NSF Proposal Budgets and Budget Justifications

http://www.thebluediamondgallery.com/wooden-tile/b/budget.html

Outline

- Overview of ATE Budgetary Considerations – These are HIGHLIGHTS; you should *still* read the ATE Program Solicitation *thoroughly*.

- General Format and Structure of NSF Budgets

- Budget Justifications

- Preparing a Budget and Budget Justification in Research.gov

- Q & A

☆ ☆ The Stars of the Show ☆ ☆

Preparing ATE proposals according to the guidance provided in these hallowed documents will serve you well!

☞ PAPPG is good for thee.

ATE Program ☞ Solicitation can amplify your inspiration.

PROPOSAL AND AWARD POLICIES AND PROCEDURES GUIDE

NATIONAL SCIENCE FOUNDATION

National Science Foundation
WHERE DISCOVERIES BEGIN

Effective October 4, 2021
NSF 22-1
OMB Control Number 3145-0058

Advanced Technological Education (ATE)

PROGRAM SOLICITATION
NSF 21-598

REPLACES DOCUMENT(S):
NSF 18-571

National Science Foundation
Directorate for Education and Human Resources
Division of Undergraduate Education

Full Proposal Deadline(s) (due by 5 p.m. submitter's local time):
October 14, 2021
October 06, 2022
October 05, 2023

IMPORTANT INFORMATION AND REVISION NOTES

Track 1: Small Projects for Institutions New to the ATE program has a maximum budget of $350,000 over three years.

Track 2: ATE Projects has a maximum budget of $650,000 over three years.

ATE-Coordination Network projects are no longer supported.

A new track, Track 3, entitled "Consortia for Innovations in Technician Education" has been added.

Track 5: Targeted Research on Technician Education has been renamed Applied Research on Technician Education, and additional information has been added.

Developers are strongly encouraged to use an open licensing approach for any new learning materials and computer software source code when these materials are developed as a component of the proposed project (see text under "Reporting Requirements").

Any proposal submitted in response to this solicitation should be submitted in accordance with the revised NSF Proposal & Award Policies & Procedures Guide (PAPPG) (NSF 22-1), which is effective for proposals submitted, or due, on or after October 4, 2021.

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:
Advanced Technological Education (ATE)

Synopsis of Program:
With a focus on two-year Institutions of Higher Education (IHEs), the Advanced Technological Education (ATE) program supports the education of technicians for the high-technology fields that drive our nation's economy. The program involves partnerships between academic institutions (grades 7-12, IHEs), industry, and economic development agencies to promote improvement in the education of science and engineering technicians at the undergraduate and secondary institution school levels. The ATE program supports curriculum development; professional development of college faculty and secondary school teachers; career pathways; and other activities. The program invites applied research proposals that advance the knowledge base related to technician education. It is required that projects be faculty driven and that courses and programs are credit bearing, although materials developed may also be used for incumbent worker education.

The ATE program encourages partnerships with other entities that may impact technician education. For example, with
- the National Institute of Standards and Technology (NIST) Manufacturing Extension Partnerships (MEPs) (http://www.nist.gov/mep/index.cfm) as applicable to support technician education programs and the industries they serve;
- Manufacturing USA Institutes (https://manufacturing.gov/) addressing workforce development issues (also see DCL NSF 16-007);

1

https://www.nsf.gov/pubs/policydocs/pappg22_1/index.jsp

https://www.nsf.gov/publications/pub_summ.jsp?org=NSF&ods_key=nsf21598

3

General Thoughts on Budgets

- The budget is a critical component to a competitive NSF proposal.

- Reviewers are typically instructed *not* to allow any perceived problems with a proposal's budget to influence their evaluation of the proposal within the framework of the two NSF Merit Review Criteria of Intellectual Merit and Broader Impacts.

- In general, relatively minor problems with budgets are not deal-breakers regarding the review of your proposal. Budgets can be "fixed" and revised. Nonetheless, it's important to do the very best job preparing the budget prior to submitting the proposal.

- It is not uncommon for an NSF Program Officer to work with the PI to revise the budget in a proposal that reviewed well before making an award recommendation and forwarding it on the trajectory toward the Division of Grants and Agreements (DGA).

How Often the Word "Budget" Appears in the ATE Program Solicitation

It shows up 29 times. ➡️
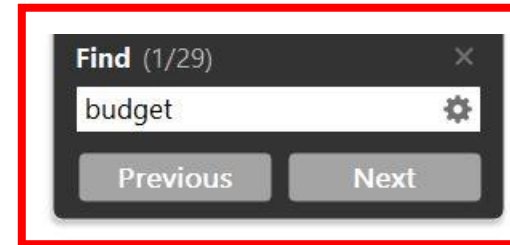
Find (1/29)   ✕

budget   ⚙

[Previous]   [Next]

Advanced Technological Education (ATE)

PROGRAM SOLICITATION
NSF 21-598

REPLACES DOCUMENT(S):
NSF 18-571

National Science Foundation

Directorate for Education and Human Resources
Division of Undergraduate Education

Full Proposal Deadline(s) (due by 5 p.m. submitter's local time):

October 14, 2021

October 06, 2022

October 05, 2023

Overview of ATE Budgetary Considerations

Two ATE Program Tracks Supported by Project Vision

Track 1: *Small Projects for Institutions New to ATE* (**Recommended, if eligible**)

Budget request may be up to $350,000, typically spread over a 3-year project. The maximum possible request of $350,000 is the **sum** of the Direct Costs **and** the Indirect Costs.

Track 2: *ATE Projects*

Budget request may be up to $650,000 for up to 3 years of project. The maximum possible request of $650,000 is the **sum** of the Direct Costs **and** the Indirect Costs.

For both tracks the ATE Program Solicitation states: "*It is expected that the budget request will match the scope of the project.*"

Overview of ATE Budgetary Considerations
Instrumentation Requests

"All proposals may request instrumentation for student use in gaining skills and competencies (see Other Budgetary Limitations section)."

       - ATE Program Solicitation (NSF 21-598), page 4

Funds requested for equipment and instrumentation (computers, computer-related hardware, software, laboratory or field instrumentation, and scientific or industrial machinery) **normally may not exceed $200,000 for the duration of a full project grant.**

Equipment requests for Small Projects for **Institutions New to ATE** should be *within the overall scope of the project budget.*

It is expected that the proposer will **request educational discounts from the equipment supplier**, and that any discount will be explained in the budget justification.

       - ATE Program Solicitation (NSF 21-598), page 11

Overview of ATE Budgetary Considerations

NSF project funds may **not** be used for:

☒ Student scholarships (please see the DUE S-STEM program for scholarships for students);

☒ replacement equipment or instrumentation that does not significantly improve instructional capability;

☒ teaching aids (e.g., films, slides, projectors, "drill and practice" software);

☒ vehicles, trailers, laboratory furnishings, or general utility items such as office equipment (including word-processing equipment), benches, tables, desks, chairs, storage cases, and routine supplies;

☒ maintenance equipment and maintenance or service contracts;

☒ the modification, construction, or furnishing of laboratories or other buildings;

☒ the installation of equipment or instrumentation (as distinct from the on-site assembly of multi-component instruments--which is an allowable charge).

- ATE Program Solicitation (NSF 21-598), page 11

Overview of ATE Budgetary Considerations

Evaluation: The funds to support an evaluator independent of the project *must be requested*. The requested funds must match the scope of the proposed evaluative activities. The evaluator may be employed by a project's home institution, as long as he or she works in a separate organizational unit (e.g., a different department) that has a different reporting line than that of the project's home unit. The project should engage project staff, project participants, or an internal evaluator to work with the external evaluator as a means to improve the quality of data collected and feasibility of conducting the evaluation.

ATE PI Conference: The budget *must include* funds to support travel to the annual ATE PI Conference. Lodging is covered by the American Association of Community Colleges for a specified number of people from each project and center. All awardees are to showcase their progress annually at the ATE PI Conference.

- ATE Program Solicitation (NSF 21-598), page 11

PAPPG Covers Budgets Thoroughly
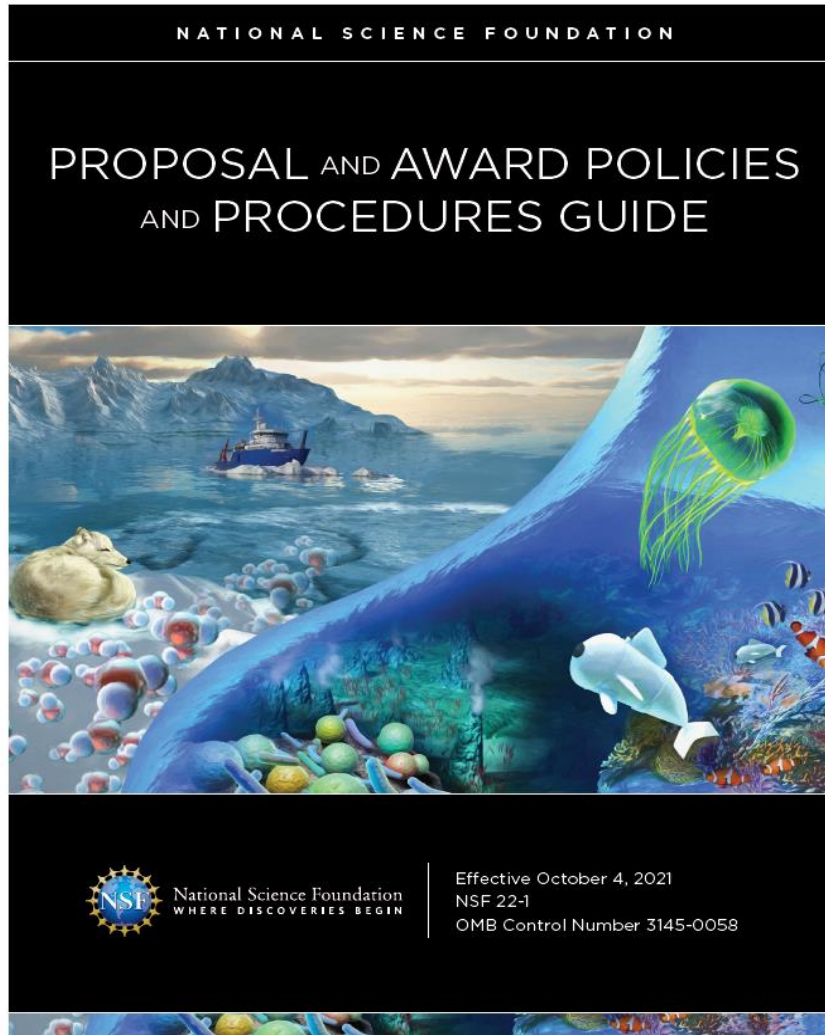
g. Budget and Budget Justification
  i. Salaries and Wages

      (a) Senior Personnel Salaries & Wages Policy
      (b) Administrative and Clerical Salaries & Wages Policy
      (c) Procedures
      (d) Confidential Budgetary Information

  ii. Fringe Benefits
  iii. Equipment
  iv. Travel

      (a) General
      (b) Domestic Travel
      (c) Foreign Travel

  v. Participant Support
  vi. Other Direct Costs

      (a) Materials and Supplies (including Costs of Computing Devices)
      (b) Publication/Documentation/Dissemination
      (c) Consultant Services (also referred to as Professional Service Costs)
      (d) Computer Services
      (e) Subawards
      (f) Other

  vii. Total Direct Costs
  viii. Indirect Costs (also known as Facilities and Administrative Costs (F&A) for Colleges and Universities)
  ix. Total Direct and Indirect Costs (F&A)
  x. Fees
  xi. Amount of This Request
  xii. Cost Sharing
  xiii. Allowable and Unallowable Costs

      (a) Entertainment
      (b) Meals and Coffee Breaks
      (c) Alcoholic Beverages
      (d) Home Office Workspace
      (e) Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment

https://www.nsf.gov/pubs/policydocs/pappg22_1/pappg_2.jsp#IIC2g

Format and Structure of NSF budgets - Overview

Calculate the amount requested and enter in Research.gov for these categories:

A. Senior Personnel

B. Other Personnel

C. Fringe Benefits [*Acquire from an appropriate campus unit, such as Payroll Office or similar.*]

D. Equipment

E. Travel

F. Participant Support [*Not eligible for Indirect Costs.*]

G. Other Direct Costs

H. Total Direct Costs

I. Indirect Costs (F&A) (SPECIFY RATE AND BASE) [*Again, check with appropriate campus unit.*]

Research.gov calculates these based on what you enter in the categories above:

J. Total Direct and Indirect Costs (H + I)

L. Amount of this Request (Should be the same as J)

Budget Sheet from NSF Proposal

Budget Lines A through E are pretty straightforward. Please consult the PAPPG if uncertain of anything.

SUMMARY PROPOSAL BUDGET — YEAR 1

FOR NSF USE ONLY		
PROPOSAL NO.	DURATION (months)	
	Proposed	Granted
AWARD NO.		

ORGANIZATION

PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR
David Brown

A. SENIOR PERSONNEL: PI/PD, 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. David Brown - Principal Inv	1.0			10,000	
2. John Krupczak	1.0			10,000	
3.					
4.					
5.					
6. ( ) OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE)	0.0			0	
7. (2) TOTAL SENIOR PERSONNEL (1 - 6)	2.0			20,000	
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)				20,000	
C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)				0	
TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)				20,000	
D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEEDING $5,000.)					
TOTAL EQUIPMENT				0	

E. TRAVEL	1. DOMESTIC (INCL. U.S. POSSESSIONS)	0
	2. INTERNATIONAL	0

F. PARTICIPANT SUPPORT COSTS		
1. STIPENDS $	0	
2. TRAVEL	0	
3. SUBSISTENCE	0	
4. OTHER	0	
TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PARTICIPANT COSTS		0
G. OTHER DIRECT COSTS		
1. MATERIALS AND SUPPLIES		0
2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION		0
3. CONSULTANT SERVICES		0
4. COMPUTER SERVICES		0
5. SUBAWARDS		0
6. OTHER		0
TOTAL OTHER DIRECT COSTS		0
H. TOTAL DIRECT COSTS (A THROUGH G)		20,000
I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE)		
TOTAL INDIRECT COSTS (F&A)		0
J. TOTAL DIRECT AND INDIRECT COSTS (H + I)		20,000
K. FEE		0
L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K)		20,000
M. COST SHARING PROPOSED LEVEL $ 0 AGREED LEVEL IF DIFFERENT $		

PI/PD NAME	FOR NSF USE ONLY		
David Brown	INDIRECT COST RATE VERIFICATION		
ORG. REP. NAME*	Date Checked	Date Of Rate Sheet	Initials - ORG

Line Item "A" – Senior Personnel

From the PAPPG: *"As a general policy, NSF limits the salary compensation requested in the proposal budget for senior personnel to **no more than two months** of their regular salary in any one year. It is the organization's responsibility to define and consistently apply the term "year", and to specify this definition in the budget justification. This limit includes salary compensation received **from all NSF-funded grants**.*

Under normal rebudgeting authority, as described in Chapters VII and X, a grantee can internally approve an increase or decrease in person months devoted to the project after an award is made, even if doing so results in salary support for senior personnel exceeding the two-month salary policy. No prior approval from NSF is necessary unless the rebudgeting would cause the objectives or scope of the project to change. NSF prior approval is necessary if the objectives or scope of the project change."

https://www.nsf.gov/pubs/policydocs/pappg22_1/pappg_2.jsp#IIC2gia

Line Item "F" – Participant Support Costs

From the PAPPG: This budget category refers to direct costs for items such as stipends or subsistence allowances, travel allowances, and registration fees paid to or on behalf of participants or trainees (but not employees) in connection with NSF-sponsored conferences or training projects.

```
F. PARTICIPANT SUPPORT COSTS
   1. STIPENDS        $ ———————————————— 0
   2. TRAVEL            ———————————————— 0
   3. SUBSISTENCE       ———————————————— 0
   4. OTHER             ———————————————— 0
   TOTAL NUMBER OF PARTICIPANTS   ( 0 )      TOTAL PARTICIPANT COSTS      0
```

☒ Cannot include Participant Support Costs (Lines F.1–F.4) in Base for determining requests for Indirect Costs recovered from the grant (*vide infra*).

https://www.nsf.gov/pubs/policydocs/pappg22_1/pappg_2.jsp#IIC2gv

Line Item "F" – Participant Support Costs

☒ If awarded an ATE grant (or *any* NSF grant), ***funds cannot be transferred out*** of Participant Support lines (Lines F.1–F.4) without written permission from NSF.

F. PARTICIPANT SUPPORT COSTS		
1. STIPENDS $	0	
2. TRAVEL	0	
3. SUBSISTENCE	0	
4. OTHER	0	
TOTAL NUMBER OF PARTICIPANTS (0)	TOTAL PARTICIPANT COSTS	0

https://www.nsf.gov/pubs/policydocs/pappg22_1/pappg_2.jsp#IIC2gv

Line Item "G" – Other Direct Costs

G.1. – Materials and Supplies: The cost of an individual item must be **less than $5,000** to be included among the budget request for materials or supplies.

G.3. – Consultant Services: This is where compensation for your project evaluator would be included in the budget request.

G.5. – Subawards: These are funds paid by the awardee organization to another collaborating organization(s).

G. OTHER DIRECT COSTS	
1. MATERIALS AND SUPPLIES	0
2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION	0
3. CONSULTANT SERVICES	0
4. COMPUTER SERVICES	0
5. SUBAWARDS	0
6. OTHER	0
TOTAL OTHER DIRECT COSTS	0

https://www.nsf.gov/pubs/policydocs/pappg22_1/pappg_2.jsp#IIC2gvi

Line Item "I" – Indirect Costs

AKA: "Facilities and Administrative Costs (F&A) for Colleges and Universities"

AKA: "Overhead"

This is the portion of a budget request that *compensates the college* for expenses associated with the use of facilities and administration of the grant (e.g., Staff in an Office of Fiscal Affairs spend time setting up and managing institutional budget lines to spend and track NSF grant funds).

Many institutions negotiate a rate (percentage) for the recovery of indirect costs with a Federal agency. In addition to the rate, the agreement also typically identifies which line items are eligible to charge indirect costs.

https://www.nsf.gov/pubs/policydocs/pappg22_1/pappg_2.jsp#IIC2gviii

Line Item "I" – Indirect Costs

If an institution **has** a Federally negotiated indirect cost rate, then NSF requires charging the *full amount* in a budget request. One **cannot** use an indirect cost rate less than the Federally negotiated rate simply to direct more of the budget toward the project.

Quoting the PAPPG: "*Except where specifically identified in an NSF program solicitation, the applicable U.S. Federally negotiated indirect cost rate(s) must be used in computing indirect costs (F&A) for a proposal. Use of an indirect cost rate lower than the organization's current negotiated indirect cost rate is considered a violation of NSF's cost sharing policy.*"

https://www.nsf.gov/pubs/policydocs/pappg22_1/pappg_2.jsp#IIC2gviii

Line Item "I" – Indirect Costs

If an institution **does not have** a Federally negotiated indirect cost rate, then NSF permits using a maximum of 10% - the *de minimis* rate - no questions asked. If a rate >10% is requested, then it becomes more complicated.

Quoting the PAPPG: *"Domestic proposing organizations that do not have a current negotiated rate agreement with a cognizant Federal agency, and who are requesting more than a de minimis 10% recovery of modified total direct costs should prepare an indirect cost proposal based on expenditures for its most recently ended fiscal year...*

...No supporting documentation is required for proposed rates of 10% or less of modified total direct costs."

https://www.nsf.gov/pubs/policydocs/pappg22_1/pappg_2.jsp#IIC2gviii

Line Item "I" – Indirect Costs

☒ Cannot include Participant Support Costs (Lines F.1–F.4) when determining the Base for calculating the Indirect Costs.

I. INDIRECT COSTS (F&A) (SPECIFY RATE AND BASE)		
TOTAL INDIRECT COSTS (F&A)		0

F. PARTICIPANT SUPPORT COSTS		
1. STIPENDS $		
2. TRAVEL		
3. SUBSISTENCE		
4. OTHER		
TOTAL NUMBER OF PARTICIPANTS ( )	TOTAL PARTICIPANT COSTS	0

https://www.nsf.gov/pubs/policydocs/pappg22_1/pappg_2.jsp#IIC2gviii

Budget Justification

Each dollar amount found in the budget should be explained in sufficient detail to "justify" why it is requested. NSF permits **up to 5 pages** for the Budget Justification.

<u>Example</u>: **Section A. Senior Personnel. *PI Compensation - $60,000*.** PI Doe requests two months of compensation each year, for a total of **$60,000** for the entirety of the three-year project. PI Doe has a 10-month contract with an annual salary of $100,000 or $10,000 per month. Thus, two months of support would cost $20,000 annually or $60,000 for three years of effort.

<u>Example</u>: **Section G.3. Consultant Services. *Project Evaluation - $18,900*.** The external evaluator anticipates devoting 70 hours each year to the project evaluation and charges $90/hour. Thus, the cost for project evaluation is: 70 hours x $90/hour x 3 project years = **$18,900**.

https://www.nsf.gov/pubs/policydocs/pappg22_1/pappg_2.jsp#IIC2g

Budget Fields (Partial) in Research.gov

Note the Alphabetical Organization of the Budget Lines.

Expand all rows | Collapse all rows   Years in Budget: **3**   Add Year   Delete Year

Personnel Direct Costs

Section									Total Funds Requested
		Year 1			Year 2				
		# Personnel	Months	Funds	# Personnel	Months	Funds		
⊖ A. Senior Personnel [Manage]		2	2.00	$20,000	2	0.00	$0		$20,000
David R Brown (PI)		1		$ 10,000	0.00		$ 0		$10,000
John J Krupczak (co-PI)		1		$ 10,000	0.00		$ 0		$10,000
⊖ B. Other Personnel ⓘ		0		$0	0		$0		$0
Postdoctoral Scholars ⓘ		0	0.00	$ 0	0	0.00	$ 0		$0
Other Professionals		0	0.00	$ 0	0	0.00	$ 0		$0
Graduate Students		0		$ 0	0		$ 0		$0
Undergraduate Students		0		$ 0	0		$ 0		$0
Administrative/Clerical		0		$ 0	0		$ 0		$0
Other		0		$ 0	0		$ 0		$0
⊖ C. Fringe Benefits				$0			$0		$0
				$ 0			$ 0		

Q&A