



Harvard University

The Faculty of Arts and Sciences

Budget Justification Job Aid

Last Updated: 6/7/2011

Phrases in Blue are instructions and information about types of costs.

Phrases in Black are recommended NSF Budget Justification headings and examples of budget items.

Phrases in Red are highly recommended for most budget justifications.

Budget Justification

PI: Professor X

Organization: Harvard University

Department or Center: Initiative for XYZ

Project Title: Very Important Long Term Study into Something that will Make the World a Better Place

BEFORE YOU BEGIN:

A WORD ON FEDERAL REGULATIONS REGARDING ALLOWABLE VERSUS UNALLOWABLE COSTS:

Any expenses directly charged to federal awards at educational institutions must be

ALLOWABLE. This means they are:

- Reasonable: A prudent person would pay this price (a \$50,000 toilet is NOT reasonable).
- Allocable: costs that are
 - incurred to benefit the specific sponsored project and
 - able to be assigned to the project with a high degree of accuracy
- Consistently Treated: Similar costs are normally treated as either Direct or Indirect across the University.
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UNALLOWABLE costs are anything not truly research related, including:

- fund raising, alumni relations, lobbying, defense and prosecution of criminal proceedings
- alcohol, entertainment, anything for personal use, and fines and penalties

IN GENERAL, THE BUDGET JUSTIFICATION SHOULD:

- follow sponsor proposal instructions as closely as possible, providing as much detail and justification as necessary
- be organized in the order of the detailed budget page
- give additional details about significant items summarized on the budget page
- explain why each of the items on the budget page is needed to accomplish the proposed research
- make it clear that all budget requests are reasonable and consistent with sponsor and Harvard policies

GETTING STARTED: If a multi-year proposal, include a phrase like:

Most costs are budgeted with a 4% increase per year.

Personnel Costs

Only Harvard employees should be listed under Personnel. If the person who will perform the work is a current Harvard employee, list his or her name, title, the amount of time he or she will spend working on the project, and what he or she will be trying to accomplish.

PLEASE NOTE: Avoid saying anything like “Person X will work Y amount of time at no cost to the sponsor”, because that is considered cost sharing. FAS doesn’t allow cost sharing unless the sponsor requires it in writing because it:

- reduces the flexibility PIs have to conduct other research when their effort is pledged to specific projects
- increases the requirements for auditable recordkeeping; and
- has an adverse effect on the University’s recovery of indirect (Facilities and Administrative) costs.

More information: http://www.fas.harvard.edu/~research/policy/cost_share.html

If the sponsor has a written requirement for cost sharing, download the Harvard Cost Sharing Form at http://www.fas.harvard.edu/~research/forms/cost_share_id_app-FAS.xls and attach it to the Dean’s Approval Form when submitting the proposal for FAS/OSP review.

Senior Personnel

This category should include anyone who is a PI, Co-PI, Co-I, or Project Director. A Co-PI must have FAS PI rights (usually faculty¹). A Co-I can be anyone who is necessary to the project.

Principal Investigator

IF NO SALARY IS REQUESTED, be careful not to quantify the amount of time and effort the PI will spend because this constitutes an effort commitment, which means you and your PI must track and certify it later and it would be cost sharing. Suggested phrases are below:

- Professor X will direct all research activities associated with the project [specify...]
- Professor X will oversee [all aspects of] the project.
- Professor X will participate in the project at every stage [specify...]
- Professor X will provide scientific direction and supervision for the project [including...]

IF SALARY IS REQUESTED, use something like the phrase below:

Dr. X (Principal Investigator) will provide scientific direction and supervision for the project [including...]. Salary support is requested for 2 summer months for years 1 through 5 of the project. One summer month represents 1/9th of the PI’s academic year salary.

IN EITHER CASE, ONE OF THE FOLLOWING EXPLANATIONS IS RECOMMENDED:

The University pays salary to full-time faculty members in the FAS based on a nine-month academic year, with the understanding that they will ordinarily teach and conduct research freely and flexibly and not make substantial, quantified cost-sharing

¹ More information on PI and Co-PI eligibility is on page 11 of “Managing Your Research” http://www.fas.harvard.edu/~research/managing_your_research/index.html

commitments of time and effort to specific organized research projects. If allowed by outside sponsors, faculty members may request "supplemental salary" from sponsored funds up to the equivalent of three months' compensation.

Alternatively, some investigators have chosen to describe the nature of their participation--still without specifying a quantifiable commitment of effort--in greater detail, with language such as...

The Principal Investigator will be responsible for the overall planning of the projects, defining experimental directions, interpreting data, communicating with collaborators, and reporting project results to the sponsor and the scientific community in the form of progress reports, papers, and presentations. In addition, the PI will be responsible for mentoring participating student researchers.

Other Personnel

Common Harvard personnel types budgeted include: Professionals Exempt from overtime, Research Associates ("Other Academic Salaries, Object code 6030"), Postdoctoral Associates, Graduate Student Research Assistants, Undergraduate Research Assistants, and Technicians.

Please list researcher, appointment title, percentage of effort, and what they'll be doing. Examples:

Professional Exempt Staff:

We request 50% of support for Dr. X, Project Manager, who will develop work plans and monitor the daily progress of the project.

We request 7.2 months (60%) support throughout the project for Ms. Y, Professional Psychometrician, who will design tests and carry out advanced data analyses of test and survey results.

Research Associate: Dr. Jane Doe, Research Associate Testing Coordinator, will oversee recruitment of High School teachers and coordinate the administration of student tests and surveys. Her effort is calculated at 75% for years one through three of the project.

Postdoctoral Associate:

Dr. Bruce Boston, Education Specialist, will contribute to the development of the survey questions and interpretation of test and survey results. His effort is estimated at 20% throughout the project. These are HU "Employee Postdocs". Non-HU postdocs (sometimes called "Stipendee postdocs") should not be charged to grants.

Graduate Student Research Assistant:

Mr. John Doe, Graduate Student Research Assistant, will write code for the teacher online survey and maintain the survey database. His effort is estimated at 75% throughout the project.

Tuition remission expenses will be charged in direct proportion to the total percentage of effort expended on this project.

Graduate Students are paid in two different ways, neither of which carries fringe benefits:

- In Life and Physical Science departments, graduate students are normally appointed as Research Assistants (RA's) by their academic departments and salaries are set by the Graduate School of Arts and Sciences.

- In Social Science and Humanities departments, graduate students are normally paid on the Temporary payroll and work up to 20 hours per week. Rate of pay is up to the department and generally ranges from \$15-\$17 per hour.

Research Assistant Tuition Remission: When appointed as RA's (as in the life and physical sciences example above), graduate students may also receive tuition paid from the grant. See Other Direct Costs- Other below for more information.

Undergraduate Student:

Undergraduate Student Research Assistant to be hired will work 15 hours per week during the academic year and 35 hours per week in the summer months logging, scanning, and compiling all test forms. The hourly rate will start at \$12.

NOTE: The UG above is a temporary worker in the summer and the salary will be assessed a minimum fringe benefit rate, which will need to be detailed in the fringe benefits section. The percentage is listed in fringe rate tables on the next page as "Temporary, Unenrolled".

The going rates for undergrads are \$12-\$15 per hour.
Academic year work is limited to 20 hours per week and will NOT carry fringe.

Non-Exempt Staff

Mr. Craig Cambridge, Administrative Assistant, will spend 50% of his time assisting Testing Coordinator with tracking status of tests, cleaning and organizing scanned data files for analysis, reading cleaned files into SPSS/SAS, running simple statistics, assembling data into graphs and tables for reporting purposes.

NOTE: Administrative staff can only be charged to grants in special cases. If the proposal contains administrative salaries and is for federal funding, an administrative checklist will need to be submitted with the Dean's Approval Form. Download the checklist at http://www.fas.harvard.edu/~research/forms/admin_checklist.pdf.

Fringe Benefit Rates

Use the latest fringe rates and vacation assessments for the types of personnel in your proposal. The latest rates may be found on the FAS RAS website at <http://www.fas.harvard.edu/~research/policy/fringe.html>. Please use the exact dates that the fringe is in effect. Fringe rates are set by Harvard's fiscal year. Projects usually span Harvard fiscal years, so fringe costs must be pro-rated. An easy way to pro-rate is to use the Current Budget Template which is downloadable on the FAS RAS website at: http://www.fas.harvard.edu/~research/training/documents/Current_Budget_Template.xls

Please check all rates used to calculate fringe benefits in the project proposal budget for all applicable years. For fellowship grants that do not cover fringe benefits, please include a cost sharing form (if Harvard funds) or memorandum (if another sponsor's funds) indicating the source of support for fringe benefits. The fringe and vacation assessment rates for Harvard FY 2012 and FY 2013 are indicated on the form. The FY12 and 13 detailed fringe rates and vacation assessments are also broken out in tables available on [the RAS website](#). The FY 2013 estimated rates should be used for all years beyond 2013. If a project spans fiscal years with different rates, the fringe rates should be pro-rated.

Fringe Benefit & Vacation Assessment Rates (as applicable)

As of [insert latest University Fringe Agreement date here²], Harvard's University Area fringe rates are as follows: [note appropriate fringe rates and vacation assessments³ and the period the rates cover for all personnel being requested]

If exempt and/or union employee salaries are being requested, please also use something like:

Harvard applies a vacation assessment to regular salary of Exempt and Unionized employees. Vacation assessment is budgeted on forty eight weeks of salary for exempt staff and on forty nine weeks of salary for non-exempt staff.

Equipment

Equipment is defined as a single item, a multiple-purchase "system" or a "fabrication" with a useful life of more than one year and a unit cost of at least \$5,000. A "system" can be made up of many items that must interact with each other and, when added up, total \$5K or more. A fabrication is just like a system except it cannot provide useful results right away.

Overhead is not taken on equipment.

Example: We plan to purchase additional computer nodes (CPUs) for Beowulf cluster HYDRA during Years 2 and 3. These are AMD Opteron units at a cost of \$3,000 each (plus shipping), and are needed for the intensive computing we plan to do.

All equipment purchased on federal funds must be pre-approved by the sponsor and/or OSP so equipment not requested in the original budget will have to be requested later and the budget will need to be revised.

Travel

Whenever possible, list "who, what, where, when, and why".

Airfare must be coach class, and, if paid by a federal grant, booked on a US carrier whenever possible.

Mileage, exchange, and per diem rates can be found on Harvard's travel website at: http://vpf-web.harvard.edu/ofs/travel/rei_mil.shtml

Domestic Travel

We request support for the PI and Research Associate [insert name] to attend the American Astronomical Society conference in project years 3-5 to present results. Meeting cities are not yet set. Airfare is estimated at \$500 per person per trip. Per Diem is estimated at \$200 a day for 5 days per conference.

Foreign Travel

We request support for Dr. X to travel to Chile to perform observations on the Paranal Observatory Telescope. Airfare is estimated at \$1000. Per Diem is \$215 a day for 15 days.

² Formal university area rate agreement is located at <http://www.fas.harvard.edu/~research/policy/fringe.html>

³ Latest fringe rates are located at: <http://www.fas.harvard.edu/~research/policy/fringe.html>

Participant Support Costs

This budget category refers to the costs of stipends, transportation, per diem, and any other costs associated with participants or trainees going to proposed conferences or meetings. These costs cannot be for employees of Harvard. They usually aren't allowed to carry overhead and cannot be re-budgeted without sponsor approval. If awarded, they are set up as a separate Subactivity. Example:

Twelve High School teachers will be convened in Cambridge for three days each summer to be trained in overcoming pupil science misconceptions. Each teacher will receive a \$200 stipend. Travel is estimated at \$300 per teacher. The Cambridge summer per diem is currently \$250. Conference costs are estimated at \$500 for handouts and other materials.

Other Direct Costs

Remember—costs can only be charged directly to a federal grant if they can be readily and specifically identified with that particular project.

This is especially true of costs that are normally considered indirect costs such as:

- Office supplies
- Personal Computers
- Books and Subscriptions
- Memberships
- Local Phones and cell phones
- Postage and FedEx
- Parking
- Printing and Photocopying

However, if the costs above are essential to the project's research and will be used solely for the project, then they may be budgeted—**when listed in budget with proper justification.**

So, always be as specific as possible. List types of purchases, estimated costs per year and, especially, why purchases are essential to and dedicated to the research on this project.

Examples of some justifications are below:

Materials and Supplies:

Non-standard supplies: Optiscan format test forms for administration to students and teachers. Year 1 only. Three tests for Chemistry and another 3 for physics. We expect to administer the tests to 25,000 high school chemistry students and another 25,000 high school physics students to participate from 250 schools across America. (ordinarily this would be for a non-research sponsored project).

Computer: Laptop needed for project-dedicated observations and travel between the telescope in Chile and Harvard.

Animal Purchase Costs: For maintaining and backcrossing lines: 60 lines x twenty C57BL/J females x \$11/female = \$1,320/year for 120 mice.

Animal per diem is under Other Direct Costs- Other below.

Up-to-date Animal purchase rates can be found through the FAS Office of Animal Resources at 617 496 9989.

Laboratory Supplies: Glassware and plastic ware, chemicals, and radioactive chemicals (32P-labeled nucleic acids).

Publication Costs: We request a small amount for page charges. These costs are estimated based on the publication rate of the PI over the past year and are budgeted for years 3 and 4 only.

Consultant Services: This is where the services of non-Harvard professionals (if paid by purchase order) and their associated fringe rates might go. Examples:

Roberta QuantumLearning, President, Quantum Learning Network (QLN) will consult with project personnel on an ongoing basis, 4 trips per year, 5 days each in Cambridge. Dr. QuantumLearning's compensation rate is \$300/day. Airfare is estimated at \$500 per trip. Per diem in Cambridge ranges from \$250-\$284 throughout the year.

Stipends for 10 Science Education Experts as Advisory Board members at a rate of \$200 per day, meeting one day each year in years 1-3 of the project. Five experts will be local and will receive mileage and the \$200 per day stipend. Five will be outside of the local area and will be reimbursed for their travel (\$400 each), lodging and meals (\$284 Cambridge per diem), as well as the \$200/day stipend.

Subawards

Please list subaward institution and a short description of the aspect of the project they will perform. Examples:

MIT will carry out the IPB test and ProtoExist2 ASIC design and is expected to need \$35,000 each year.

UCSD will design and build the Gondola pointing system, starting in year two and is expected to need \$20,000 per year.

Harvard also requires a separate

- statement of work
- budget
- budget justification
- negotiated fringe and overhead rate agreement, and
- an authorized signature of approval from the subaward institution.

Other

Mailing Services: Needed to sort, pack and mail all test sets to teachers. Estimate is based on past experience with this service. Use of service is necessary because the volume of materials exceeds the capacity of any in-house resource.

Tuition Remission: 75% of Mr. John Doe's tuition remission will be charged, **in proportion to his expected effort on this project.**

When appointed as Research Assistants (as in the life and physical sciences example in the Personnel costs section of this document), graduate students may also receive tuition paid from the grant. If this is the case, any tuition remission (i.e. tuition charged to grants as part of their compensation) they will receive must be indicated here.

The Graduate School of Arts and Sciences sets tuition fees and tells the student's academic department. The academic department may have non-

sponsored funds set aside to pay all of the student's tuition, in which case there will be no tuition remission charged to the grant.

Any tuition charged to any grant must be proportional to the percentage of effort the person spends on that project. So if Research Assistant X is dedicates 75% of his effort to Project Y and 25% to Project Z, then 75% of Research Assistant X's total tuition remission should be charged to Project Y and 25% to Project Z. If the percentage of effort changes, the tuition remission percentages have to change also.

No overhead is charged on tuition remission.

A Final Note: For NIH budgets, the amount of Stipend and Tuition Remission paid cannot be more than the NIH National Research Service Award (NRSA) first-year Postdoctoral Fellowship stipend (\$36,996 as of 2/1/08). For the latest information, see <http://grants1.nih.gov/grants/guide/notice-files/NOT-OD-06-093.html>

Bottom Line: *Check with the academic department and when in doubt, budget! If the project doesn't end up getting charged tuition remission it is possible to spend it on something else.*

Animal Per Diem: Mouse maintenance for an average daily number of 60 cages at \$.81/cage, per diem, annually.

Up-to-date rates can be found through the FAS Office of Animal Resources at 617-496-9989.

Animal Shipping Charges: \$925 to comply with regulations for shipping live animals. Projection is for 120 mice, based on shipper's average charges in recent year.

Fedex and Priority Mail: We will provide teachers and professors with FedEx return shipping labels to facilitate the return of all tests and to avoid these 500 volunteers having to pay shipping costs.

Long Distance Telephone Calls: We will be calling a very large number of teachers in order to recruit the 500 volunteers and will be speaking with volunteer teachers numerous times throughout the project.

Indirect Cost Rates (F&A)

Indirect Cost rates are also called Facilities and Administrative rates (F&A) or overhead rates. These rates are negotiated with the federal government on a periodic basis. Indirect cost rates are meant to recover all of the "hidden" costs of doing research like building, utility and maintenance costs, and administrative costs (e.g. the costs of purchasing and controller offices).

The federally approved Facilities and Administrative rates⁴ are as follows:

	FY12	FY13	FY14	FY15	FY16	FY17
Type	7/1/11-6/30/12	7/1/12-6/30/13	7/1/13-6/30/14	7/1/14-6/30/15	7/1/15-6/30/16	7/1/16-6/30/17
Research and Instruction	69%	69%	69%	69%	69%	69%
Other Sponsored Activity	34%	34%	34%	34%	34%	34%
Off-Campus Activity	26%	26%	26%	26%	26%	26%

These rates do not apply to equipment, tuition remission, or participant support and are taken only on the first \$25,000 of expenses charged to each subaward.

Please Note: Overhead rates change every four years or so, so be sure to check the RAS website for the latest rates (<http://www.fas.harvard.edu/~research/policy/overhead.html>).

Total Requested: \$

Modify the suggestion above as needed for your project—most projects, for instance, do not have participant support so you could remove that phrase. You could also remove unneeded period columns in the above table.

Have a suggestion or need more information?

Email FAS RAS at fasrsrch@fas.harvard.edu.

⁴ The University Area federally negotiated Facilities & Administrative rates may be found at: http://vpf-web.harvard.edu/osp/quick_links/current_rates/federal_cost_rates.php