

**SUSTAINABLE NANOTECHNOLOGY: THE NSF ATE PROGRAM EDUCATING THE SKILLED TECHNICAL  
WORKFORCE**

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**Abstract:** The Advanced Technological Education (ATE) program focuses on the education of highly-qualified science and engineering technicians for advanced technology fields that drive our nation's economy. It promotes the improvement of STEM education of science and engineering technicians at the undergraduate and secondary school levels, and in the workforce. Because two-year public community and technical colleges provide most of the technician education in the US, two-year college educators have leadership roles in ATE initiatives. The partnerships that ATE grantees build with industry, business, government agencies, and between secondary schools, two-year, and four-year institutions support the Centers and projects remaining at the forefront of industry needs. ATE has a strong portfolio of Centers and projects supporting nanotechnology and microelectronics, and as the industry moves towards interdisciplinary and sustainable practices, the work of the Centers and projects shifts to support industry needs.

**Bio:** V. Celeste Carter received her Ph.D. in Microbiology from the Pennsylvania State University School of Medicine. She completed postdoctoral studies at the University of California at Berkeley. She joined the Division of Biological and Health Sciences at Foothill College in 1994 to develop and head a Biotechnology Program. She was the recipient of an NSF DUE award, which produced a set of case studies and associated laboratories with biotechnology industry partners. From 2001-2003 and 2007-2008, she served as a Program Director in the Division of Undergraduate Education (DUE) at the National Science Foundation (NSF). She returned to Foothill College following each of these rotations to resume her position as Director for both the Biotechnology and Bioinformatics Programs. Dr. Carter accepted a permanent program director position in DUE in 2009; she is the Lead Program Director for the Advanced Technological Education (ATE) Program in DUE. Dr. Carter also works on other programs in DUE and serves on several federal interagency working groups.