ADVANCED TECHNOLOGICAL EDUCATION

http://www.ehr.nsf.gov/ehr/DUE/programs/ate/
ATE Focus

All activities should demonstrably contribute to ATE Program’s central goals.

- Producing more science and engineering technicians to meet workforce demands.
- Improving the technical skills and general science, technology, engineering, and mathematics (STEM) preparation for these technicians and the educators who prepare them.
Advanced Technological Education (ATE)

- Assures that students acquire appropriate backgrounds in mathematics and science
- Supports development of science and engineering technology programs and courses with the assumption that students have appropriate backgrounds
- Works on partnerships among 2-year colleges, secondary schools, 4-year colleges and universities, business, industry, and government

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Advanced Technological Education Programs

- *Projects* which focus on one or more aspects of:
  - Curriculum and Instructional Material Development;
  - Adaptation and Implementation
  - Teacher and Faculty Preparation and Enhancement;
  - Technical Experiences for Students; or
  - Instrumentation and Laboratory Improvement.

- *Articulation Partnerships*

- *Regional Centers* in Information Technology and/or Manufacturing

- *Centers of Excellence*
Intellectual Merit: Review Criteria Related to Institutionalization and Sustainability

- Are the goals and objectives, and the plans and procedures for achieving them worthwhile, well-developed, and realistic?
- Is the rationale for selecting particular activities for development of adaptation clearly articulated?
- Are the plans to evaluate appropriate and adequate?
- Is the evidence of institutional support clear and compelling?
- Is the project supported by adequate facilities, resources, and departmental commitment?
Broader Merit: Review Criteria Related to Institutionalization and Sustainability

- Are the proposed activities integrated into the academic program(s) of the participating institution(s)?
- What is the potential for the project to produce widely used products that can be disseminated through commercial or other channels?
- Are plans for producing, marketing, and distributing products appropriate and adequate?
Guide for Improving Sustainability: ATE Program Evaluation

- See http://ate.wmich.edu
- Sustainability Checklist
- Practices to Enhance Sustainability
- Mechanisms for Attaining Sustainability
- Evaluation of projects relative to sustainability
Sustainability Checklist

- Wide participation and clear shared purpose
- Abundant information available and used to improve program and reward effort
- Needed resources, resource mobilization
- Knowledge and skills training for faculty and teachers implementing the program
- Decision making/ distributed power
- Coordination with current initiatives
- Administrative support
- Use of promotion and marketing
Wide Participation

Develop abundant collaborative relationships and a shared project vision among project staff and collaborators

- Find roles for all appropriate organizations
- Make sure everyone gains from success of project
- Clearly articulate goals
- Periodically revisit goals and reaffirm consensus
Use of Promotion and Marketing

Market the project’s value and target resources to help the project be flexible, hold out in lean times, and take advantage of unexpected opportunities.

- Train students in the program for a variety of situations to enhance their employability and the marketability and flexibility of the program.
- Gain name recognition.
- Anticipate future needs and act on them.
- Plan in advance to take advantage of strategic opportunities.
Fit the project into other institutional goals and initiatives. Use existing institutional processes to meet project goals.

- Choose well-respected faculty members with institutional power as principal investigators.
- Involve administrators in supporting and finding resources for the programs.
- Capitalize on other funding and grant programs (e.g. Tech Prep) within your institution.
Some Mechanisms for Attaining Sustainability

- Obtain support from sponsoring institution to support all or some of the activities.
  - Retain activities for a project but lower work scope.
  - Move forward with a subset of activities that were most successful.
  - Change activities slightly to better fit existing priorities.
- Commercialize materials and processes (e.g. professional development)
- Obtain other grants.
- Obtain support from collaborators.
- Disseminate to other institutions.
Evaluation for Sustainability

- Do you have a long term vision and goal for project?
- Do you have written commitments describing contributions and timelines for collaborations and partnerships?
- Do you have contingency plans for key personnel and partnership changes?
- Have you specified methods and a timeline to use to collect data about your project to use with project staff and collaborators?
Evaluation for Sustainability

- Do you have a written plan for incorporating the project within the institution?
- Do you have strategies to obtain additional funding and support beyond time of original grant?
- Do you have a project promotion and marketing plan for raising awareness of the project and updating and disseminating the products?
Division of Undergraduate Education
Anticipated Closing Dates FY 02

- Course, Curriculum, and Laboratory Improvement (CCLI)
  - EMD and ND: June 6, 2002
  - A & I: December 4, 2002
- Advanced Technological Education (ATE)
  - Preliminary Proposals: April 24, 2002
  - Formal Proposals: October 16, 2002
- Science, Technology, Engineering, and Mathematics Talent Expansion Program: June 3, 2002
- Science, Technology, Engineering, and Mathematics Teacher Preparation (STEMTP): October, 2002 *
- Assessment of Student Achievement (ASA): August 20, 2002 *

* Anticipated