BECOMING A STEM CERTIFIED TEACHER

The National Certificate for STEM Teaching

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.

Partnering with the globally recognized American College of Education, the STEM certificate conferred by NISE also grants access to a low-cost, accelerated master's in STEM Teaching and Doctorate at the American College of Education.

a. STEM Certify Teachers

+ dedicated academic coach
+ self-paced
+ competency-based
+ increases student achievement through STEM pedagogy

b. Guiding Principles

+ student autonomy
+ constructivism
+ explicit/reflective methodology
+ 21st-century skill building

c. Competency Domains

+ creating an environment for learning
+ building scientific understanding
+ engaging students in science and engineering practices

How is the National Certificate for STEM Teaching learning experience organized?

The National Certificate for STEM Teaching (NCST) acknowledges STEM professionals for their expertise in STEM 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.

Cost: $625 per teacher

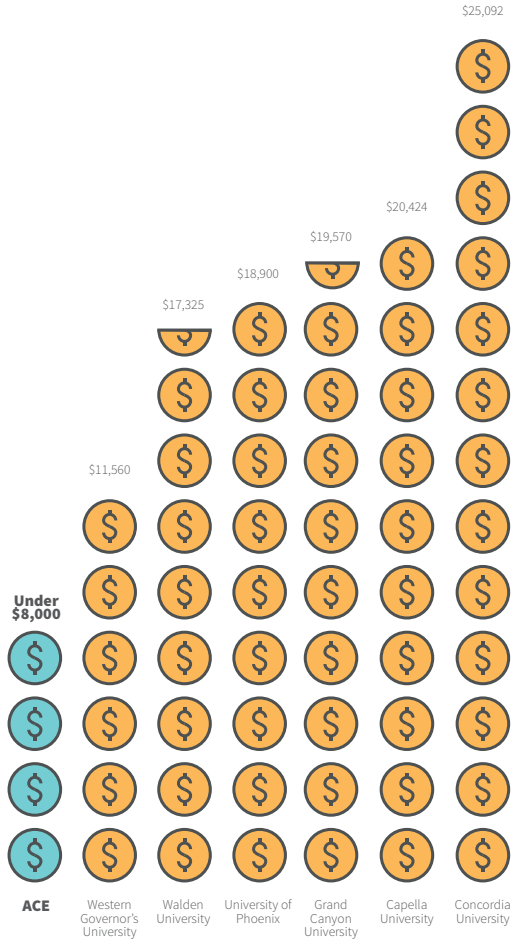
3.21.17 | learn more at **getSTEMcertified.com** | 800-531-0864

MASTERS AND DOCTORATE DEGREE PROGRAMS

Continuing Education with the American College of Education

The online Master of Education in STEM Leadership at American College of Education prepares educators to incorporate digital resources into the curriculum to enhance integrated science program education like STEM programs.

Through this program, candidates learn to promote skills in developing testable questions, establishing variables and controls, selecting data and data collection methods, and using tools to test hypotheses in ways that engage elementary, middle, and high school-aged students, leading to better student outcomes in STEM subject areas. Candidates should finish the program confident in their understanding of the content, and in leading other educators to discover the value of integrated learning.



Curriculum & Instruction

Degrees Conferred in the U.S.

*** Based on 2012-13 Conferred Degrees IPEDS data*
http://nces.ed.gov/IPEDS/datacenter

Course Plan

RES5323 Research Design and Application

ED5383 Principles of Integration

ED5023 Assessment Strategies

SCI5203 Foundations of Integrated Science Education

SCI5213 Engaging Diversity in the Science Classroom

SCI5223 Modern Learning and Integrated Science Education

SCI5233 Inventing and Reinventing Mathematics and Science Curriculum: Elementary, Secondary, and College Level

SCI5243 Creating an Environment for STEM Learning**

SCI5253 Building Scientific Understanding in Students

SCI5263 Applied Science and Engineering Practices**

SCI5091 Capstone Experience for STEM Leadership

** Individual course sequences will be finalized upon start of each new term*
*** Completed with the National Certificate for STEM Teaching*

UNDERSTANDING THE FIFTEEN STEM TEACHER ACTIONS

Guiding Principles and Domains

The 15 STEM Teacher Actions embedded within the National Certificate for STEM Teaching 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 for the National Certificate for STEM Teaching

- I Student Autonomy
- II Constructivism
- III Explicit/Reflective Methodology
- IV 21st Century Skill Building

Domains and Actions for the National Certificate for STEM Teaching

Creating an Environment for Learning

1. Improving Classroom Culture
2. Establishing Cooperative Learning
3. Connecting Learning Outside the Classroom
4. Integrating Technology

Building Scientific Understanding

5. Implementing Inquiry
6. Utilizing Assessment
7. Addressing Student Misconceptions
8. Facilitating Questioning & Discourse
9. Building Literacy in Science

Engaging Students in Science and Engineering Practices

10. Cultivating Scientific Investigations
11. Developing Engineering Solutions
12. Fostering Data Utilization
13. Implementing Project Based Learning (PBL)
14. Facilitating Claim Evidence Reasoning (CER)
15. Promoting Scientific Argumentation