Before You Start: Are you ready to move up?

☐ Develop ideas to move up such as (i) involving additional institutions, (ii) including other areas of the college for broader impact, (iii) expanding or further developing programs such as recruiting more and more diverse students, incorporating industry needs, enhancing curriculum based on industry feedback, improving skills sets of students, including certifications or other credentials, and/or providing faculty development.

☐ Read the current program solicitation.

☐ Discuss your idea with others who need to be involved.

☐ Consider the timing of your next grant proposal. It is not necessary to complete your current grant to apply for additional funding; however, you should be far enough into your current project that you have enough results to justify additional support.

☐ Seek advice from your prior mentor or from one of the ATE Mentoring programs.

☐ Discuss your ideas with appropriate college administrators (e.g., department chairs and deans).

☐ Develop a one-page description that you can share with college personnel, potential partners and an NSF program officer.

The Rationale: How will you make your case?

☐ Describe a local and regional need for technicians with the skills and knowledge this project will provide. Emphasize local, regional, and state-specific needs for technicians in the region(s) served by the college(s) rather than broader national needs. Include information about the number of relevant technician jobs gathered from local, regional, and state sources.

☐ Engage with business and industry in meaningful ways. Reviewers expect you to actively involve business and industry people who commit to support the work of the project and associated technician education programs.

☐ Support your project idea and plan with literature references on technician education, but be concise and brief. Describe how you will build on what you have accomplished and/or what other ATE projects have accomplished. Leverage the work of ATE Centers or projects, include references to that work, and describe how the new project will differ from, build on, and add to the body of knowledge about technician education.

☐ Align your project with the strategic goals of your institution and economic and workforce development initiatives of the community.

☐ Think about and discuss the broader impacts of your project beyond the grantee institution.
Results of Prior Support: What have you done before?

☐ Include if any PI or co-PI named on the proposal has received prior NSF support (including an award with an end date in the past five years), or has any current funding (including a no cost extension). If NA, you should make a statement regarding no prior support.

☐ Include information about both successes and lessons learned in prior project(s) that will be addressed in the new work. Describe results of prior NSF support in terms of both what was accomplished and its effectiveness and impact. This should not be a repeat of your prior project abstract. This section is about what was actually accomplished, written in present and past tense, not what you said you were going to do and accomplish in a previous project.

☐ In describing results of prior support, address both the intellectual merit and broader impacts of past awards.

☐ Include information about the number of people impacted

➢ Faculty (e.g., earning certifications or other credentials, incorporating materials into technician programs, using new teaching methodologies)

➢ Students (e.g., taking classes, graduating, being employed in industry, earning certifications, serving in internships and apprenticeships)

☐ Qualitative data is also useful. For example, discuss

➢ not only how many students graduated but also the jobs for which students were hired and employer satisfaction with those hired.

➢ not only how many faculty participated in professional development (PD) but also what impact this had on their students.

➢ not only recruitment activities for high school students but also how the activities have impacted the college technician programs and how secondary teachers were involved.

➢ not only industry involvement but also how their input was incorporated into the college technician programs.

Partners: Who should be involved?

☐ Situate the project in the context of local and regional conditions and provide names and affiliations of people who will work with the project including a description of their roles and contribution.

☐ Include commitment letters from external partners such as secondary schools, other community colleges, and industry partners. Commitment letters must describe specific individual or organizational roles in the project vs. vague offers of support. These letters should be unique, not duplicates of each other.

☐ Document college commitment. A letter from an upper level college administrator such as your president, chief academic officer, or academic vice president that describes the commitment to the project and how it fits into the strategic goals of the college will strengthen the proposal.

☐ If secondary institutions are to be involved, describe how their involvement will create or serve as a pipeline to the college technician program. Gaging the success of the pipeline should be part of the evaluation.
The Work Plan: What are your project goals and objectives, the activities to accomplish those goals, and your planned deliverables and outcomes?

- Describe in concise terms that reviewers can clearly understand what the project plans to do. This is likely to be the longest section of the proposal.
- Make sure that your goals and objectives are S.M.A.R.T (Specific, Measurable, Achievable, Relevant and Time-based). Activities and deliverables should be realistic for the resources requested or available and reasonable for a 3-year project.
- Provide details about the professional development that faculty will require to accomplish the project goals (e.g., timing, compensation, topics, provider, certifications).
- If activities are included to broaden participation, describe specific strategies to be used based on prior work, successes in other ATE projects, or successes identified in the literature.
- If equipment is to be requested, a description of that equipment and its importance to the project should be included in the project description.

The Management Plan: Who is going to do the work?

- Right-size your project team. The larger the project, the more people you will likely need to achieve project goals.
- Carefully consider staffing requirements, including PI, Co-PI, Senior Personnel, other personnel, and contractors in view of the scope of work and available budget.
- Include a short description about the role of each person to be involved in the project and the capabilities of the project team for conducting the project.
- Provide compensation for college faculty to work on the project rather than only hiring other people to do most of the work. Remember that the ATE program allows overload pay for faculty doing grant work as long as the compensation follows established college policy for faculty compensation.
- If other people are to be compensated (such as recruiters, curriculum developers, consultants), describe their contributions to the project in clear terms and include appropriate compensation in the NSF budget.
- If others at the college will be involved in the project but compensation is not requested for them, include names and positions in the management plan and in the Facilities, Equipment, and Other Resources Form.
- If industry people are to be involved on Advisory Committees or Business and industry Leadership Teams, include their names and affiliations in this section or in the Rationale Section and attach commitment letters in Supplementary Documents for your ATE proposal.
Budget and Other Resources: What funding do you need to complete the project?

☐ Include a budget request and detailed budget justification that is appropriate for the work to be accomplished.

☐ Prepare the budget justification in narrative form and labeled to match the NSF categories. It is often best to prepare the budget justification narrative first, which makes it easier to then complete NSF budget templates.

☐ If overload pay is requested, include a statement in the budget justification about college policies that allow this.

☐ If consultants are included, NSF requires that the compensation request be fully justified with a scope of work. Daily or hourly rate and time commitments must be included.

☐ Include participant support funds only for faculty and teachers at other institutions (or per program solicitation) or for students at your college who are project participants and will benefit from project activities. Whereas, faculty and students at your institution who are working on your projects should be included in Parts A and B of the budget. Faculty and people at other institutions who are providing services to the project are usually included in Section G, most often as consultants.

☐ Describe concisely in the Facilities, Equipment, and Other Resources form other resources or people available to help accomplish the goals of the project.

☐ Do not request funding for things not supported by the ATE program such as scholarships for students.

Evaluation: How will the project know if it has been successful and what adjustments may be needed during implementation?

☐ Include a detailed and project-specific evaluation plan that is tied directly to the project goals, objectives, activities, and deliverables.

☐ Specify what parts of the project will be evaluated and when. Remember that good evaluations determine not only if activities are conducted but what impact they have.

☐ Include the name of a credible evaluator if possible and work with this evaluator in proposal preparation.

☐ If your college requires that evaluation services be contracted via a bid process, describe the process, and outline the qualifications expected for the evaluator.
Dissemination: How will you let others know about your accomplishments? Who needs to know?

- Describe how you will share project information within your college and with your partners.
- Describe how you will share your accomplishments locally with businesses and industries, schools, other workforce development organizations, and nearby community colleges.
- Describe how you will share your accomplishments more broadly. Examples include
  - sharing with partners and having partners share with others.
  - hosting workshops or other events as part of your project plan where you will invite other educators to learn more.
  - exhibiting or making presentations at state meetings of community colleges, national meetings that attract technician or related STEM educators, and national conferences of industries or professional organizations.
  - publishing outcomes in articles or through peer-reviewed publications including conference proceedings.
- Describe how you will share curricular materials and events via ATE Central and with other ATE projects. Plan a web presence for your project keeping in mind the availability of a cost-free microsite provided by ATE Central.

Sustainability

- There is no expectation that everything in a grant-funded project can or will be sustained, but some elements should be continued for a successful project to have lasting value.
- Discuss what you anticipate will remain and/or be supported from the work of the project beyond the duration of the grant. For example, project activities that can/will beinstitutionalized such as
  - improved/increased industry involvement, curriculum that has been integrated into a program, improved teaching methodologies, new faculty credentials, certifications, or other updates to faculty knowledge and skills; or,
  - Sustained by alternate financial resources including industry paid internships, college support based on increased enrollment in programs, industry support for some aspect of the grant-developed program such ask software or equipment.

Check before you submit: What might improve your submission and help make your case?

- Ask someone with reviewing experience to read the proposal for content, organization, spelling, grammar, and clarity.
- In the project summary, do not use curly apostrophes, quotation marks, bullets, or other special characters. FastLane only recognizes ASCII and will convert special characters to ASCII characters such as question marks. The project description and other proposal components can be uploaded as PDF files which avoids this issue.
Check before you submit: What might improve your submission and help make your case (continued from previous page)

☐ NOTE: In 2022, submit ATE proposals using FastLane (recommended) or grants.gov (not recommended). FastLane will be replaced by research.gov in the future so watch for updates.

☐ Familiarize yourself in advance about current PAPPG requirements, including
  ➢ required formats for current and pending support, biographical sketches, and collaborators and other affiliates forms.
  ➢ allowable font, font sizes, and proposal margins. (Hint: Consider readability. Even though NSF allows some 10-point fonts, many of these are difficult for reviewers to read. If used, limit 10-point fonts to tables and charts and include white space to make reading easier.)
  ➢ other current requirements such as including a separately labeled broader impacts section in the project description.
  ➢ page limits for project summary (max 1 page) or project description (max 15 pages).

☐ Do not focus the project in ways that do not align well with the ATE Program. Examples include projects with a focus on
  ➢ an engineering, computer science, or other STEM 2 + 2 articulation program.
  ➢ STEM programs or students generally, rather than technician education specifically.
  ➢ K-8 students.
  ➢ high school STEM camps that do not describe how they will be a conduit into college technician programs.

✔ Items to Avoid: The following are likely to have your proposal returned without review

☐ Vague support letters rather than commitment letters.

☐ Including anything in the Supplementary Documents section that is not specifically allowed by the ATE Solicitation.

☐ Omission of required forms such as the Data Management Plan.

This material is based upon work supported by the National Science Foundation Grant No. 1840856 and No. 2032835. Any opinions findings and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

This document was prepared to support the Moving Up! Strategies for Preparing YOUR Next ATE Project Proposal presentation on March 11, 2021 and updated for the February 2, 2022 webinar. Presenters:
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