



The National Certificate for STEM Teaching

PROGRAM OVERVIEW AND FOUNDATIONS

What Is the National Institute for STEM Education?

The National Institute for STEM Education (NISE) offers an online, competency-based program leading to the **National Certificate for STEM Teaching (NCST)**. The STEM Teaching Certificate provides a flexible pathway for teachers wanting recognition—and support—for further refining their instruction by integrating high-yield STEM and 21st-century learning strategies.

Students enrolled in a STEM-focused graduate program at American College of Education (ACE) receive six graduate hours for completing the NCST at no additional cost. Visit ace.edu/NISEtransfers or call 1-844-446-STEM.

PROGRAM DESIGN

- Competency-based, self-paced, online instruction
- Focus on stem pedagogy
- Support from an online STEM coach

GUIDING PRINCIPLES

- Student autonomy
- Constructivism
- Explicit/reflective strategies
- 21st-century skill building

COMPETENCY DOMAINS

- Creating an environment for learning
- Building scientific understanding
- Engaging students in science & engineering

Both Credit and Support

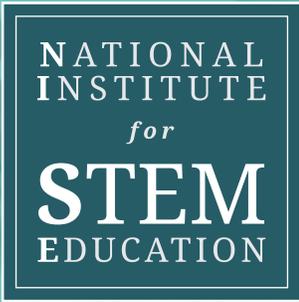
The National Certificate for STEM Teaching (NCST) recognizes STEM professionals for their expertise in education. Once enrolled, participants are guided through the development of a portfolio that demonstrates proficiency across **15 fundamental Teacher Actions** essential to STEM learning. Professionally mature teachers are invited to immediately demonstrate proficiency in their online portfolio through guided self-evaluations, documentation, examinations of student work, and relevant educational scenarios. Likewise, a variety of relevant, "just-in-time" learning resources are provided for those teachers wanting more support.



getstemcertified.com

contact us at 800-531-0864 or support@nise.institute
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The National Certificate for STEM Teaching

GUIDING PRINCIPLES AND DOMAINS

What Are the 15 STEM Teacher Actions?

The 15 STEM Teacher Actions embedded within the National Certificate for STEM Teaching (NCST) represent the crossroads of fundamental, high-impact instructional strategies, STEM, and 21st-century learning strategies. Together, the 15 STEM Teacher Actions facilitate research-based teaching and learning that: 1) significantly impact student learning, 2) support STEM, NGSS, and 21st-century learning, and 3) allow teachers choice in prioritizing and pacing their professional growth.

Guiding Principles of the National Certificate for STEM Teaching

- 1 Student Autonomy
- 2 Constructivist Learning
- 3 Explicit/Reflective Learning
- 4 21st-Century Skill Building

Domains and STEM Teacher Actions

CREATING AN ENVIRONMENT FOR LEARNING

Improving Classroom Culture - Establishing Cooperative Learning - Connecting Learning Outside the Classroom - Integrating Technology

BUILDING SCIENTIFIC UNDERSTANDING

Implementing Inquiry - Utilizing Assessment - Addressing Student Misconceptions - Facilitating Questioning and Discourse - Building Literacy in Science

ENGAGING STUDENTS IN SCIENCE AND ENGINEERING PRACTICES

Cultivating Scientific Investigations - Developing Engineering Solutions - Fostering Data Utilization - Implementing Project Based Learning (PBL) - Facilitating Claim-Evidence-Reasoning (CER) - Promoting Scientific Argumentation



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Master's and Doctoral Degree Programs
PARTNERSHIP WITH AMERICAN COLLEGE OF EDUCATION

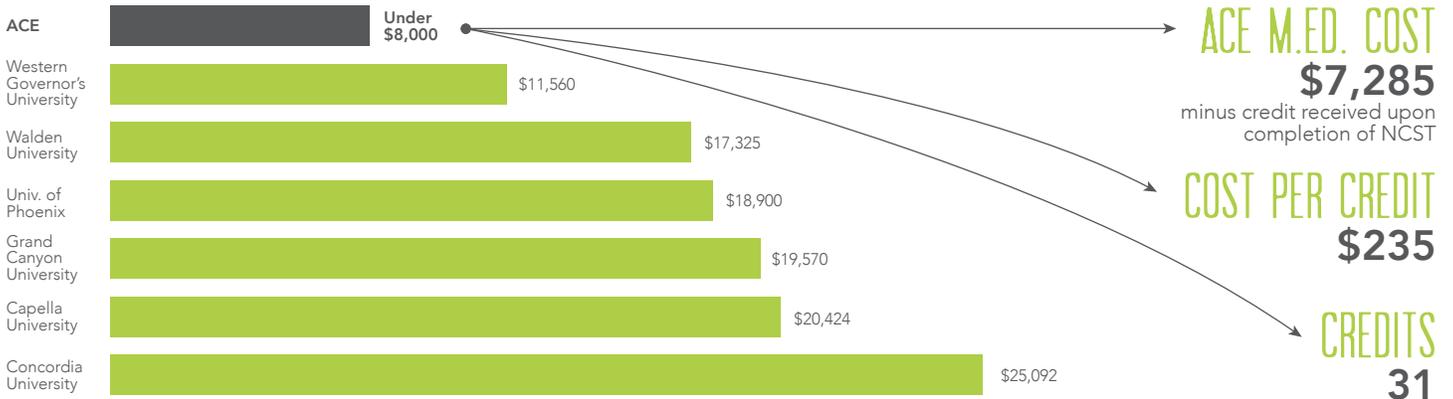
Apply Your STEM Certificate to a Master's or Doctoral Degree Program

With a Master of Education in STEM Leadership, you will be able to take your place at the table as a STEM educational leader and advocate. Learn how to empower your teachers and students to think like scientists.

As educators, we know the best teaching provides relevant application. Now more than ever, students must master the critical thinking skills necessary to thrive in a global, digital society. For students to master STEM and prepare for careers in STEM fields, they must explore ideas and concepts through project-based learning and working within an environment that fosters hands-on scientific inquiry. Become a leader in facilitating teachers' effective use of STEM strategies in their classrooms and across the school.

American College of Education Tuition Comparison*

Based on information provided on each institution's website as of November 2015. Totals include tuition only for M.Ed. in Curriculum & Instruction or comparable programs and do not include fees and associated expenses.



Credit Earned with National Certificate for STEM Teaching

SCI5243 Creating an Environment for STEM Learning

SCI5263 Applied Science and Engineering Practices

Credit can also be applied to the ACE Doctorate in Leadership with a STEM Leadership Focus.



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