ATE Regional Centers

American Association of Community Colleges (AACC)
Monday, April 27, 2004
Elizabeth J. Teles (ejteles@nsf.gov)
Lead Program Director for Advanced Technological Education (ATE) (www.nsf.gov/ATE)
Division of Undergraduate Education
Purpose of ATE

• The ATE program promotes improvement in the education of science and engineering technicians at the undergraduate and secondary school level and the educators who prepare them, focusing on technicians for high-technology fields that drive the nation’s economy.
Number of Awards per State in ATE’s 10 Year History
Total number of Awards 539
Advanced Technological Education Program

Projects which focus on one or more aspects of:

- Curriculum and Educational Materials Development;
- Program Improvement;
- Institution-wide Reform of Technician Education
- Technical Experiences for Students;
- Professional Development. for Educators;
- Instrumentation and Laboratory Improvement; or
- Research

- Centers of Excellence – National, Regional, Resource
- Articulation Partnerships
ATE Centers of Excellence (25)

- National Center
- Regional Center
- Resource Center

[Map showing locations of centers across the US]
Regional Centers

- Manufacturing Technology or Information Technology
- Regional focus – serves the needs of industry in a region
- Collaboration among colleges and secondary schools
- Collaboration with industry in the region
- Activities include curriculum adaptation, faculty and teacher development, establishment of partnerships, and recruitment and retention strategies, all directed toward regional workforce needs
- Clear, measurable impacts on quantity and quality of students for the workforce
Regional Centers for Manufacturing or Information Technology Education

Purpose is to produce highly qualified workers who meet today’s industry needs within a particular geographic region. Activities should include:

• Academic program reform
• Professional development for college faculty (including adjunct faculty) and K-12 teachers
• Capacity building (recruitment, retention, and placement of students)
ATE Centers of Excellence

Regional Centers

AIM Institute (Omaha, NE)  Information Technology
College of the Canyons (Santa Clarita, CA)  Manufacturing
CC of Baltimore County (Essex, MA)  Manufacturing
Lexington CC and KY Comm. & Tech. Coll. (Lexington, KY)  Information Technology
Moraine Valley CC (Palos Hills, IL)  Information Technology
Nashville Tech CC (Nashville, TN)  Information Technology
Penn State University (University Park, PA)  Nanofabrication
University of Mass. (Boston, MA)  Information Technology
Center for the Advancement of Systems Security and Information Assurance (CASSIA)

Moraine Valley Community College DUE 0302612

• Focusing on homeland security in a 5 state region
• Collecting, adapting, and enhancing curricula in cybersecurity
• Offering AAS degrees and certificates in IT security and data assurance and a BS program in computer science
• Providing professional development for college faculty and internships for students
• Increases educational strength in IT at 2- and 4-year colleges, secondary schools, and industry
• Creates real world scenarios based on industrial needs and uses them as basis for instruction (0202397 *The Case Files*)
• Bases cases on learning strategies developed at the Center for Learning and Teaching at Vanderbilt
• Includes students in educational institutions and re-careering workers
ATE Regional Center for Nanofabrication Manufacturing Education

Penn State University, University Park  DUE 0101635

• Established to meet increased demand for associate degree level workers in nanofabrication

• Partnership involves 15 community colleges, comprehensive universities, secondary schools, private industry, and Penn State Nanofabrication Facility

• New activities include creating curricula and strengthening capacity at the 15 community colleges, providing professional development for educators and industry personnel, and promoting awareness of careers
Boston Area Advanced Technological Education Connections (BATEC)

Univ. of Massachusetts, Boston   DUE 0302912

• Involves three community colleges, a large number of high schools, and University of Massachusetts Boston
• Builds a seamless regional IT education system
• Uses NWCET Standards to align course content with industry needs and ensure consistent, current, and flexible IT education.
New Opportunity: Planning Grants for Institution-Wide Reform of Technician Education (Continued)

- developing life-long career and educational pathways for technicians;
- adapting to educational forces outside the college such as e-learning and changing workplace expectations;
- building leadership faculty leadership potential;
- dealing with fiscal constraints; and
- incorporating global issues and international technological and business practices into technical programs.
New Opportunity: Planning Grants for Institution-Wide Reform of Technician Education (Continued)

Proposals require a letter of commitment from the Chief Academic Officer at the institution. Participation by academic administrators and significant faculty involvement on the leadership team are essential and expected.
Program Impact from Western Michigan Evaluation of ATE

• 125 of 139 surveyed reported (out of about 260 active awards)
• 70,000 students in at least one ATE class
• Students are 35% female, 11% African American, and 12% Hispanic
• About 1/3 of students are employed as technicians currently
• Over 15,000 faculty and teachers were involved in workshops or other activities to assure that their knowledge and skills are current
WAYS TO PARTICIPATE

• Grant Holder
  – Principal Investigator
  – Member of Project Team
  – Member of a coalition
  – Member of an Advisory Board
  – Test Site

• User of Products

• Participant in Workshops and Symposium

• Reviewer of Proposals
Information and Inquiries

• DUE Information System
  – Email undergrad@nsf.gov
  – Phone 703-292-8670
  – Fax 703-292-9015

• DUE and ESIE Web Sites
  http://www.ehr.nsf.gov/EHR/DUE/
  http://www.ehr.nsf.gov/ehr/esie/

• DUE Project Information Resource System
  http://www.ehr.nsf.gov/PIRSWeb/Search/

• DUE and ESIE Mailing Addresses
  – NSF, DUE Room 835 (or ESIE Room 885), 4201 Wilson Boulevard, Room 835, Arlington, VA 22230