

MENTOR-CONNECT TUTORIAL

PREPARING A BUDGET AND BUDGET JUSTIFICATION FOR YOUR NSF ATE PROPOSAL

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

Live Webinar
March 29, 2023 - 2:00 pm

Featuring
Research.gov
updates

MENTOR CONNECT

SOUTH CAROLINA ADVANCED TECHNOLOGICAL EDUCATION

TECH

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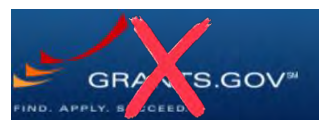
This tutorial will guide you through development and online completion of budgets and budget justifications that are required for grant proposals to the National Science Foundation's Advanced Technological Education Program, with a specific focus on the *Small Projects for Institutions New to ATE* funding track.

A correctly prepared and well-justified budget will make your proposal more competitive. Mentor-Connect will help you avoid errors as you prepare this important part of your proposal.

This tutorial is based on the webinar shown on this slide, which is available as a recording in the *Find a Resource* section of the Mentor-Connect website (www.Mentor-Connect.org).

You will be submitting your proposal using an online platform. Mentor-Connect strongly recommends that you use Research.gov, which meets the specific needs of ATE proposals and offers invaluable Help Desk support and online compliance checks.

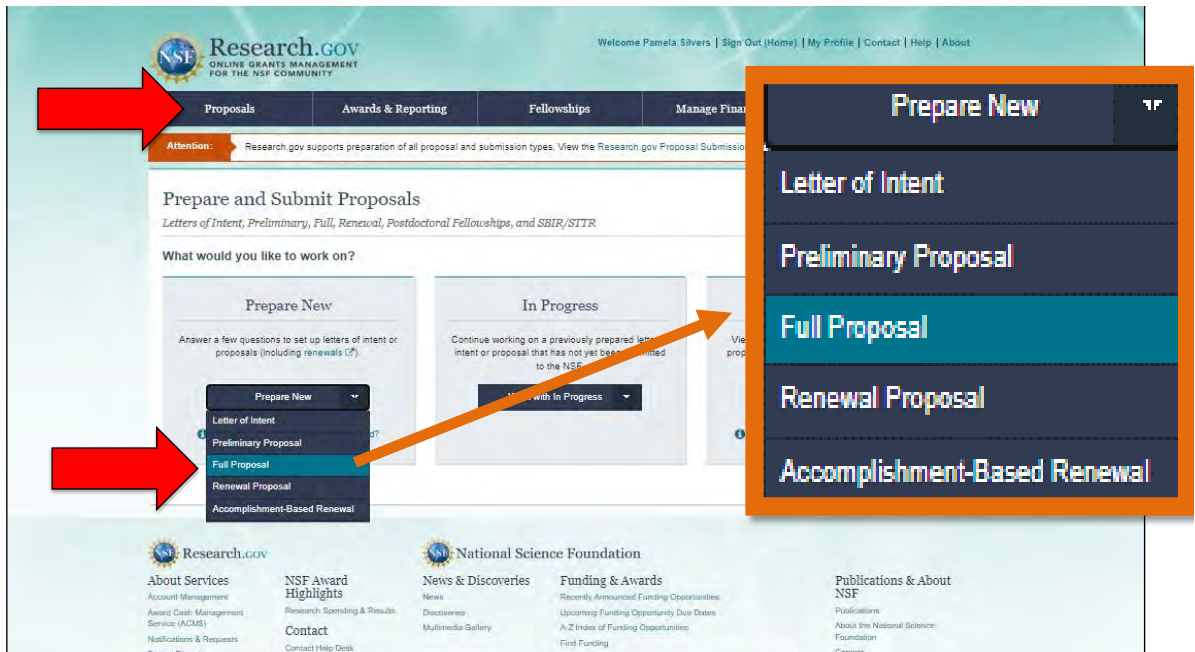
If you have submitted proposals in the past on Fastlane.gov, note that it was phased out in 2022. The other available platform is Grants.gov, but it is not well suited for ATE proposals. It does not provide all required forms, and unlike Research.gov, it will not alert you if your proposal is incomplete. Also, Grants.gov does not adhere to NSF deadlines, and 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.



Before you can access the budget forms, 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 *might* be included. This will avoid the delays if adding individuals at the last minute.

If your institution was previously registered in Fastlane, your registration will have been transported to Research.gov and it will not be necessary to register your college or previously registered individuals again. Also, the password you used for Fastlane provides access to Research.gov if it is current. (If you haven't worked in the system in the past year, you will likely be asked to set a new password.)

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. The list of relevant forms will appear on the “control page” on the next screen that you will see when a new proposal is initiated. Select Budget(s).



Proposal Actions	Proposal Sections	Last Updated	Compliance Status [Key]
<ul style="list-style-type: none"> Share Proposal with SPO/AOR Manage Personnel and Subaward Organizations Print Proposal Delete Proposal 	Required		
	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
Proposal Details	Facilities, Equipment and Other Resources		Document unavailable for check
Proposal Status:	Senior Personnel Documents		Document unavailable for check

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When you click on the Budget tab, you will come to a screen like the one below, which shows the name of the grantee organization – i.e. your institution – and your project’s PI. Click on the name of the institution to advance to the control page for your proposal.



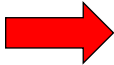
Budget(s)

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		



If your project includes a subaward to one or more other institutions, the organization(s) will be selected and added separately after which the subawardee organization name(s) will also appear on this page. Subawards will be discussed later in the tutorial, but note that they most often are included in larger and more complex projects than found in the *Small Projects for Institutions New to ATE* funding track.

The budget form is a template, partially shown below. Research.gov will automatically generate year-by-year budget templates for you when you click “Add Year” at the top of the page. When you enter the budget information in the various categories for each year of the project, totals are calculated by budget category and by year. Once budget forms are completed for each year of the project, a cumulative budget for the proposal is automatically generated. The Budget Justification is not a template but a Word document that you will create as a narrative or a table (not an Excel spreadsheet) and upload separately in Research.gov. It provides details about the dollar amounts in the budget form and explains how each expense relates to your project plan. (Note: convert the document to a pdf file prior to uploading to avoid unintended formatting changes.)

Budget (Prime Organization)

For Florence-Darlington Technical College ⓘ

\$0
Total Requested Amount

Video: How to Work on a Proposal Budget

Expand all rows | Collapse all rows
Years in Budget: 1
Add Year
Delete Year

Section	Year 1		Total Funds Requested
	# Personnel	Funds	
Personnel Direct Costs			
A. Senior Personnel [Manage]	1	0.00	\$0
Pamela J Silvers (PI)	<input style="width: 40px;" type="text" value="0.00"/>	<input style="width: 40px;" type="text" value="\$ 0"/>	\$0
B. Other Personnel ⓘ	0	0.00	\$0
Postdoctoral Scholars ⓘ	<input style="width: 40px;" type="text" value="0"/>	<input style="width: 40px;" type="text" value="0.00"/>	<input style="width: 40px;" type="text" value="\$ 0"/>
Other Professionals	<input style="width: 40px;" type="text" value="0"/>	<input style="width: 40px;" type="text" value="0.00"/>	<input style="width: 40px;" type="text" value="\$ 0"/>
Graduate Students	<input style="width: 40px;" type="text" value="0"/>	<input style="width: 40px;" type="text" value="0.00"/>	<input style="width: 40px;" type="text" value="\$ 0"/>



The complete template for each year will look like the one below. You are not likely to have expenses in all budget items listed. It is common to have several zero-amounts in the budget form. One exception is the personnel section. If you name a person or position, compensation is required.

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 next year’s work and to keep the budget perfectly aligned with your Budget Justification. Realistic budgets are rarely identical from year to year since activities and associated costs tend to change.

The total budget amounts for each year do not need to be identical as long as the cumulative total budget does not exceed the limit for the type of proposal you are submitting. The Year 1 budget may, for example, be larger than Years 2 and 3 if you need to purchase equipment that will be used throughout the project.

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!

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

(continued)



Section	Year 1		Total Funds Requested
	# Participants	Funds	
D. Equipment + Add Equipment		\$0	\$0
E. Travel US, territories, and possessions Foreign		\$ 0 \$ 0	\$0 \$0
F. Participant Support Costs Number of Participants Stipends Travel Subsistence Other	0	\$ 0 \$ 0 \$ 0 \$ 0	\$0 \$0 \$0 \$0
G. Other Direct Costs Materials and Supplies Publication Costs/Documentation/Distrib Consultant Services Computer Services Other		\$ 0 \$ 0 \$ 0 \$ 0 \$ 0	\$0 \$0 \$0 \$0
H. Total Direct Costs (A-G)		\$0	\$0
Indirect Costs			
Section	Year 1		Total Funds Requested
	Rate x Base		
I. Indirect Costs 1. <input type="text"/> + Add Indirect Cost Item	0.00% x \$ <input type="text"/> \$0 funds	\$0	\$0
J. Total Amount Requested (H + I)		\$0	\$0

Mentor-Connect recommends drafting your annual budgets in an Excel spreadsheet, using Excel formulas and keeping careful notes so that changes will be easier to make as you finalize each annual budget and transfer the information to NSF templates. Be sure to use budget categories and line items that match those in the templates and use the same categories in the Budget Justification so that reviewers and Program Officers will easily be able to go back and forth between your explanations and the individual line items in the budget. When your calculations are complete - or nearly complete – and you transfer the amounts to the online budget templates, you will be able to make sure that the totals that are automatically calculated match your spreadsheet totals. This allows you to correct any errors you have made. As you enter information in the Budget template, you will notice hot links that you can activate in order to work on each section. The system tracks and displays which sections of the proposal that you have worked on and when.



The only SAVE command is located at the bottom of the budget form for each year. A good practice is to scroll to the bottom of the page and save after you complete each section, so that you do not risk losing your work when you leave the budget. Notice that you also have a print option on this part of the form.

J. Total Amount Requested (H + I) \$0 \$0

Save Preview/Print Cancel

Building your budget spreadsheets and preparing your Budget Justification should be a back-and-forth process as you obtain more precise cost information and think through the details of personnel time and other expenses. Dollar amounts and information will no doubt need to be modified in your budget and the Budget Justification as you refine these documents.

Your budget must clearly align with the project’s scope of work. The budget requests the 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.

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 you can develop and submit your budget accordingly. *Once funded*, you will need to work with your business office to develop a clear crosswalk between the NSF budget categories and the accounting codes that will be used by your college.

Personnel categories are labeled Section A: Senior Personnel and Section B: Other Personnel. Fringe Benefits are calculated and included in Section C. In the example below, only the Principal Investigator (PI) is listed in Section A. Most budgets list one PI and one or more Co-Principal Investigators (Co-PIs) in this section. While it is permissible to include as many as four Co-PIs, new-to-ATE project budgets are smaller and can seldom support more than two or three people in this category. It is permissible to include a Co-PI from a different organization but that person should not be budgeted in section A.

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



A. Senior Personnel

The “Senior Personnel” classification may include people with leadership roles in the project who are not Co-PIs if they will receive compensation from the grant, and if they are employees of your institution. Note that each person listed as Senior Personnel must be an employee of the grantee institution. If a person in a Co-PI or other Senior Personnel role does not work for the grantee institution, that person will be included elsewhere in the budget. If an individual works on the project but will not receive compensation from the grant, do not include that person in the budget. Their contribution to the project should be described elsewhere.

Note that institutional grant writers 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 grant. Likewise, avoid including high-level administrators at the institution as Senior Personnel on ATE-funded projects. In the Mentor-Connect **Forms** webinar, we explain how to include in your proposal all such supporting individuals who will work on the project as part of their regular responsibilities, without compensation from your budget.

As you itemize Senior Personnel costs, you will not enter names directly in the template. Instead, you will select the names from a list of people who have been previously registered in Research.gov for your institution. You may add or delete individuals selected from this list for each year of the budget at any time prior to proposal submission. Individuals who are not registered will not be on the list and cannot be included in the budget. This is one of many good reasons for not delaying budget work until the last minute! If you find that people you need to include as Senior Personnel are not registered, it may take some time to register them. And, the Authorized Organizational Representative (AOR) at 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. Since there is no limit to the number of individuals your institution may register, you can register anyone you think you may want to include as Senior Personnel. When you prepare the budget, the system allows you to select from that list the individuals you want to include.

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. These are not last-minute tasks!

NSF requires you to report time for grant-funded Senior Personnel in “person months.” Errors are often made by prospective grantees who do not understand exactly what this means. (Section A of the budget example on page 6 has a column designated for “months.”) These are person-months, calculated as shown in Example 1, for a faculty member who will serve as PI.

Her salary is \$74,000 for a 9-month contract, and she will work on the project during the 9-month academic year. In addition, she will work full-time on the project for 2 months in the summer under a separate contract. During the academic year, she will spend the equivalent of 1 day/week working on the grant, or 1/5 of a work week which is 20% of her time. Her compensation will be 20% of the 9-month salary amount. The person-months associated with this salary 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.

Example 1 - Senior Personnel

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

Year 1			Total Funds Requested
# Personnel	Months	Funds	
1	3.80	\$31,244	\$31,244
	1.8	\$14,800	\$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)

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In addition, she will work full-time on the grant for 2 months in the summer. For simplicity in this example, we have used the same rate of compensation. If summer work is compensated differently at your institution, you must follow college guidelines. 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.

Other Senior Personnel Budget Issues:

- Remember that information in the budget and in the proposal need to match and that that the budget amounts requested on these year-by-year forms must be fully explained and justified in your Budget Justification.
- When working on personnel costs, it is important that the amount you budget for an individual aligns 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 from the institution for comparable time and work. It is preferable that no individual receive more than 100% of his or her full-time salary in a given period, such as a semester; 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 work 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 this additional or 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 a person working on a grant funded by NSF. NSF's specific language about overload pay may be found in Mentor-Connect online resources.
- The time allocation for senior personnel will be reported multiple times in the grant proposal. It is important that the information you provide be consistent each time. For example, Senior Personnel will be named in the project description, and the time each person will devote to the project will appear in at least 3 places in your proposal: on Current and Pending support forms, in the Budget, and in the Budget Justification. Checking and re-check all places throughout the proposal where this information appears.
- When you allocate funds to support personnel, you need to be reasonable and very specific in the proposal and in your Budget Justification about the work the individual will be doing for that compensation. Reviewers will consider the responsibilities noted in the project description and raise questions if an individual appears to be overcompensated for too little work or undercompensated for an extensive scope of work.

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 note that all requested time must be well justified when you explain the scope of work for each budgeted faculty member.



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

Graduate & Undergraduate Students

- Generally hourly rates
- Max 20 hrs./week during the academic year, 40 hrs./week in the summer
- Only provide total grant-funded compensation per year

Secretarial/Clerical Staff

- Only if not covered by indirect costs
- Full- or part-time
- Annual or hourly basis
- Only provide total grant-funded compensation per year

Adjunct faculty fit into this category if they will work on the project or if the college will be paying adjuncts to provide release time for full-time faculty who work on the project. While Post-Docs and Graduate Students may be listed as Other Personnel, they are seldom included in ATE grants submitted by two-year colleges.

In the Other Personnel section, it is not necessary to name the people who will do the work. If you know who they are, however, you may 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 should be described in the Budget Justification, with details about the amount of time they will work and the compensation for that time.

Secretarial or clerical support may be included only in very limited, specific circumstances since in most cases indirect costs are designed to cover such expenses. To be an eligible 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.

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

Example 2 explains how to budget Other Professionals. In this case, we have an individual in a 12-month staff position who will serve as an Internship Coordinator. His annual compensation is \$60,000/year, and he will be working on the project the equivalent of 1 day/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. Likewise, the person-months come to 20% of 12 months or 2.4 person-months. The Other Professionals section is also where you may request funds for adjunct faculty who will work on the project as employees of the college.

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	\$0
Other Professionals	1	2.4	\$ 12,000	\$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

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The “Other” category includes people who will be compensated for work on the project but do not fit into the other categories listed as Other Personnel. In Example 3, the person listed in this category (red arrow), is lab assistant who will be hired to work 6 hours/week fall and spring semesters and paid \$15/hr.

She will work a total of 20 hours over a 2-semester time frame each year of the project. Her compensation will be calculated for a total of 20 weeks, 6 hours/week, at \$15/hour, which results in a \$1,800 total budget request per year.

Example 3 - Other

Other (e.g., lab assistant paid \$15/hr. for 6 hrs. each week, for 30 weeks -2, 15-week semesters)

		2	\$13,800	\$13,800
B. Other Personnel				
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**
- **NO person-months required.**

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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 and Co-PIs)
- Other Professionals (adjunct faculty, technicians, programmers, etc.)
- Secretarial/Clerical Staff
- Undergraduates (summer months only)
- Casual/Temporary Employees

In the budget on page 6, you will see that you can insert only one number for the total fringe benefits to be paid on the salaries and wages included in sections A & B. An explanation of your fringe benefit request should be included in your Budget Justification, clearly stating the fringe benefit rate that was used and how it was determined. If fringe benefit rates vary for different personnel, you will need to use an average percentage on your budget form since the template 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.

Fringe benefit expense per individual should be pro-rated, based on the percent of a person’s time that is supported by the grant. If the grant supports 10% of a salary, it should support 10% of total fringe benefits for that individual.

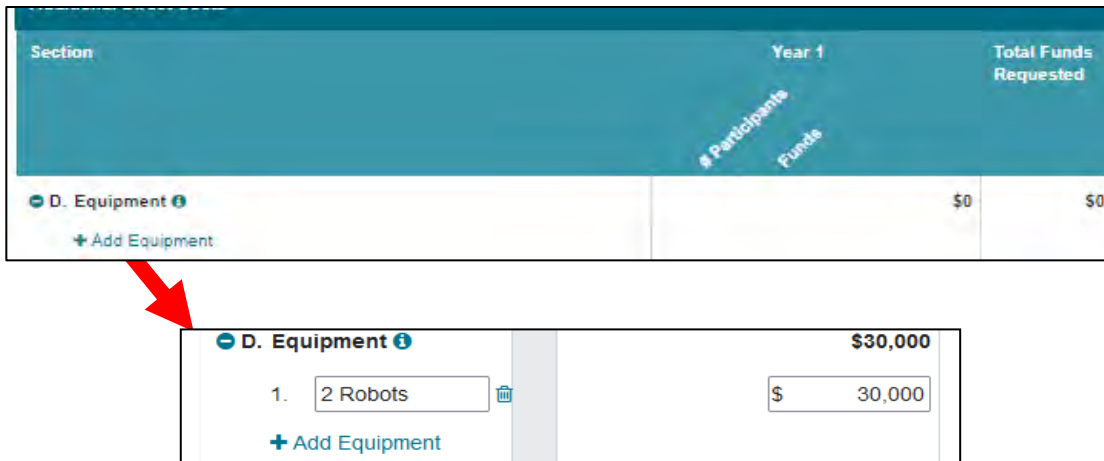
It is not common for graduate students to work on ATE projects, but if your project does include graduate students, note that you may not include their compensation when calculating fringe benefits for personnel.

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. (A piece of equipment that costs \$4,000 would be listed here if modifications and 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.



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. Look for educational discounts whenever possible, and document them in the Budget Justification.

E. Travel

Your budget may include expenses for travel by project personnel that is necessary to accomplish project objectives, such as conducting field work and attending meetings/conferences associated directly with the work of the project or the dissemination of results.

Note the following restrictions:

- This budget category is NOT for travel by consultants, national visiting committees, advisors, or speakers. Their travel costs are included in their fees or budgeted under Other Direct Costs. Travel and subsistence for project “participants” should be budgeted in the Participant Support category.
- 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 to Canada, Mexico, and Puerto Rico is considered domestic travel.)
- 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.
- Never use federal funds 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 airfares (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 affordable rates.

Your travel budget must include the costs of attending the annual ATE Principal Investigators Conference in Washington DC every October, beginning in 2024, if the proposal you submit in 2023 is funded. ATE will provide complementary registrations, individual hotel rooms for two 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, the additional cost may be included in your budget, but must be explained in the Budget Justification.

Additional participants: When you have been awarded a *Small Projects for Institutions New to ATE* or an *ATE Project* grant, your college may send up to three additional people (total of 5) to the conference. The costs for additional participants must be covered by your college or other another funding source, unless you can justify their participation as essential to the project. Costs will include conference registration, travel, lodging, and meals not provided during the conference. The conference is organized by the American Association of Community Colleges, and 2024 registration fees will be posted on the AACC website in July. The conference Hotel is the Omni Shoreham, and the 2024 discounted room rate is \$285/night. (In order to reserve rooms at this rate, participants must specify that they will be attending the National Science Foundation ATE Principal Investigators Conference, organized by the American Association of Community Colleges.)

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 or trainees 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 in order 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. Remember that travel costs for project personnel employed by the grantee college who participate in such events are not listed in this budget category, but in category E, Travel.

You will enter the expenses for Participant Support under four categories on the budget form: stipends, travel, subsistence, and other related expenses. Enter the number of participants and the total cost in each category. Note that the costs must add value to your project. They 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.



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 this budget category 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 is advisable 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, while college faculty may or may not receive stipends. 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 it 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 costs of dinner.)
- Other: List any other expenses incurred in supporting the participants and explain how they are relevant and necessary to the event or activity (e.g., printing of workshop materials, classroom kits, devices, software, etc. that support implementation).

G. Other Direct Costs

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

G. Other Direct Costs		\$0	\$0
Materials and Supplies		\$ <input type="text" value="0"/>	\$0
Publication Costs/Documentation/Distrib		\$ <input type="text" value="0"/>	\$0
Consultant Services		\$ <input type="text" value="0"/>	\$0
Computer Services		\$ <input type="text" value="0"/>	\$0
Other		\$ <input type="text" value="0"/>	\$0
H. Total Direct Costs (A-G)		\$0	\$0



Materials and Supplies: Materials and Supplies include necessary project-specific items. 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 total cost would still be budgeted under Materials and Supplies since the individual cost per unit is under \$5,000.)

Materials and Supplies may include items such as lab 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, Documentation, and Dissemination: The grant may cover costs related to documenting, preparing, publishing, and sharing research findings and materials developed by the project. Examples of these activities may include storage and indexing of data and databases; website development; page charges for publications in journals; production of posters and exhibit materials, printing of sample materials, etc. (Note that you will be required to develop an exhibit for the annual ATE PI Conference. You may not need a new exhibit each year, but you will want to incorporate updates as your project progresses. You may also want to have handouts available.)

Consultant Services: Consultants are contractors (such as external evaluators) who are paid a fee for their services and listed in the budget under Other Direct Costs in the Consultant Services line item. 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 not yet been identified. Note that rates of compensation for consultants are based on their regular rates of pay. The only other allowable consultant expense is for travel. The Budget Justification must include specific information about a consultant's compensation and time commitments to the project. For example: a \$6,000 expense might consist of 12 days @ \$500 or 60 hours at \$100 per hour plus \$1200 for travel expenses. Travel expenses should 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 information 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, only 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 separate budget forms and a Budget Justification for each subawardee.
- The total from the subaward budget form will auto-populate on the main budget form.
- When subawards, which are administered by the primary organization, are added to the proposal, the single proposal is considered a collaborative proposal.

Other Direct Costs: Any direct costs not previously identified must be included here and itemized in the Budget Justification. Examples include materials and supplies for work conducted in offices or labs; meeting costs, such as conference registration fees; costs associated with preparing exhibits or presentations; and travel for advisors.

H. Total Direct Costs

When you have entered all costs in Sections A through G, the total direct costs will be 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 indirect costs in the budget at the federally negotiated 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 a different rate during that time.

The full indirect cost rate must be applied in your budget. An institution that offers to accept less than the current rate to provide more funds for project work will be engaging in cost-sharing, which is prohibited by NSF. Again, note that subawards have their own budgets and their own indirect cost rates.

Some colleges have a higher on-campus indirect 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 with, for example, salaries or equipment that are not listed in your budget. Such college support from indirect costs can be valuable if your indirect rate is so high that it makes it difficult to accomplish your goals.

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 correct base amount for the calculation. Your institution's indirect cost rate is typically a percentage of either personnel costs (only salaries or salaries and fringe benefits) or allowable operating costs (all 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. Do not convert the percent to a decimal. (If the rate is 30%, enter 30 with no decimal point. The system makes the conversion.) The budget form will automatically calculate indirect costs using the rate and base numbers you have provided.



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

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 website has resources that can assist you in applying for a rate.) The base for your indirect costs will be determined at that time. A newly-negotiated indirect cost rate will not, however, apply to your current grant proposal, but only to future proposals. For the current proposal NSF requires that you develop your budget with 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.

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* track, adding indirect costs that increase your budget beyond the maximum \$350,000 will most likely result in your proposal being placed instead in the *ATE Projects* funding track, which is far more competitive. This would significantly diminish your chances of being funded.

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 Two and Three, 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 on the next page. (For a proposal in the *Small Projects for Institutions New to ATE* track, make sure that the cumulative budget does not exceed \$350,000!) 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 those below will guide you to errors that require your attention. (The command page, where you initiate all components of the proposal, also has a compliance check report column that will help you ensure that you have addressed all components of the proposal.)

The form contains the following error(s) which must be fixed before submitting the proposal.

- The indirect cost description must be specified

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



SUMMARY PROPOSAL BUDGET				Cumulative	
ORGANIZATION Florence-Darlington Technical College				FOR NSF USE ONLY	
				PROPOSAL NO.	DURATION (months)
PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR Pamela Silvers				Proposed	Granted
				AWARD NO.	
A. SENIOR PERSONNEL: P/PI/D, Co-PI's, Faculty and Other Senior 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. Pamela Silvers - Principal Inv	2.0			10,000	
2.					
3.					
4.					
5.					
6. () OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE)					
7. (1) TOTAL SENIOR PERSONNEL (1 - 6)	2.0			10,000	
B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)					
1. (0) POST DOCTORAL SCHOLARS	0.0			0	
2. (0) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)	0.0			0	
3. (0) GRADUATE STUDENTS				0	
4. (0) UNDERGRADUATE STUDENTS				0	
5. (0) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)				0	
6. (0) 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 \$ _____	5,000				
2. TRAVEL _____	75				
3. SUBSISTENCE _____	0				
4. OTHER _____	0				
TOTAL NUMBER OF PARTICIPANTS (25)	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 \$ 0				AGREED LEVEL IF DIFFERENT \$	
PI/PI/D NAME Pamela Silvers				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



BUDGET JUSTIFICATION

Since the budget form does not allow you to provide details about WHY you are requesting funds, you must prepare a Budget Justification for this purpose. It is a separate document that explains your expenses for each year of the project. Note that 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 will want to be thorough in your explanation of costs for the budget request. Remember that subawards have their own budgets and budget justifications.

NSF does not require a specific format but prefers that you organize your Budget Justification using the same alphabet letters and descriptors that appear in the budget template. It is generally helpful 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 clarifies for reviewers and program officers that you haven’t inadvertently overlooked something.

It is a good idea to convert the Budget Justification (and all other documents) to pdf files before uploading. This is not a requirement, since Research.gov will convert uploaded Word documents to pdf, but making your own conversion allows you better control of formatting issues. Within Research.gov, on the proposal “Control Page,” select Budget Justification to upload your document. After uploading, check to make sure that the formatting remains correct, not just on the screen but also in printed form.

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 so that you can be very specific about the amounts that are needed and for what purpose. Do not request funds for “etc.” or unspecified expenses.
- When purchasing equipment, take advantage of educational discounts when available.
- 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 will you need for each budget item?
- If a total is made up of several costs (e.g., air fare, lodging, meals) how much is requested for each component of the total cost? 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 items or equipment be used in project activities to benefit students or participants?

Avoid mistakes! The most common budget justification errors are:

- Too short to adequately explain expenses or longer than the allowable five pages
- Hard to follow (Use NSF budget form categories for organization to help avoid this problem.)
- Time, rate of compensation, and responsibilities not provided for consultants
- Time for personnel not justified or incorrectly calculated
- Overload pay for full-time faculty not clarified (Institutional overload policy must be explained.)
- Travel costs placed incorrectly in the budget or not fully justified
- Items in Materials and Supplies category not clearly identified (Avoid the appearance of a slush fund!)
- Part-time faculty included as consultants or participants (instead of Other Personnel)



Sample Budget Justification

Below you will find an example of a narrative budget justification, with paragraphs created to describe costs. Note the use of 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.