

The National Science Foundation Advanced Technological Education (ATE) Pilot Initiative



Through this pilot initiative, community colleges in the Kansas City, Metro Denver, and Arkansas Delta WIRED regions will receive mentoring from experienced NSF-ATE grantees to enhance regional technical education.

Background

Science, Technology, Engineering, and Mathematics (STEM) have become increasingly central to U.S. economic competitiveness and growth. Long-term strategies to maintain and increase living standards and promote opportunity will require unprecedented coordinated efforts among public, private, and not-for-profit entities to promote innovation and prepare an adequate number of qualified STEM workers capable of translating knowledge and skills into new processes, products, and services.

Since its inception in 1992, the National Science Foundation's (NSF) **Advanced Technological Education (ATE)** program has been improving the productivity of American high-tech industries by growing the nation's technical workforce and developing best practices in technician education. Through NSF's competitive grant process, the program provides seed money to innovative community college educators to focus on specific ways to improve technician education. The grants support the development of educational materials, courses, and curricula; professional development for high school and college educators; and lab experiences, field experiences, and internships for students.

ATE Centers of Excellence – the flagships of the ATE program – maintain strong partnerships with employers and coordinate educational institutions – two-year colleges, four-year colleges and universities, and secondary schools – to equip students with key skills needed to excel in the high-tech workplace as well as provide pathways from high school to an associate degree to a bachelor's degree. The ATE Centers offer workshops and other training for faculty and serve as clearinghouses for exemplary instructional materials and teaching techniques in particular areas of technology.

The Department of Labor Employment and Training Administration's (ETA) **Workforce Innovation in Regional Economic Development (WIRED)** Initiative focuses on the role of talent development in driving regional economic competitiveness, increased job growth, and new opportunities for American workers. The WIRED Initiative supports innovative approaches to education and workforce development that go beyond traditional strategies, preparing workers to compete and succeed both within the United States and globally. In many of these efforts, collaboration to catalyze talent development for STEM-related fields is at the core of the regional strategy.



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Both NSF and ETA recognize the critical role that the ATE program and the WIRED Initiative play in developing the country's most valuable asset – its STEM talent. The agencies are forging a strategic partnership to strengthen and expand the STEM workforce pipeline to drive regional economic development. By connecting the ATE program's experience in preparing world class technicians with the STEM activities in select WIRED regions, this pilot effort will leverage the best work of each agency in workforce development. This partnership will not only accelerate regional transformation but ultimately provide better outcomes for workers and employers alike.

The ATE/WIRED Pilot Initiative

In this pilot, community colleges in three WIRED regions – Kansas City, Metro Denver, and Arkansas Delta – will receive small “special project” grants to collaborate with experienced ATE Center and project leaders to develop plans that will enhance each WIRED region's ability to provide science and engineering technician education. One or more experienced mentors from ATE grants will guide WIRED community college participants in all aspects of designing and managing projects, from structuring activities to implementing evaluation and dissemination plans. The ATE mentors will ensure that WIRED participants are able to research and obtain the resources from ATE Centers and projects that are the most appropriate for their particular college and WIRED region.

The process used in developing the ATE/WIRED collaborative projects will mirror the process used in developing competitive ATE grant proposals. Project development will be guided in ways that ensure that all factors critical to success (e.g., project management, evaluation, and sustainability) are given careful consideration. The process will incorporate two major milestones that parallel the ATE program's preliminary proposal deadline in the spring and formal proposal deadline in the fall. This time frame will facilitate proposal submission for potential NSF funding for community colleges that elect to pursue this opportunity.

WIRED participants pursuing ATE funding will benefit from receiving the type of feedback provided by the ATE proposal process, in which the preliminary proposals are peer-reviewed by teams of educators and industry representatives. Following the review process, written advice will be provided to help with the development of a stronger project plan, which may become a formal proposal later in the year. At the end of the year-long pilot, it is expected that competitively selected ATE/WIRED projects will begin implementation in mid-2008.



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