



COLLEGE OF SCIENCE  
**Geosciences**

**NSF Budget Justification Guide**

The NSF budget narrative is an excellent place to continue “selling” your project, by pointing out the various strengths of faculty and resources, and the well-planned proposal through the suitable allocation of funds over the project period. Make sure that the numbers included on the Budget Justification match those on the budget pages and in the narrative. For assistance with the budget justification template, please contact Denise Carrillo at [dycg@arizona.edu](mailto:dycg@arizona.edu) and/or Christine Duddleston at [cmeranza@arizona.edu](mailto:cmeranza@arizona.edu).

Unless otherwise noted, the budget justification is limited to a maximum of **five (5)** pages.

**Budget Justification**

**A. Key Personnel** (Includes PI and Co-PI/s)

For each person, it is recommended that the following be included for clarity:

1. Role, position, and suitability to project:  
Professor <Name> will serve as PI on this project. A Professor of <Department> at the University of Arizona, s/he has researched <XYZ> extensively. Enter relevant work or accomplishment here, which shows suitability to project).
2. List specific role in project, e.g., directing the project, contributing a specific expertise, showing how this is the best person to lead the project.
3. Commitment of effort to project:  
Dr. <Name> is committed to the project for <#> calendar months per year. NSF request commitment be listed in academic (9 month), summer, or calendar months.
4. You may choose to list 1<sup>st</sup> year salary, or multiply annual salary with commitment effort. It is optional, but in general, an explanation of your salary should be made. If you are committing 1 person month of your total academic time, you should include an explanation that says you are requesting one academic month of your base salary be funded by this proposal, should it be awarded. If you are requesting money which may be used for summer, or for work on the proposal during the academic year, you should request summer months. *Note: There is a limit of 2 summer months total per PI for ALL of their NSF proposals, which may not be exceeded without prior NSF approval.*

Please remember to escalate salary for subsequent years, as natural rate of inflation can cause a multi-year project to become under-funded in the later years. A 3% or 4% escalation is standard. (In some cases, PIs have chosen to exclude escalation for their own salaries for various reasons. One reason may be to focus on the cost of supplies or other expense which is vital to the execution of the project, and to fit the budget cap instituted by the funding agency.)

*Example:*

Jane Smith, Co-PI of the project, is Associate Professor of the Department of Computer Science at the University of Arizona. She has been funded for several NSF education initiatives integrating mathematics, computer science and engineering for college and pre-college students, and is noted for her work in XYZ. (You may include area of expertise, notable accomplishments, especially those which are relevant to the project.) Her expertise in XYZ will assist in the project goal of XYZ.

She and her collaborator Professor Norah Carter of MIT (subcontractor) are both committed for 0.5 summer months, respectively. An escalation rate of 3% per year for Professor Carter's salary has been calculated for the period.

**B. Other Personnel** (Includes non-Key personnel; that is, members who will not be playing a leadership role, but will contribute through their labor, such as graduate students, post-docs, technicians, and administrative staff)

*Example:*

*Computer Science graduate student:* Dr. Smith requests one graduate research assistant for the project, (biosketch enclosed under Supplementary Documents). His current research work is in algorithms for self assembly, and he will devote 100% of his research time to the project. His stipend is \$24,960\* for the first academic year and summer, with an escalation of 3% in following years.

*\* You should check NIH and NSF websites for salary minimums for pre-doctoral and postdoctoral students.*

*Postdoctoral fellow and technical support:* Dr. Smith requests one postdoctoral associate and one technician to assist with XYZ. The post-doc will be recruited to commit 100% of his or her time at the salary of \$X in the first year. A technician is also requested at 50%. The post-doc will be responsible for performing and for directing the technician to perform XYZ. Salary is escalated by 3% for both individuals in following years.

### **C. Fringe Benefits**

**NSF Budget Template includes the correct verbiage for Fringe Benefits**

### **D. Equipment** (Items of durable value exceeding \$5,000)

List the equipment you are requesting for the project. Include model no. and price quotes from a reputable source, listing name of source. Explain the necessity of the equipment to the project, and how this item will be used by the different parties in the proposal.

### **E. Travel**

List total amount requested in first year, with breakdown of expenses, e.g., airfare, hotel, per diem, and mileage reimbursement. If you know which conferences you will be attending, providing this detail would be helpful, as this is one gauge of the breadth of work you will be doing, presenting results and participating in academic exchange. Please specify domestic or international travel and include reasonable amounts. Please read the RFA carefully to ensure that you've included any required travel, for instance for the PI to travel to NSF-sponsored events relevant to the project.

### **F. Participant Support Costs**

(A participant is defined as an educational participant; someone who is not bound by contract in the way an employee is to produce a specific product. Usually, the participant is participating in an educational capacity, and benefits from the project's educational goals)

List the stipend each participant will have, and what expenses are figured into the provision of the stipend.

List amount allotted for travel. Do not add this amount to the amount listed in E. Travel, which is for key personnel and other personnel. Explain the purpose of the travel.

List amount allotted for subsistence, which could be a food per diem. Specify the period you are providing assistance for subsistence in.

List any other expense associated for the participants, and how this is relevant and necessary to the project (e.g., supplies, printing of materials, etc.).

## **G. Other Direct Costs**

1. *Supplies*: Expenditures budgeted for this proposal are costs that can be identified specifically with this particular sponsored project and are required in the direct performance of the research. These expenses include applicable laboratory supplies.

*Example:*

To accomplish the work needed to do XYZ, we will be purchasing supplies for XYZ. It is estimated that these supplies will cost \$X per year, with an escalation of 3% for each subsequent year. Estimates are based on prior experience.

2. *Publication Costs*: Many journals require a per-page or per-article publication cost, and these fees should be paid for through your grant. Other publication costs, including posters for meetings, should also be included.

*Example:*

We request the amount of \$800 in Years 4 and 5 to publish the results of our study. We project that results will be verifiable and provide data that will produce information which will be disseminated through conferences and publication in journals. The amount of \$800 per year will cover journal page costs, and production of posters for research meeting.

3. *Consultant Services*: Please make sure that consultants are well-justified and that you have also included a letter of support for all consultants, with a scope of work.

*Example:*

The PI will employ an outside source to provide evaluation and input into her work with XYZ. James Jones, Ph.D., is CEO of Arizona labs, and will devote 5 hours per year to the project. His rate is \$200 per hour, for a yearly budget of \$1,000

4. *Subawards*: NSF requires subcontracts to submit separate budgets, with budget justification. If you have a subcontractor, request these items and have them submit a detailed budget and justification in NSF format.

*Example:*

A subcontract to Massachusetts Institute of Technology Computer Science and Artificial Intelligence Laboratory in the amount of \$400,000 for four years as described in the proposal is included. The PI of this subcontract is Norah Carter.

5. *Other*: The “Other” category includes tuition expenses that will be covered by the grant.

*Example:*

Tuition expenses are requested for Dr. Smith’s graduate student, following the University of Arizona policy of supporting graduate students. Tuition is calculated at \$xxxx for FY 2021, and expected to escalate at 8% per year. See NSF Budget Template for Geosciences Graduate Tuition remission costs.

**H. Indirect Costs** (Facilities and Administrative Costs)

**The correct Indirect Cost verbiage exists on the NSF Budget Justification template**