesters)

and one of the following:

EDCI 5854: Biotechnology Literacy by Design (3 SH – Spring Semester)

EDCI 5824: I-STEM Education Trends and Issues (3 SH - Spring Semester)

Procedures for Completing the Integrative STEM Education Graduate Certificate

1. Point your browser to <https://graduateschool.vt.edu/academics/what-you-need-to-graduate/forms.html>, select Admissions, and select the Application for Certificate link. Download the application form, fill in the required information, and indicate which of the four courses identified above you will complete.
2. Submit a signed version of that form to the Enrollment Services Assistant (540-231-5348), Office of Academic Programs in the School of Education (105 War Memorial Hall, Virginia Tech, Blacksburg, VA 24061) for review and approval of an assigned advisor. If appropriate/necessary, your assigned advisor will assist you in revising the identified courses, after which you will resubmit it to him for approval.
3. When the Graduate Certificate Application has been approved, you and the Graduate School will be sent copies.
4. Following your successful completion of the four Integrative STEM Education courses identified in your Graduate Certificate Application, download and complete the “Application for Degree or Certificate” (<https://graduateschool.vt.edu/academics/what-you-need-to-graduate/forms.html>). Submit the completed form to the Graduate School.
5. Upon verifying that you have completed the coursework identified in the Application, the Graduate School will award you the “Integrative STEM Education Graduate Certificate.”

For more information

Enrollment Services Assistant (540) 231-5348

* All coursework for this Graduate Certificate is available both on-campus and virtually via synchronous audio/video web-conferencing.

Invent the Future