

Unless otherwise noted, the budget justification is limited to a maximum of three pages.
ANY INSTRUCTIONS IN PURPLE ITALIC TEXT SHOULD BE REMOVED BEFORE UPLOAD.

BUDGET JUSTIFICATION: *EXAMPLE WITH INSTRUCTIONS*

A. Key Personnel (*includes PI and Co-PIs*)

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

1. *Role, position, and suitability to project*

Professor Goldwyn will serve as PI on this project. A Professor of Biology at ECU, he has researched EXPERTISE 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. Goldwyn is committed to the project for 2 summer months per year. *NSF forms request commitment be listed in academic (9 month), summer, or calendar months. Personnel with no salary request may not be listed in the budget; their expertise may be listed in the Facilities section.*

*You may choose to list 1st 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 that may be used for summer, you should request summer months. **Note: There is a limit of 2 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 underfunded in the later years. A 3% escalation is standard and is an option to include in the OSP internal budget template.*

Example:

A. Senior Project Personnel

Dr. Jane Smith will serve as PI on this project. An Associate Professor of the Department of Mathematics at ECU, she has been funded for several NSF education initiatives integrating mathematics and computer science for college and pre-college students, and is noted for her work in ... (*you may include area of expertise, notable accomplishments, especially those that are relevant to the project*). Her expertise in computational programming **will assist in the project goal** of advancing underrepresented students in the STEM fields.

Dr. Smith and her collaborator, Professor John Doe of UNC (subcontractor), are both committed for 0.5 summer months, respectively. A rise of 3% per year for Professor Smith's salary has been calculated for the period. **Note: The budget for UNC is prepared separately. UNC and any external expertise (external to ECU) never appear as senior key personnel in the budget form. We cannot list Professor Doe in Senior Key Personnel with the rule that they are not being paid (until G.5; see below).**

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, postdocs, technicians, and administrative staff*)

Example:

Doctoral Assistant from the Mathematics Department TBD: Dr. Smith requests one doctoral research assistant for the project (biosketch enclosed under Supplementary Documents). The graduate student will

devote 100% of their research time to the project. The stipend is \$24,960* for the first academic year and summer, with an escalation of 3% in following years.

**You should check NSF websites for salary minimums for predoctoral and postdoctoral students.*

Postdoctoral fellow and technical support: Dr. Smith requests one postdoctoral associate from education to assist in the instruction of the content. The postdoc will be recruited to commit 100% of their time at the salary of \$40,000 in the first year. The postdoc will be responsible for applying mathematical concepts to basic computer programming. Salary is escalated by 3% for both individuals in following years.

C. Fringe Benefits

Fringe Benefits change yearly, and should be confirmed before submitting your budget to OSP. Updated rates may be found on the Office of Sponsored Programs website: <http://www.ecu.edu/osp/Proposal-Dev.cfm>

- *SPA/CSS staff have a 21.88% benefit rate applied throughout the year.*
- *EPA Employees and Faculty who hold a 9 month appointment have a 20.23% benefit rate applied to academic year effort, and a 20.23% benefit rate applied to summer effort.*
- *Postdocs receive a 7.65% fringe benefit rate.*
- *Graduate and undergraduate student benefits are calculated at 7.65%.*

In addition to describing these percentages, include health insurance at the following rates with 3% increases in subsequent years:

- *Full-time Employees \$5,192 (not on summer salary)*
- *Post-Doctoral Scholars \$2,999*
- *PhD Candidates \$1,418*

Example:

The PI, a fully appointed faculty member, receives a 20.23% benefit rate through the year. Multiplying her salary for the first year by 20.23%, we request the amount of \$4,171 ($\$20,616 \cdot .2023 = \4171) for the first year, escalating by 3% in subsequent years.

CONTINUE LISTING FRINGE BENEFITS FOR EACH SALARIED PERSONNEL

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.

Example:

The total estimated amount of \$5,000 is budgeted for travel expenses to attend relevant conferences and workshops and present findings. This includes \$2,000 for Drs. Smith and Doe to travel to the NSF as required to present research results. It would cover airfare, hotel, and per diem. Dr. Smith also requests

\$3,000 total per year for both domestic with her graduate student. Domestic travel is budgeted to cover RT airfare, hotel, and per diem. Total requested for all four years is \$15,000. Possible conferences include the ACM Symposium on Mathematical Instruction Research, Bellairs Winter Workshop on Impact of Math in STEM for Girls, and the Canadian Conference on Computational Mathematics.

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 for which you are providing assistance for subsistence.
- 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 purchase computer supplies for instructing in math will include four handheld devices and pointers to service instruction. **MUST BE MORE SPECIFIC** It is estimated that these supplies will cost \$12,000 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 2 and 3 to publish the results of our study. We project that results will be verifiable and provide data that will produce information that will be disseminated through conferences and publications in journals. The amount of \$800 per year will cover journal page costs and production of posters for research meetings.

3. Consultant Services: *Please make sure that consultants are well justified and that you have also included a letter of intent for all consultants, with a scope of work. All consultants must be external to ECU. Neither ECU faculty nor staff can serve as a consultant on the proposed project.*

Example:

The PI will employ an outside source to provide evaluation and input into the impact of integrating mathematics and computer science for college and pre-college students. The evaluator will devote 5 hours per year to the project. The rate is \$200 per hour, for a yearly budget of \$1,000.

4. Computer Services: *Make certain that the need for any computer-related expenses are justified by the project, and make sure that you remember to include the cost of any software necessary for the project.*

Example:

ECU maintains a full-service computing environment to support research and instruction. For hardware, computing facilities have available four Sun Enterprise-250 servers (1-2 gb of main memory each), 3 Sun 240s (2 GBs of memory each), a NetApp file server (1 Terabytes), 45 linux servers dedicated to course support, and about 400 workstations. The cost for each Computer Science faculty member is \$620 and for each graduate research assistant is \$310, for a total of \$930 per year. Basic computer services are included in the overhead of the College of Arts and Sciences.

5. Subawards: *NSF requires subcontracts to submit separate budget with budget justification. If you have a subcontractor, request these items and ensure they submit a detailed budget and justification on the correct forms.*

Example:

A subcontract to NCSU in the amount of \$80,000 total for three years as described in the budget and budget narrative for the subcontractor. The PI of this subcontract is John Doe.

A second subcontract to Pitt Community College in the amount of \$47,000 for three years as described in the proposal is included. The PI of this subcontract is Janice Jones.

6. 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 Harriot College of Arts and Sciences policy of supporting doctoral students in full. Tuition is calculated at \$17,851 for FY14, and expected to escalate at 3% per year. We request 50% of the tuition per year, or \$8,925 for the first year, increasing at 5% in remaining years.

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

These rates vary by campus and generally are updated every year; they can be checked at the following website: <http://www.ecu.edu/cs-acad/grants/upload/F-ARates-2.pdf>

The Modified Total Direct Cost Base includes all direct costs consisting of all salaries and wages, fringe benefits, materials, supplies, services, travel and subgrants and subcontracts up to the first \$25,000 of each subgrant or subcontracts (regardless of the period covered by the subcontract or subgrant). MDTC shall exclude equipment, capital expenditures, charges for patient care, student tuition remissions, rental costs of off-site facilities, scholarships and fellowships.

Example:

Using DHHS negotiated rates, the modified total direct cost base of \$251,085 was multiplied by the negotiated rate of 47% in YR 1 and 47.5% in subsequent years to obtain the indirect cost of \$163,205 for the first rate.

BLANK TEMPLATE FOLLOWS

NSF Budget Justification

A. Senior Project Personnel Salaries and Wages

B. Other Personnel

C. Fringe Benefits

D. Equipment

E. Travel

a) **Domestic**

b) **Foreign**

F. Participant Support Costs

G. Other Direct Costs

a) **Materials and Supplies**

b) **Publication/Documentation**

c) **Consultant Services**

d) **Computer Services**

e) **Sub-awards**

f) **Other**

a. **Tuition**

b. **Rent of facilities**

c. **Workshop costs**

d. **Etc.**

H. Total Direct Costs

I. Indirect Costs

J. Total Direct and Indirect Costs