



NSF ATE CCPI-STEM PROJECT

Faculty Role: Opportunities and Benefits

BACKGROUND INFORMATION

The National Science Foundation's Advanced Technological Education program (NSF ATE) was initiated in 1992 by Congress to provide funding to community colleges in support of STEM and workforce education. With a focus on two-year Institutions of Higher Education (IHEs), the ATE program supports the education of technicians for the high-technology fields that drive our nation's economy.

The National Science Board (2019) estimates that there are currently more than 16 million skilled technical jobs requiring an associate degree or similar level qualification, and the number of jobs requiring substantial STEM expertise has grown nearly 34% over the past decade. In addition to projected STEM labor shortages, there are significant racial and gender disparities in the technical workforce.

BENEFITS TO YOU, the FACULTY

When a college receives an NSF award, it gains immediate prestige, national prominence, and enhanced visibility with the business community, four-year partners, and professional associations. NSF ATE projects support a plethora of different programs and innovative ideas focused on curriculum, students, faculty professional development, collaboration, and diversification and provide prestige and recognition to faculty and the department. The benefits to faculty and to students are significant, including:

FACULTY DEVELOPMENT

- Participating in cutting-edge professional development, including workshops, conferences, and courses that lead to certifications.
- Being part of faculty designed activities that assist in showcasing innovation while building capacity.
- Participating in faculty externships to learn from industry experts and practicing technicians.
- Gaining regional and national visibility as leaders and innovators in community college STEM and workforce education.

CURRICULUM DEVELOPMENT

- Developing new programs and/or courses.
- Collaborating with colleagues from other disciplines or other colleges in revising current offerings and developing new ones.
- Collaborating with business and industry professionals to infuse current industry standards and/or certifications into courses and programs.
- Revising teaching methodologies to better serve all students.



COMMUNITY IMPACT

- Collaborating with 9-12 secondary education systems, university colleagues, and business and industry partners in the development of creative and successful career pathways that maximize student success.
- Creating partnership programs with business and industry to stimulate workforce development.
- Addressing community needs such as creating a more diverse workforce, helping to solve environmental and security issues, or assisting community groups with technology.
- Working with business and industry to increase the numbers of enrolled students by supporting the up- and re-skilling of the incumbent workforce and onboarding of new hires through credit courses.

STUDENT ENROLLMENT, RETENTION, AND COMPLETION

- Collaborating with 9-12 secondary education systems to recruit students to STEM and workforce programs and to offer joint courses and certifications.
- Offering leading-edge course content that attracts well qualified students to college programs.
- Working with business and industry to create clear pathways to excellent, well-paying, and satisfying jobs in high-demand STEM fields.
- Implementing innovations in the classroom experience that aligns with current and future business and industry practices.

FINANCIAL BENEFITS

- NSF funds can support professional development activities including travel that college faculty and secondary school teachers strengthen academic programs.
- Indirect costs generated from NSF award can be used by the college to support faculty time, faculty professional development, and/or departmental activities.
- Grant funds can support faculty time, purchase equipment and instrumentation, and address other critical needs for two-year college technician education.
- NSF ATE proposals do not require cost sharing.

In **SUMMARY** an NSF ATE award offers **FACULTY** opportunities for personal and professional growth, innovations, collaborations across disciplines and institutions, as well as a transformational career experience.

A new, undiscovered world of career-changing experiences and opportunities opened up for me, my students and community college after receiving a NSF new-to-ATE award. ~Dr. Elizabeth Hawthorne, PI, Cyber Service! Interdisciplinary & Experiential Education for Cyber Forensics Technicians

