



## MENTOR-CONNECT QUICK REFERENCE GUIDE

### Preparing a Proposal Budget and Budget Justification for Your NSF ATE Proposal

Walking the NSF Budgeting Walk:  
NSF ATE Proposal Budget  
and Budget Justification

MENTOR  
CONNECT

Live Webinar  
May 22, 2024  
2:00-3:30 pm

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**This reference guide will** help you complete the NSF budget form and develop a budget justification for your proposal to the National Science Foundation's Advanced Technological Education Program.

**It is based on an May 2024 webinar**, presented by Mentor-Connect PI Elaine Craft, Co-PI Pamela Silvers, and Mentor Fellow Leader Louis McIntyre.

A webinar recording is available in the Mentor-Connect Resource Library ([www.Mentor-Connect.org](http://www.Mentor-Connect.org)).

You will use an online platform to submit your proposal. Mentor-Connect strongly recommends using Research.gov, which meets the specific needs of ATE proposals and offers invaluable Help Desk support and online compliance checks. The other available platform is Grants.gov, but it does not provide all required forms; and, unlike Research.gov, it will not alert you if your proposal is incomplete. Also, Grants.gov does not enforce NSF deadlines, thus proposals submitted near the due date may be sent to NSF after the deadline has passed.



These are important issues, because a proposal that is incomplete or late will be returned by NSF without being reviewed. Also, if your proposal is funded, all grant management functions, such as accessing payments and submitting annual reports, must be carried out in Research.gov. If you submit your proposals using that platform, all your NSF grant activities will be coordinated.

If your institution was registered in Fastlane (a previous NSF platform that was phased out in 2022), your registration should have automatically transported to Research.gov. Verify this, but it should not be necessary to register your college or previously registered individuals again. Your passwords will also be unchanged. If you haven't worked in the NSF system in the past year or so, you will likely be asked to register and set a new password when you log in on Research.gov.

The budget form is a template in Research.gov. Information entered on this form becomes your budget - a separate but integral part of your overall NSF grant proposal. Research.gov automatically generates year-by-year budget forms for you, and totals are calculated by budget category and by year. The budget justification is not a template. You will need to develop this document "from scratch." In the budget justification, you need to explain and provide details about each amount entered in the budget

form (including, in some cases, how the amount was calculated) and why each expense relates to your project plan. The budget justification is uploaded as a separate document to support your proposal.

The key thing to remember is that *your budget must clearly align with the scope of work of the project*. The budget requests the funds needed to enable the project to be implemented as planned. The project description outlines the scope of work for which funding is needed.

## Accessing the Budget Form

Before you can access the budget form, your Authorized Organizational Representative (AOR) must acquire a college ID and register your college and the project’s senior personnel in Research.gov. If you are not sure who will be included as senior personnel, have your administrator register all who *may* be included. This will avoid the delays if you need to add individuals at the last minute.

Log in at Research.gov and select Proposals on the opening screen. Indicate that you intend to prepare a new full proposal, as shown below.

Proposal Sections	Last Updated	Compliance Status <a href="#">(Key)</a>
<b>Required</b>		
Cover Sheet		Form not checked
Project Summary		Document unavailable for check
Project Description		Document unavailable for check
References Cited		Document unavailable for check
Budget(s)		Form not checked
Budget Justification(s)		Document unavailable for check
Facilities, Equipment and Other Resources		Document unavailable for check
Senior Personnel Documents <a href="#">i</a>		Document unavailable for check

This will take you to the “control page” from which you can access all components of the proposal.

Click on the Budget tab and you will come to the screen shown below, which has the name of the grantee organization – i.e. your institution – and the name of your project’s PI.

If you click on Manage Personnel and Subaward Organizations, you will see your institution's unique identifier number (UEI), address, and the PI's name.

Click on the tab with the name of your institution to access the budget template, shown below.

Budget(s)

[Manage Personnel and Subaward Organizations](#)

Prime Organization			
Budget for:	Principal Investigator	Total Requested Amount	Compliance Status [Key]
Florence-Darlington Technical College	Pamela J Silvers	\$0	Form not checked

  

Subaward Organization(s)		
Budget for:	Subaward Requested Amount	Compliance Status [Key]
There are currently no Subaward Organizations. You may add a Subaward Organization from Manage Personnel and Subaward		

Budget (Prime Organization)  
For Florence-Darlington Technical College

**\$0**  
Total Requested Amount

Expand all rows | Collapse all rows      Video: How to Work on a Proposal Budget

Years in Budget: 1      Add Year      Delete Year

Section	Year 1	Total Funds
<b>A. Senior Personnel [Manage]</b>		
Pamela J Silvers (PI)		
<b>B. Other Personnel</b>		
Postdoctoral Scholars	0	
Other Professionals	0	
Graduate Students	0	
Undergraduate Students	0	
Administrative/Clerical	0	
Other	0	
Total Salaries and Wages for Senior and Other Personnel (A-B)		
<b>C. Fringe Benefits</b>		
Total Salaries, Wages & Fringe Benefits (A-C)		
<b>D. Equipment</b>		\$0
+ Add Equipment		
<b>E. Travel</b>		\$0
US, territories, and possessions		
	\$	0
Foreign		
	\$	0
<b>F. Participant Support Costs</b>		\$0
Number of Participants		
	0	
Stipends		
	\$	0
Travel		
	\$	0
Subsistence		
	\$	0
Other		
	\$	0
<b>G. Other Direct Costs</b>		\$0
Materials and Supplies		
	\$	0
Publication Costs/Documentation/Distrib		
	\$	0
Consultant Services		
	\$	0
Computer Services		
	\$	0
Subaward		
	\$	0
Other		
	\$	0
<b>H. Total Direct Costs (A-G)</b>		Year 1 (A-G)
		\$0
Indirect Costs		
Section	Year 1 Rate x Base	Total Funds Requested
<b>I. Indirect Costs</b>		\$0
+ Add Indirect Cost Item		
<b>J. Total Amount Requested (H + I)</b>		Year 1 (H + I)
		\$0

Save      Preview/Print      ?      Cancel

## Developing the Budget

Mentor-Connect recommends that you first build your budget in an Excel spreadsheet. Organize the spreadsheet with budget categories and alphabet letters and numbers to match the NSF budget template and set up your budget justification narrative the same way. (The budget justification should be created in a Word document and uploaded separately as a PDF file in Research.gov.) Building your budget spreadsheet and preparing your budget justification will be a back-and-forth process as your project plan evolves and you obtain more precise cost information. As you work, keep an eye on indirect costs and on how this expense is impacting the bottom line. Use Excel formulas and keep good notes as you develop your spreadsheet.

When you have a complete, or nearly complete, Year One budget in your spreadsheet, transfer the dollar amounts to the online budget template. You will see that each section is a hot link that you will activate to work on the categories in that section.

Note that the only SAVE command is located at the bottom of the budget form. Save your work after you complete each section so that you do not risk losing it when you leave the budget. Confirm that the totals that are calculated automatically in the template match your spreadsheet totals! (Notice that you also have a print option on this part of the form.)

After completing and saving the Year One form, click on “Add Year” at the top of the page to access the forms for Years Two and Three, and follow the same process. If your budget will be similar from year-to-year, you can choose to have information from a previous year transferred to the new budget form. If you do this, be very careful to make all edits that are applicable to the subsequent year’s work and to keep the budget aligned with your Budget Justification.

Once budget forms are completed for each year of the project, a cumulative budget is generated automatically. The total budget amounts for each year may vary, but the cumulative total budget may not exceed the limit for the type of proposal you are submitting. For example, the Year 1 budget may be larger than that for Years 2 and 3 if you need to purchase equipment that will be used throughout the project.

If you plan to include subaward organizations, they must be selected and added separately. After you do this, the subawardee organization will also appear on this page.

The budget template depicts all budget categories that are available for requesting funds. Sections A through G are Direct Costs – personnel and other expenses that are specific to your project. These Direct Cost items will be determined by you. Indirect Costs, however, will be calculated based on a specific subset of Direct Costs using a pre-determined rate. Note that Indirect Costs can have a significant impact on your overall budget!

*Your budget must clearly align with the project’s scope of work.* The budget is a request for funds that will enable the project to be implemented as planned. The project description outlines the scope of work for which funding is needed. The two must work in concert, and consistency is important.

## Budget Categories

NSF budget categories will differ from budgets you work with at your college. It is important to understand how NSF defines each category of expense so that, *once funded*, you can work with your business office to develop a clear crosswalk between the NSF budget categories and the college accounting codes.

### A. Senior Personnel

This category includes the Principal Investigator (PI), Co-PIs, and people with leadership roles in the project who are not Co-PIs who are employees of the grantee institution. (If they do not work for the institution, they will be included elsewhere in the budget.) You may include as many as four Co-PIs, but smaller ATE budgets can seldom support more than two or three people in this category.

Only individuals who receive compensation from the grant are to be included in the budget. People who work on the project without compensation may not be listed in the budget with a zero-dollar amount. Their contributions can be included and described elsewhere.

Note that institutional grant professionals and high-level administrators should not be included as Senior Personnel and should not receive compensation in the budget, even if they will contribute to the work of the project. (The Mentor-Connect webinar *Preparing Forms for Your NSF ATE Proposal* explains how to include individuals who will contribute to the project without compensation. A recording and a Quick Reference Guide are available in the Resource Library.)

As you itemize Senior Personnel costs, you will not enter names directly in the template. Instead, you will select the names from the list of people who have been previously registered in Research.gov. You may add or delete individuals selected from this list at any time prior to proposal submission. Individuals who are not registered cannot be included in the budget. If you find that people you need to include as Senior Personnel are not registered, it may take some time to register them. The Authorized Organizational Representative (AOR) for your institution must be available to do so, since no-one else may register them. So do not delay registering personnel in Research.gov because you are not yet sure exactly who will be included in your budget.

Any organization that will receive a subaward from your grant must also be registered in Research.gov. In addition, all Senior Personnel included in the subawardee budget - which is separate from your main project budget - must be registered in Research.gov by the subawardee organization.

#### Personnel Direct Costs

- A. Senior/Key Personnel
- B. Other Personnel
- C. Fringe Benefits

#### Additional Direct Costs

- D. Equipment
- E. Travel
- F. Participant Support
- G. Other Direct Costs
- H. Total Direct Costs

#### Indirect Costs

- I. Indirect Costs
- J. Total Amount Requested

NSF requires that you report time for grant-funded Senior Personnel and certain Other Personnel in “person months.” Errors are often made by prospective grantees who do not understand exactly what this means.

See the column labeled “months” in this personnel budget. These are person-months, as calculated in Example 1, below. (Only the PI is listed in Section A, but most budgets include Co-PIs.)

Section	Year 1		Total Funds Requested
	# Personnel	Months	
<b>A. Senior Personnel [Manage]</b>	1	0.00	\$0
Pamela J Silvers (PI)		<input type="text" value="0.00"/>	<input type="text" value="\$ 0"/>
<b>B. Other Personnel</b>	0		\$0
Postdoctoral Scholars	<input type="text" value="0"/>	<input type="text" value="0.00"/>	<input type="text" value="\$ 0"/>
Other Professionals	<input type="text" value="0"/>	<input type="text" value="0.00"/>	<input type="text" value="\$ 0"/>
Graduate Students	<input type="text" value="0"/>		<input type="text" value="\$ 0"/>
Undergraduate Students	<input type="text" value="0"/>		<input type="text" value="\$ 0"/>
Administrative/Clerical	<input type="text" value="0"/>		<input type="text" value="\$ 0"/>
Other	<input type="text" value="0"/>		<input type="text" value="\$ 0"/>
<b>Total Salaries and Wages for Senior and Other Personnel (A-B)</b>			\$0
<b>C. Fringe Benefits</b>			\$0
			<input type="text" value="\$ 0"/>
<b>Total Salaries, Wages &amp; Fringe Benefits (A-C)</b>			\$0

Example 1 explains how to budget a faculty PI whose salary is \$74,000 for a 9-month contract.

During the academic year, she will spend the equivalent of 1 day per week working on the grant, or 1/5 of a work week which is 20% of her time. Her compensation will be 20% of her 9-month salary.

She will also work full time on the project for 2 months in the summer under a separate contract.

### Example 1

**Faculty with \$74,000, 9-month academic year contract and separate contract for summer work**

	Year 1		Total Funds Requested
	# Personnel	Months	
1	3.80	\$31,244	\$31,244
<input type="text" value="3.8"/>		<input type="text" value="\$ 31,244"/>	\$31,244

**How to budget for 1 day per week + 2 months summer work?**

- **ACADEMIC YR:** 1 day per 5-day week (or 1 course release where normal teaching load is 5 courses) = 1/5 or 20% of the person’s time = 20% of 9 months or 1.8 months →  $0.20 \times \$74,000 = \$14,800$
- **SUMMER:** 2 months full-time work on grant in summer = 2.0 months, →  $\$74,000/9 = \$8,222/\text{month} \times 2 = \$16,444$
- Total annual **budget request** = **\$31,244** (\$14,800 + \$16,444)
- Total **person months** = **3.8** (1.8 + 2.0)

18

The person-months associated with the academic year will be 20% of 9 months or 1.8 person-months. The grant budget for this portion of her salary will therefore be 20% of \$74,000 or \$14,800.

For her two months of full-time summer work on the project, she will receive the same rate of compensation. (If summer work is compensated differently at your institution, you must follow college guidelines to calculate appropriate compensation.) Dividing the 9-month contract salary of \$74,000 by 9 results in a monthly compensation of \$8,222. Multiply this by the 2 months of summer work, and the summer component of the total grant-funded compensation will be \$16,444. The person-month entry in the budget form will be the sum of the time spent during the academic year and the summer, or 1.8 + 2.0 person-months, for a total of 3.8 person-months. The budget entry will be the sum of the academic year and summer compensation calculations, \$14,800 + \$16,444, which is \$31,244.

One additional note about faculty time on grants: NSF guidelines in the Proposal and Award Policies and Procedures Guide (PAPPG) refer to a 2-month limit on faculty time. ATE-funded projects do not have this limit, but all requested time must be well justified when you explain the scope of work for each budgeted faculty member.

Example 2 explains how to budget Other Professionals in the Senior Personnel category. In this case, an individual in a 12-month staff position will serve as an Internship Coordinator.

His annual compensation is \$60,000 and he will be working on the project the equivalent of 1 day per week year-round, which is 20% of his time. This is a simpler calculation since the total budget request is 20% of \$60,000 or \$12,000. The person-months come to 20% of 12 months or 2.4 person-months.

### Example 2 - Other Professionals

**Staff (e.g., internship facilitator with \$60,000, 12-month annual contract) or Adjunct Faculty**

B. Other Personnel	1	\$12,000	\$12,000
Postdoctoral Scholars	0	\$ 0.00	\$0
Other Professionals	1	\$ 2.4	\$12,000

**How to budget for 1 day per week, year-round?**

- 1 day per 5-day week = 1/5 or 20% of the person's time  
= 20% of 12 months or 2.4 months, → 0.20 x 60,000 = \$12,000
- Total annual budget request = **\$12,000**
- Total person months = **2.4**

19

The Other Professionals section is also where you may request funds for adjunct or part time faculty or other college employees who will be paid for their project-work time to complete tasks (vs. producing a specific work product for fixed-price compensation such as developing a course module or teaching a course).

Other Senior Personnel budget Issues:

- Information in the annual budgets and in the proposal must match, and the amounts requested must be fully explained and justified in your Budget Justification.
- The amount budgeted for an individual must align with institutional salaries or pay rates for that individual and with institutional policies and procedures for compensation. Individuals may not be paid more - or less - than their normal compensation for comparable time and work. It is preferable that grant work be part of a person's full-time job; however, overload pay is possible.
- No faculty member or other employee should experience a pay reduction while working on a grant. Faculty who routinely teach an overload may substitute overload teaching with grant work to maintain their customary compensation. Faculty may also receive extra compensation for taking on grant work in addition to a full-time teaching load as long as college policy and procedures for overload pay are followed. Overload pay for grant work must be explained in the Budget Justification, and the college's compensation policies and procedures for overload pay must also be referenced. The policy and procedures should be specific to all college personnel, not only to someone working on a grant. NSF's specific language about overload pay is available online in the Mentor-Connect Resource Library.
- Time allocation for Senior Personnel is reported in several places in the proposal: in the Current and Pending Support forms, the Budget, and the Budget Justification. Make certain that the information you provide throughout the proposal is consistent!
- Be reasonable and very specific in the Project Description and the Budget Justification about the work individuals will do for their compensation. Reviewers will consider the responsibilities noted in the Project Description and raise questions if any individual appears to be overcompensated for too little work or undercompensated for an extensive scope of work.

## **B. Other Personnel**

This is a slightly different category of personnel who work on grants, as shown below. Note that compensation and reporting requirements vary among the three groups of Other Personnel.

Post-Docs and Other Professionals (Adjunct Faculty, Technicians, Programmers, Web-page Developers, other technical support personnel, etc.)

- Show person-months on the budget form (unless they are paid a fixed amount for work product)

Graduate & Undergraduate Students

- Generally paid at hourly rates
- Max 20 hours per week during the academic year, 40 hours per week in the summer
- Provide only the total grant-funded compensation per year in the budget

Secretarial/Clerical Staff

- Only if not covered by indirect costs
- Full or part time
- Annual or hourly basis
- Provide only total grant-funded compensation per year in the budget

Adjunct faculty or permanent faculty who are not part of the project leadership team fit into this category if they will be working on the project or if the college will be paying them with grant funds to provide release time for full-time faculty who are working on the project.

Post-Docs and graduate students may be listed as Other Personnel, but this would be an unusual situation in an ATE-funded project at a two-year college.

In the Other Personnel section, it is not necessary to name persons who will do the work. If you know who they are, however, include names and qualifications in your Budget Justification. Whether or not you name the individuals, the scope of work for any position that is included in the Budget should be described in the Budget Justification, along with details about the amount of time that is allocated, and the compensation associated with that time.

Secretarial or clerical support may be included only in very limited, specific circumstances. In most cases, indirect costs are designed to cover such expenses. To be an eligible direct-cost expense, such services must clearly support the work of the grant and be distinct and distinguishable from functions that are normally performed by the college. See the NSF Proposal & Award Policies & Procedures Guide (PAPPG), Chapter II, D.f.i (b), for specific information on this topic.

Note that among the Other Personnel, only Post-Docs and Other Professionals must have person-months listed in the budget forms. For others, you will only report the number of individuals in each category and the amount of total compensation requested per year.



Example 3 shows how to budget someone who works part time in the Other Personnel category, under the last heading (other, red arrow).

Here a lab assistant will work 6 hours per week during the fall and spring semesters for \$15/hour. Semesters are 15 weeks long, so she will be paid for 30 weeks, which results in a \$2,700 total budget request per year.

**Example 3 - Other**  
**Other (e.g., lab assistant paid \$15/hr., 6 hrs. per week, for total of 30 weeks over 2, 15-week semesters)**

B. Other Personnel		2	\$13,800	\$13,800
Postdoctoral Scholars	0	0.00	\$ 0	\$0
Other Professionals	1	2.4	\$ 12,000	\$12,000
Graduate Students	0		\$ 0	\$0
Undergraduate Students	0		\$ 0	\$0
Administrative/Clerical	0		\$ 0	\$0
Other	1		\$ 1,800	\$1,800

**How to budget for "Other" in Other Personnel category?**

- Calculate total payment. \$15/ hr. x 6 hr./wk. X 30 wks. = \$2,700
- Total annual budget request = \$2,700

Some things to remember:

- Faculty who will be compensated for work on your project but do not work for your college (known as the grantee institution) should be budgeted as consultants.
- Faculty who work for your college belong in sections A or B of the budget. Those who have leadership roles are budgeted in Category A as PI, Co-PI, or Other Senior Personnel.
- Faculty who work on the project but do not have leadership roles are budgeted in one of the subcategories in Category B, Other Professionals.
  - If compensation is based on work time, they belong in the subcategory Other Professionals, and their compensation is shown in person months.
  - If compensation is a fixed amount for a specific, finite product such as teaching a course or developing a curriculum module, they belong in the Other subcategory.
- When possible, include the names and qualifications of the individuals who will serve as Other Professionals in your Project Description and Budget Justification. This will help justify the requested compensation.

### C. Fringe Benefits

Once you have entered all personnel salaries and wages, you will need to determine fringe benefits for the requested salaries and wages for the following personnel categories:

- Senior Personnel (PIs, Co-PIs, others in leadership roles who work for the college)
- Other Professionals (adjunct faculty, technicians, programmers, etc.)
- Secretarial/Clerical Staff
- Undergraduates (summer months only)
- Casual/Temporary Employees
- NOT graduate students

The budget will only allow you to insert one number for the total fringe benefits to be paid on the salaries and wages included in sections A & B. Include an explanation of your fringe benefit request in your Budget Justification, clearly stating the rate that was used and how it was determined. (Your grants professional, HR department, or Business Office will be able to provide the fringe benefits rate that is used by your college.)

If fringe benefit rates vary for different personnel, you will need to use an average percentage on your budget form since it only accommodates the total amount of personnel compensation for the year and a single percentage from which a total fringe benefit amount will be automatically calculated.

The fringe benefit expense per individual should be pro-rated based on the percent of that person's

time which is supported by the grant. If the grant supports 10% of a salary, it should support 10% of total fringe benefits for that individual.

It is not common for graduate students to work on ATE projects, but if your project does include graduate students, note that you may not include their compensation when calculating fringe benefits for personnel.

## D. Equipment

NSF allows you to budget for equipment and instrumentation costs (such as laboratory or field instrumentation, and scientific or industrial machinery), including the cost of shipping and any necessary modifications, attachments, and accessories. In this section, you will list any equipment purchased with an acquisition cost of over \$5,000. Equipment costing less is classified as Materials and Supplies. An item that costs \$4,000 would be listed as Equipment if modifications, attachments, or shipping costs bring the total to more than \$5,000.

Click on Add Equipment in the budget template to list specific equipment purchases and costs.

Section	Year 1		Total Funds Requested
	# Participants	Funds	
D. Equipment		\$0	\$0

+ Add Equipment

D. Equipment \$30,000

1. 2 Robots \$ 30,000

+ Add Equipment

Note that:

- All equipment and instrumentation purchases must be:
  - Necessary to support project activities
  - Not otherwise available and accessible
  - Acquired in accordance with your college's normal practices
- All equipment purchased with grant funds must have a service life of over one year.
- If your college classifies equipment differently than NSF, use the NSF definition for this budget. For example, your college may consider a robotic device to be equipment. However, if robotic devices purchased for use in your project cost less than \$5,000 each, they should be budgeted as Materials and Supplies rather than as Equipment.
- NSF funds may not be used to support costs that would normally be incurred if you did not have a grant, such as laboratory upgrades, routine instructional needs and teaching aids (like projectors), or general utility items such as office equipment and office furniture.
- Your Budget Justification must explain why the project needs each item of equipment, how it will be used, and how it will impact student learning outcomes.
- There is no maximum limit on equipment expenditures, but they must be reasonable in relation to your total budget. For small New-to-ATE grants, equipment costs should not dominate the budget.
- NSF expects that you will ask for any available educational discounts from equipment suppliers and document them in the Budget Justification.

## E. Travel

Your travel budget includes necessary expenses by project personnel, such as conducting field work and attending meetings/conferences associated directly with the work of the project or the dissemination of results. Other college personnel who are not project staff may be included in this category if they are travelling to help accomplish project objectives.

Note the following restrictions:

- This budget category is NOT for travel by consultants, national visiting committees (applicable only for ATE Centers), advisors, or speakers. Their travel costs should be included in their fees or budgeted under Other Direct Costs (reference [https://www.nsf.gov/pubs/1994/nsf942/gpgchap2/two\\_c7d.htm](https://www.nsf.gov/pubs/1994/nsf942/gpgchap2/two_c7d.htm)). Travel and subsistence for project “participants” should be budgeted in the Participant Support category.
- For mileage rates and per diem restrictions, use the guidelines established by your college. NSF expects your budgeted travel allowances to be consistent with your institutional policies.
- You must book the most economical form of travel, such as economy class airfare.
- If your project objectives require foreign travel, you must travel on U.S. carriers if they are available. For budgeting purposes, travel in the United States and its possessions, to Canada, and to Puerto Rico is considered domestic travel. All other travel, including Mexico, is foreign.
- Travel expenses must be reasonable in terms of the number of trips and the amount budgeted for each one.
- Federal funds may never be used for alcoholic beverages or entertainment!

Explain all travel expenses, based on careful cost estimates, in the Budget Justification. For travel to conferences, find reasonable current hotel rates and fares (economy class only!), and estimate the increases in those costs by the time of the conferences. Be sure to budget for meals, ground transportation, and other predictable costs at reasonable rates.

Your travel budget must include the costs of attending the annual ATE Principal Investigators Conference in Washington DC every October. If the proposal you submit in 2024 is funded, your first conference attendance will be in 2025. ATE will provide complementary registrations, individual hotel rooms for three nights, and several meals (currently one dinner and two breakfasts and lunches) for the PI and one other member of the project team. Your budget must cover the cost of travel and of meals not provided by the conference. If you need to spend extra nights at the hotel to accommodate travel to or from the conference, or to arrive early for a pre-conference workshop, you may include the additional cost in your budget with an explanation in the Budget Justification. (The 2025 ATE Conference will be held October 29-31. The hotel rate to include in your budget is \$290 per night plus tax for any nights your team may require over and above the two comp rooms for three nights.)

## F. Participant Support Costs

If you plan to offer conferences, meetings, training workshops, or other short-term instructional or information-sharing activities as part of your project, the costs to support participants at those events will be budgeted as participant support.

Participants cannot be project personnel. They are individuals, not usually from your institution, who receive services or training provided by your project. Participants can be required to complete training activities and provide input to be eligible for stipends and/or travel support.

If faculty are the participants in such events, it is important to explain in the Project Description how the experience will impact their students. Note that travel costs for project personnel employed by the grantee college who participate in such events are not to be listed in this category, but in category E, Travel.

Enter the expenses for Participant Support under four categories on the budget form: Stipends, Travel, Subsistence, and Other related expenses. Provide the number of participants and the total cost in each category. Note that the travel must add value to your project. The costs must also be reasonable and limited to the days of attendance at the event, plus the actual travel time required to reach the event location by the most direct route available. Check your institution’s policies on relevant cost items. You should follow college guidelines with respect to travel such as meal reimbursement policies.

F. Participant Support Costs		\$0	\$0
Number of Participants	<input type="text" value="0"/>		
Stipends		\$ <input type="text" value="0"/>	\$0
Travel		\$ <input type="text" value="0"/>	\$0
Subsistence		\$ <input type="text" value="0"/>	\$0
Other		\$ <input type="text" value="0"/>	\$0

**IMPORTANT:** You may not transfer funds among line items within Participant Support or move funds out of this category without approval by your NSF Program Officer. A request for approval, with an explanation of your reasoning, should be made in Research.gov under Notifications and Requests. An email exchange or a telephone conversation with your Program Officer should be scheduled prior to submitting a request.

Calculate participant support costs and explain them in the Budget Justification:

**Stipends:** High school teachers and students usually receive daily stipends when they participate in project activities, and thus it is an expectation. Stipend payments are appreciated but most often are optional for college faculty for whom travel support may be more important. Determine the amount that each participant will receive per day and multiply it by the number of days and the number of participants.

**Travel:** Research the anticipated travel costs for participants who will attend your events/activities and select economical and direct-route options. Explain the purpose of the travel and your cost calculations in the Budget Justification. Remember that this travel line item is for participants only.

**Subsistence:** Estimate the cost of meals (without alcoholic beverages) and housing per person per day and multiply by the number of days and the number of participants. If meals or lodging are furnished without charge or at a nominal cost to the participants, you must reduce the subsistence amount accordingly. (For example, if breakfast and lunch are included as part of your training activity, you may only reimburse the participants for the cost of dinner.)

**Other:** List any other expenses incurred for the participants and explain how they are relevant (e.g., preparing/printing materials, providing hand-held GPS devices).

## G. Other Direct Costs

Other direct costs include expenditures for Materials and Supplies, Publication, Consultant Services, Computer Services, Subawards and other. Enter the total for each of these categories in Section G and itemize them in the Budget Justification.

	\$0	\$0
Materials and Supplies	\$ 0	\$0
Publication Costs/Documentation/Distrib	\$ 0	\$0
Consultant Services	\$ 0	\$0
Computer Services	\$ 0	\$0
Subaward:	\$0	\$0
Other	\$ 0	\$0

**Materials and Supplies:** Materials and Supplies include necessary project-specific items. Any equipment that costs up to \$5,000 is included in this category, while equipment costing more than \$5,000 is listed under D, Equipment. (If 30 pieces of instrumentation cost \$200 per unit, the \$6,000 cost would still be budgeted under Materials and Supplies since the cost per unit is under \$5,000.)

Materials and supplies may include items such as laboratory chemicals and project-specific office supplies. Remember that NSF does not permit purchases of office furniture or general office supplies that are not used exclusively for the project.

**Publication Costs/Documentation/Distribution:** The grant may cover costs related to documenting, preparing, publishing, and sharing research findings, products, and materials developed by the project.

**Consultant Services:** This is where you will budget for people who work on the project but are not project personnel. Consultants are contractors (such as external evaluators) who are paid a fee for their services. The project description must explain their contributions to the project, and that information must be aligned with the consulting expenses described in the Budget Justification. Include names and affiliations of consultants in both places and provide detailed job descriptions for individuals who have not yet been identified. When you plan to hire consultants, be sure to abide by any procurement rules at your college or in your state, such as requirements for bidding a consultant contract only after receiving grant funds.

Consultants' rates of compensation must be based on their regular rates of pay. The only other allowable consultant expense is travel. The Budget Justification must include specific information about the consultant's time commitment to the project and associated compensation. For example: a \$6,000 expense might consist of 12 days at \$500 per day or 60 hours at \$100 per hour, plus \$1200 for travel expenses. Travel expenses should then be detailed (e.g., mileage, airfare, lodging, meals).

**Computer Services:** This category typically refers to costs for computer-based retrieval of scientific or technical data and contracted services for web design and data analysis that is necessary to support or inform your work.

- The cost of computer services may be included in your budget only if your institutional policy is to bill computer services as direct costs and, if provided by the institution, at your college’s established computer service rates.
- General-purpose computer equipment and software are not allowable expenses.

**Subawards:** Subawards are used to fund a discrete portion of work that is carried out by another organization. Most subawards are part of relatively large projects. They are less common in projects funded in the *Small Grants for Institutions New to ATE* track.

- Like all awardee organizations, any organization that receives a subaward must be registered in the System for Award Management (SAM). If your project has a subaward, note that the registration process can take two to four weeks.
- After the proposal is created, add subaward organizations under “Manage Personnel & Subaward Organizations” and they will appear as a line item on the budget form.
- You must submit a separate Budget and Budget Justification for each subawardee.
- The total from the subaward budget form will auto-populate on the main budget form.

**Other Direct Costs:** Any direct costs not previously identified must be included under Other Direct Costs and itemized in the Budget Justification. Examples include conference registration fees, costs associated with preparing exhibits or presentations, and travel by project advisors.

## H. Total Direct Costs

When you have entered all costs in Sections A through G, total direct costs will be automatically calculated for you.

H. Total Direct Costs (A-G)	\$0	\$0
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## I. Indirect Costs

Indirect costs help support the business operations and other functions of your institution. Your college must include in the budget and recover indirect costs at the federally approved rate that applies to your institution at the time the grant award is made. If your proposal has a subaward, the subawardee’s budget must also include indirect costs at an established rate for that organization (which is likely to differ from the grantee institution rate).

Ask your business office whether your college has established an indirect cost rate; and, if so, what the current rate is. Indirect costs rates can change over time, so be certain that the one used in your proposal is current, and that it will not expire before the ATE due date. The rate that is in place *when your grant is awarded* will apply for the life of the grant, even if the college negotiates/receives a different rate during that time. Before a grant award can be made to your institution, you will be required to provide written verification of that rate.

Note that the full indirect cost rate must be applied in your budget. An institution that offers to accept less than the current rate in order to provide more funds for project work will be engaging in cost-sharing, which is prohibited by NSF.

Some colleges have a higher on-campus indirect cost rate and a much lower off-campus indirect rate. If this is the case at your college, ask whether your project activities qualify for the off-campus rate. (NSF allows the colleges to determine which rate to apply.)

NSF does not restrict the ways in which colleges allocate funds received as indirect costs. You may be able to negotiate for some of those funds to be used to support the project. For example, these funds could be used to pay for salaries or equipment that are not included in your budget. Such college support from indirect costs can be valuable, particularly if your indirect cost rate is so high that it is difficult to accomplish your goals with your budget.

**What if your college does not have an indirect cost rate?** Your business office may apply for a rate, but not until your grant proposal has been recommended for funding. The college will then be referred to the U.S. Department of Health and Human Services to negotiate the rate. (The Mentor-Connect Resource Library has information that can assist you in applying for a rate.) The costs to be included in the base for calculating your indirect costs will be determined at that time.

Note: A newly negotiated indirect cost rate will not apply to your current grant proposal, but only to future proposals. For the current proposal NSF requires that you develop your budget using the *de minimus* indirect rate, which is calculated as 10% of the allowable operating costs (also called the Total Modified Direct Costs). Note that the college may choose not to apply for a negotiated indirect cost rate. NSF allows the *de minimus* rate to be applied indefinitely for future projects.

**Calculating indirect costs:** The rate is the federally determined percentage to be applied, and the base is the total of the specific costs in the budget to which the rate applies.

Since the rate is pre-determined, you will only need to identify the base amount for the calculation.

Section	Year 1 Rate x Base	Total Funds Requested
I. Indirect Costs		\$0
1. <input type="text"/>	0.00% x \$ <input type="text"/>	\$0
	\$0 funds	
<a href="#">+ Add Indirect Cost Item</a>		

Your institution's indirect cost rate is typically a percentage of either personnel costs (salaries or, perhaps, salaries and fringe benefits) or allowable operational costs (all direct costs minus participant support, equipment, and subawards over the first \$25,000). The latter is called Total Modified Direct Costs.

Enter the base amount for each year on the budget form and the rate to be applied, without the percent sign. (If the rate is 30%, enter 30 with no decimal point.) The budget form will automatically calculate indirect costs using the rate and base numbers you have provided.

**IMPORTANT:** Pay close attention to the impact that indirect costs have on your project budget. This expense must be included in the total amount of the grant request. For a proposal in the *Small Projects for Institutions New to ATE* category, adding indirect costs that increase your budget beyond the allowable maximum will most likely result in your proposal being placed in the ATE Projects funding track, which is far more competitive. If this happens, it will significantly diminish your chances of being funded. If you use an Excel spreadsheet as you develop your budget, a formula that calculates and adds the appropriate indirect costs as you build your budget will enable you to keep track of your total grant request.



## J. Total Direct and Indirect Costs

We are getting to the bottom line! When you click on *Calculate* in Section J, the system will automatically determine your total Direct and Indirect Costs.

J. Total Amount Requested (H + I)	\$0	\$0
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## Completed Budget Forms

When you have repeated this process for Years 2 and 3, Research.gov will produce a concise budget for each year, as well as a cumulative budget with the three-year totals for each budget category, like the one shown here.

SUMMARY PROPOSAL BUDGET				Cumulative	
ORGANIZATION <b>Florence-Darlington Technical College</b>			FOR NSF USE ONLY		
PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR <b>Pamela Silvers</b>			PROPOSAL NO.		DURATION (months)
			AWARD NO.		Proposed
					Granted
A. SENIOR/KEY PERSONNEL: PI/PD, Co-PI's, Faculty and Other Senior/Key Associates (List each separately with title, A.7. show number in brackets)			NSF Funded Person-months	Funds Requested By proposer	Funds granted by NSF (if different)
			CAL	ACAD	SUMR
1. <b>Pamela Silvers - Principal Inv</b>			2.0		10,000
2.					
3.					
4.					
5.					
6. ( ) OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE)					
7. ( <b>1</b> ) TOTAL SENIOR/KEY PERSONNEL (1 - 6)			2.0		10,000
B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)					
1. ( <b>0</b> ) POST DOCTORAL SCHOLARS			0.0		0
2. ( <b>0</b> ) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)			0.0		0
3. ( <b>0</b> ) GRADUATE STUDENTS					0
4. ( <b>0</b> ) UNDERGRADUATE STUDENTS					0
5. ( <b>0</b> ) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)					0
6. ( <b>0</b> ) OTHER					0
TOTAL SALARIES AND WAGES (A + B)					10,000
C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)					2,500
TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)					12,500
D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEEDING \$5,000.)					
TOTAL EQUIPMENT					300
E. TRAVEL 1. DOMESTIC (INCL. U.S. POSSESSIONS)					1,800
2. INTERNATIONAL					0
F. PARTICIPANT SUPPORT COSTS					
1. STIPENDS \$ <u>5,000</u>					
2. TRAVEL <u>75</u>					
3. SUBSISTENCE <u>0</u>					
4. OTHER <u>0</u>					
TOTAL NUMBER OF PARTICIPANTS ( <b>25</b> )			TOTAL PARTICIPANT COSTS		5,075
G. OTHER DIRECT COSTS					
1. MATERIALS AND SUPPLIES					350
2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION					0
3. CONSULTANT SERVICES					8,000
4. COMPUTER SERVICES					0
5. SUBAWARDS					0
6. OTHER					50,000
TOTAL OTHER DIRECT COSTS					58,350
H. TOTAL DIRECT COSTS (A THROUGH G)					78,025
I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE)					
TOTAL INDIRECT COSTS (F&A)					5,000
J. TOTAL DIRECT AND INDIRECT COSTS (H + I)					83,025
K. FEE					0
L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K)					83,025
M. COST SHARING PROPOSED LEVEL \$ <b>0</b>			AGREED LEVEL IF DIFFERENT \$		
PI/PD NAME <b>Pamela Silvers</b>			FOR NSF USE ONLY		
ORG. REP. NAME*			INDIRECT COST RATE VERIFICATION		
			Date Checked	Date Of Rate Sheet	Initials - ORG

\*ELECTRONIC SIGNATURES REQUIRED FOR REVISED BUDGET



Note that Research.gov automatically helps you avoid errors when you fill out the budget forms by running compliance checks each time you use the SAVE command. Messages like this one will guide you to errors that require your attention.

- The form contains the following error(s) which must be fixed before submitting the proposal.**
- The indirect cost description must be specified

The command page, where you initiate all components of the proposal, also has a compliance check function that will help you ensure that you have addressed all components of the proposal.



Prime Organization			
Budget for:	Principal Investigator	Total Requested Amount ⓘ	Compliance Status [Key]
Florence-Darlington Technical College	Pamela J Silvers	\$83,025	❗ Error(s) will prevent submission

## BUDGET JUSTIFICATION

Since the budget form does not allow you to provide details about WHY you are requesting funds or HOW you determined the dollar amounts, you must prepare a Budget Justification that addresses these questions. It is a separate document that explains your expenses for each year of the project. Each expense must have a purpose that is tied to the project description. You are allowed up to 5 pages (which are not counted toward other page limits in the proposal). Small projects are not likely to need all 5 pages, but you need to be thorough in your explanation of costs. Remember that subawards have their own budgets and budget justifications.

NSF does not require a specific format, but it helps reviewers and Program Officers if you organize your Budget Justification using the same alphabet letters and descriptors that appear in the budget template. It is good practice to include all alphabet letters and subsections, even if you do not have a budget request in some of those categories. Where there is no request, you may state “none requested.” This makes it clear that you haven’t inadvertently overlooked something.

You must convert the Budget Justification (and all other documents) to PDF files before uploading. Within Research.gov, on the proposal “Control Page,” select Budget Justification to upload your document. After uploading, make sure that the formatting remains correct on the screen and when printed.

### Carefully align activities and corresponding budget amounts

- Ensure that the budget and project description are mutually supportive. Expenses must be discussed in the Project Description as well as explained in greater detail in the Budget Justification.
- Request funds for specific purposes and provide logical reasons for those expenditures.
- Research your costs and be specific about the amounts that are needed and the purpose for which they are needed. Do not request funds for “etc.” or unspecified expenses.
- When purchasing equipment, take advantage of available educational discounts.
- Remember that NSF requires low-cost travel options and prohibits expenditures on entertainment and alcoholic beverages.

**Your reviewers will be looking for answers to questions like:**

- How much money do you need for each budget item?
- If a total consists of several items (e.g., air fare, lodging, meals), how much is requested for each item? Have you made realistic estimates of future costs?
- For whom do you need funds? Personnel, participants, consultants?
- What will these people do to contribute to the project? With what compensation? Over what period of time?
- What items do you plan to purchase and why? How will the items or equipment be used in project activities to benefit students or participants?

**Avoid mistakes! The most common budget justification errors are:**

- Travel costs are not fully justified or incorrectly placed in the budget. Explain why you are traveling and what will be accomplished. Provide a breakdown of travel costs. Trips to conferences solely for dissemination, other than the ATE PI Conference, are usually considered more appropriate later in a project after you've had time to accomplish something. (Be careful of placement when you budget travel for project personnel employed by the college, consultants, and participants!)
- Expenses are not adequately explained. Justify every amount you request. Show that you have done the research and made the calculations necessary to make your request as precise and realistic as possible.
- The justification is hard to follow. (Organize it alphabetically, using the section and category titles that align with the budget form.)
- Time, rate of compensation, and responsibilities are not provided for consultants. Specify the rate of pay by hour or day, and the total hours or days of work. Include a scope of work and be clear about what the consultants will provide for the requested compensation.
- Overload pay for full-time faculty is not explained. Describe the institutional overload policy. Identify who will be paid for how much overload, for what time period and for what scope of work.)
- Items in the Materials and Supplies category are not clearly identified. Provide a list of specific materials and supplies that you anticipate purchasing and the estimated cost per item. Indicate how each item will support the project.
- Part-time faculty are included as Consultants or Participants instead of as Other Personnel.

**Sample Budget Justification**

Below you will find an example of a narrative budget justification, with paragraphs that describe costs using the same letters and headings as those on the budget form.

Sample Technical College (Sample Tech) requests \$288,951 from the National Science Foundation over the course of a three-year grant under the Small Grants for Institutions New to the ATE Program. Sample Tech requests \$99,375 in year one; \$98,693 in year two; and \$90,883 in year three.

Grants funds will be used in the following manner:

**A. Senior Personnel (Year 1 = \$17,334; Year 2 = \$17,334; Year 3 = \$17,334; Total = \$52,002)**

The PI, A. Instructor, is a 9-month employee. Due to the specialized skills and certifications required to teach her courses, course reduction is not an option. In each year of the grant, she will receive a stipend equivalent to 12.5 percent of her normal work schedule in the Fall and Spring semesters and one month in the Summer. This has been approved by the departmental Dean and the College's Vice President of Finance and Administrative Services. Ms. Instructor will be implementing and managing the grant project, which will include but not be limited to supervising the two Power of Us Ambassadors, meeting with the grant's advisory board, and planning monthly Tech Tuesday meetings, fall and spring recruitment events, Taste of Industry events, and Summer Camps.

The Co-PI, M. Colleague, is a 12-month employee. She will receive a stipend for her grant participation. Her primary tasks under the grant will be to assist with the Taste of Industry events and Summer Camps.

**B. Other Personnel (Year 1 = \$18,000; Year 2 = \$18,000; Year 3 = \$18,000; Total = \$54,000)**

(4) *Undergraduate Students:* Undergraduate students will serve as Power of Us Ambassadors. As Ambassadors, they will facilitate open lab hours in the makerspace, serve as mentors for other female students, and assist with monthly Tech Tuesday meetings, fall and spring recruitment events, Taste of Industry events, and Summer Camps. The program will be staffed by two Ambassadors per semester (fall, spring, and summer). They will be paid \$14 per hour and work 15 hours a week for 16 weeks in the fall/spring semesters and 8 weeks in the summer.

(6) *Other:* During the Power of Us Summer Camp, nine-month instructors from the targeted programs will assist with camp events. Nine-month employees, other than the PI and co-PI, will receive a \$400 stipend for helping with the camp. Twelve-month college employees will also be participating with the camp but will be doing so as part of their regular summer workload.

**C. Fringe Benefits (Year 1 = \$9,182; Year 2 = \$9,182; Year 3 = \$9,182; Total = \$27,546)**

PI A. Instructor's involvement in the grant is equivalent to 12.5 percent of her normal work schedule, or 1.125 ACAD months, for the fall and spring semesters. Her contribution during the summer semester will be 1 ACAD month. Her yearly fringe benefits under the grant will be \$4,987.62. Co-PI M. Colleague's work will be equal to 0.5 CAL months. Her yearly fringe

benefits under the grant will be \$1,640.80. The benefits were calculated by the College's Business Office at 40 percent.

FICA (7.65%) will be paid out of the grant for Power of Us Ambassadors and summer part-time personnel. This equates to yearly costs of \$1,101.60 for Ambassadors and \$480 for part-time summer personnel.

**D. Equipment**

Not applicable to the proposed project

**E. Travel (Year 1 = \$9,090; Year 2 = \$9,090; Year 3 = \$9,090; Total = \$27,270)**

In each of the three years of the grant, the PI and Co-PI will attend the ATE PI Conference, Hi-Tec and State Computer Instruction Association (SCIA). The cost for the ATE PI Conference are estimated to include: \$875 airfare; \$50 baggage fees; \$75 ground transportation; \$268 hotel (night before conference); \$82 subsistence. The total cost for the ATE PI Conference is \$1,350 per person.

For Hi-Tech the cost is estimated to be: \$875 airfare; \$50 baggage fees; \$75 ground transportation; registration \$190; \$1,250 hotel (four nights of conference and night before); \$205 subsistence. The total cost for Hi-Tech is \$2,645 per person.

Costs for attending SCIA are: registration \$60, hotel \$375 (3 nights); \$114.90 subsistence. This is a total of \$550 per person.

Subsistence has been calculated at the state rate.

**F. Participant Support (Year 1 = \$6,090; Year 2 = \$6,090; Year 3 = \$6,090; Total = \$18,270)**

(1) *Stipends*: Each secondary school employee who attends the Taste of Industry will receive a stipend of \$125. Approximately 30 participants will attend each summer. (Year 1 = \$3,750; Year 2 = \$3,750; Year 3 = \$3,750; Total = \$11,250)

(3) *Subsistence*: The College has determined that subsistence costs are an essential component for Taste of Industry, Summer Camps, and Tech Tuesdays. At each event, presentations will be given during mealtime. The estimated costs for each event are provided below.

Taste of Industry: This will be a yearly, all-day event and breakfast and lunch will be provided. It is estimated that 30 participants will attend. Breakfast will be provided at the cost of \$8 per participant and lunch at \$12 per participant. (Year 1 = \$600; Year 2 = \$600; Year 3 = \$600; Total = \$1,800)

Summer Camp: This will be a 5-day, all-day event and breakfast and lunch will be provided each day. It is estimated that there will be 20 participants. Breakfast will be provided at the cost of \$8 per participant and lunch at \$12 per participant. (Year 1 = \$1,500; Year 2 = \$1,500; Year 3 = \$1,500; Total = \$4,500)

Tech Tuesdays: Current students will attend monthly meetings that will include guest speakers, peer mentoring, and hands-on learning. Approximately 20 participants are expected at each of the 8 meetings per year (160 total attendees per year). Snacks will be provided at the cost of \$30 per meeting. (Year 1 = \$240; Year 2 = \$240; Year 3 = \$240; Total = \$720)

**G. Other Direct Costs (Year 1=\$30,645; Year 2=\$30,025; Year 3=\$22,925; Total=\$83,595)**

(1) *Materials and Supplies:* (Year 1 = \$21,645; Year 2 = \$18,525; Year 3 = \$11,425; Total = \$51,575)

Materials and supplies will be purchased to be used in the makerspace during Taste of Industry, Summer Camp and Tech Tuesdays. The following will be purchased:

Virtual Reality (VR) Kits: These include a laptop, Oculus Rift virtual reality bundle, headset, storage case, and VR software. A total of 5 will be purchased but spread over three years: 2 each in Years 1 and 2, and 1 in Year 3. Each kit costs \$4,700. CareerLabsVR software licenses will also be purchased each year for \$4,700. This software will allow students to receive safe but realistic training on activities they may need in their careers, such as stick welding, construction welding, robotics welding operator, robotics, and wiring. New careers are added each year. Training on how to use the VR kits (at a cost of \$2,000) will be needed in the first year. (Year 1 = \$16,100; Year 2 = \$14,100; Year 3 = \$9,400; Total = \$39,600)

Raspberry Pi Kits: These include SparkFun Raspberry Pi 3B+ starter kits, SparkFun Tinker kits, sensors, relays, transistors, and diodes. The kits will be used to explore networking, programming, and the Internet of Things (IoT), create relays and circuits, and otherwise inspire participants to experiment with networking and electrical activities. Ten kits, at a cost of \$222 per unit, will be purchased in Year 1. (Year 1 = \$2,220; Total = \$2,200)

Wireless Routers: These will be used to show how to set up wireless routers for secure wireless client access. Ten routers will be bought in Year 1 for \$125 each. (Year 1 = \$1,250; Total = \$1,250)

Virtual Access: The College is making contingency plans to account for pandemic-related disruptions to the program. In case the virus is continuing to make in-person events unsafe during the grant period, Power of Us staff will implement virtual programming. In Year 1, two webcams and two microphones, at a cost of \$400, will be purchased. Zoom subscriptions will be purchased each year at the current cost of \$175. (Year 1 = \$575; Year 2 = \$175; Year 3 = \$175; Total = \$925)

3D Printer: In Year 2, a 3D printer will be purchased. This will allow participants to print 3D objects that they have created. In addition to being useful learning and prototyping

tools for those in the targeted programs, the 3D printer will be an excellent marketing tool at recruitment events and a memorable hands-on activity for Taste of Industry and Summer Camp participants. (Year 2 = \$2,400; Total = \$2,400)

Supplies: Necessary materials and supplies include display boards for presentations, promotional items, printing costs, postage, flash drives, banners, and supplies for hands-on labs. Each event (Taste of Industry, Summer Camps, and Tech Tuesdays) has been budgeted for \$500 each year. An additional \$350 has been allocated in years two and three for 3D printer filament. (Year 1 = \$1,500; Year 2 = \$1,850; Year 3 = \$1,850; Total = \$5,200)

- (3) *Consultant Services:* (Year 1 = \$7,500; Year 2 = \$7,500; Year 3 = \$7,500; Total = \$22,500)

An external evaluator will be contracted to facilitate data analysis and report creation. Due to the College's purchasing thresholds, the contract for the evaluator must be put out for bids.

- (6) *Other:* (Year 1 = \$1,500; Year 2 = \$4,000; Year 3 = \$4,000; Total = \$9,500)

Funds are being requested to develop marketing materials to spread awareness of both Power of Us and the targeted programs. In Year 1, these efforts will focus on creating print materials, including brochures and flyers. In Years 2 and 3, the College will continue to produce print materials but will also add professionally produced videos to its marketing offerings. In the fall and spring, funds will be used to advertise the recruiting events.



The webinar and this Quick Reference Guide share information extracted by Mentor-Connect from NSF publications and from Mentor-Connect communications with NSF ATE Program Officers and grantees. All opinions expressed are those of the Mentor-Connect project Webinar presentation team. Mentor-Connect is supported by the National Science Foundation Grant No. 2227301.