SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS (STEM) EDUCATION - CERTIFICATE

This online certificate expands the STEM skills of teacher-practitioners specializing in grades 6-12, focusing on integrative pedagogy and learning design for impactful student experiences.

The Department of Teaching, Learning and Culture offers a Certificate in Science, Technology, Engineering and Mathematics (STEM) Education. The graduate STEM Certificate provides teacher-practitioners, specializing in grades 6-12, with an opportunity to expand their skills and methods for engaging students in rich, powerful STEM (science, technology, engineering and mathematics) learning experiences in a cutting-edge online environment. The focus is on topics of importance to teachers and districts within a high-impact, two-semester timeline.

Individuals completing the certificate will gain knowledge and skills in designing learning experiences integrating STEM content and pedagogy:

- elements of engineering design
- mathematics (algebra) for engineering
- research on teaching and learning (including cyber learning) from the learning sciences
- STEM-appropriate integrative pedagogical approaches (problem-based and inquiry learning)

This program is also approved for delivery via asynchronous distance education technology.

Admission and program information is available on the Department of Teaching, Learning and Culture website (http://tlac.tamu.edu/).

Program Requirements

Code	Title	Semester Credit Hours
EDCI 720	Engineering Design for School Teaching and Learning	3
EDCI 620	Science, Technology, Engineering and Mathematics (STEM) Teaching and Learning	3
EDCI 721	How People Learn STEM	3
EDCI 723	Developing Students' Disciplinary Language and Reading in STEM Teaching and Learning	3
Total Semester Credit Hours		**12**