



12/11/2019

# Preparing a Proposal Budget Toolkit

Prepared by the Office of Research,  
Sponsored Programs



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# Getting Started

## Understand the Task

Before starting the proposal budget, begin understanding the task by reviewing the following sections:

- Download and review the [Key Terms](#)
- [Proposal Budget Overview](#)
- [General Guidelines/Cost Accounting Standards](#), including [UC Davis Charging Practices](#)
- [Specific Sponsor Rules](#)
- [Department and School or College Specific Rules](#)

### Proposal Budget Overview

A budget is a financial proposal that reflects the work proposed. It outlines the expected project costs in detail and should mirror the project description. A budget is presented as a categorical list of anticipated project costs representing the researcher's best estimate of the funds needed to support the proposed work. View the budget as a flexible tool to help the department administrator and scientific team plan for the project and understand what can and cannot be accomplished with the available funding. Sponsors utilize the budget during the technical review of the project to evaluate the reasonability of the project costs. To ensure enough funding will be available to complete the scope of work, prepare a detailed budget even when sponsors only require modular or lump sum budgets. Having the details readily available is beneficial if the sponsor requests additional details during the review process or at the just-in-time (JIT) phase, requiring a short-turn-around time.

### General Guidelines/Cost Accounting Standards

Researchers at UC Davis have a variety of cost accounting standards they must adhere to when spending extramural funds, including [Office of Management and Budget \(OMB\) – Uniform Guidance](#) and [UC Davis Charging Practices](#)

#### Office of Management and Budget – Uniform Guidance

Because the majority of UC Davis' research funding comes from the federal government, most of our cost accounting standards are based on federal regulations. These are listed in circulars provided by the [Office of Management and Budget](#) (OMB) in the executive branch of the federal government. All federal sponsor policies that govern grant management (such as the NIH Grants Policy Statement) are based on the [OMB Uniform Guidance](#), which establishes principles for determining allowability of costs applicable to grants, contracts and other agreements with educational. Per Uniform Guidance, all costs in the budget should be **allocable, reasonable and allowable**.

1. **Allocable** costs are clearly associated with the particular project. For example, chemicals purchased for use on a specific project should only benefit that project. Restocking general chemical supplies used for a variety of purposes would benefit many projects and may not be easily allocated to individual projects. Consider whether the cost will be incurred solely to advance the work under the sponsored agreement. For example, travel costs incurred for the Principal Investigator to obtain data on the topic of the research would generally qualify, but travel costs to attend a conference on a topic not related to the research would not.
2. **Reasonable** costs would generally be accepted as necessary per a “prudent” person’s review. For example, the purchase of a laptop computer for field research by a graduate student researcher on the project would generally be accepted as reasonable, while the purchase of a laptop for non-project related coursework by a graduate student researcher would not.
3. **Allowable** costs are permitted by institutional and sponsor regulations and are consistent with UC Davis charging practices. There are some costs which are specifically prohibited from being charged to a sponsored project, such as alcoholic beverages, advertising, lobbying or entertainment charges. These are known as “unallowable” costs. It is important to ensure that a cost is allowable before including it in a proposal.

View Frequently Asked Questions (FAQs) and training modules on the [US Chief Financial Officers Council Uniform Guidance webpage](#).

## UC Davis Charging Practices

UC Davis Charging Practices take into account the rules of our largest sponsor, the federal government, and the policies and procedures set forth in the University of California Office of Research Policy Analysis and Coordination [Contract and Grant Manual](#). UC Davis Charging Practices are based on [Cost Accounting Standards Board Areas of Consistency \(CASB\)](#) and [UCOP Contracts and Grants Manual, Chapter 7](#).

### *Cost Accounting Standards Board Areas of Consistency*

The federal [Cost Accounting Standards Board \(CASB\)](#) has the following four cost accounting standards applicable to UC Davis which help to clarify what costs must be treated consistently.

- **Estimating, Accumulating and Reporting Costs:** In order to permit comparisons of estimates to actual costs, the expenditure classifications used to estimate costs in contract and grant proposals must be consistent with those used to accumulate and report costs.
- **Allocating Costs Incurred for the Same Purpose:** Costs incurred for the same purpose, in like circumstances, must be treated consistently as either direct or indirect costs.
- **Accounting for Unallowable Costs:** Unallowable costs must be identified and accounted for independently from allowable costs.
- **Cost Accounting Period:** Consistent use of the same cost accounting period for purposes of estimating, accumulating and reporting costs is required. At UC Davis, this is the Fiscal Year (FY) which occurs July 1- June 30.

### *UCOP Contracts and Grants Manual, Chapter 7*

[UCOP Contracts and Grants Manual, Chapter 7](#) provides details about the University of California's (UC) policies and procedures related to budgets and expenditures. This chapter includes details about what costs are allowable, justifying and documenting expenditures, cost transfers, fixed price agreements and service facilities. Many of these are similar to the federal guidelines. However, it is important to read through these in order to identify areas where UC's policies differ from (and are more restrictive than) the federal guidelines.

## Specific Sponsor Rules

In general, each sponsor agency or entity has specific guidelines about how the funding they provide can be spent. Below is general information based on the type of sponsor providing funding:

- [Federal](#)
- [State of California](#)
- [Private](#)

## Federal Sponsors

Many federal sponsors, such as the National Science Foundation (NSF) and the United States Department of Agriculture (USDA), have guidelines under the [Federal Demonstration Partnership \(FDP\)](#). The FDP is an association of federal agencies, academic research institutions with administrative, faculty and technical representation and research policy organizations working to streamline the administration of federally sponsored research. Through their partnership with federal agencies, the FDP has developed costing guidelines which are consistent throughout the various participating federal agencies. As a member of FDP, UC Davis is able to utilize these guidelines. In addition to the standard guidelines through the FDP, each agency often has additional restrictions. These are detailed in specific funding announcements and sponsor specific general guidelines. For example, NSF's funding announcement states: "Proposals submitted in response to this program announcement should be prepared and submitted in accordance with the general guidelines contained in the NSF Grant Proposal Guide."

## State of California Sponsors

[Assembly Bill 20 \(AB20 2009-2010\)](#) allowed for model contract terms for research, training and public service projects funded by State of California agencies and performed by the UC and California State University systems. However, not all State agencies have negotiated a model agreement. Check each funding announcement and funding agency website to determine whether there are any restrictions and consult with Sponsored Programs if terms and conditions differ from AB20. Keep in mind that if the dollars are federal flow through (meaning some or all project funding is federal), then both federal and state agency guidelines apply.

### **Private Sponsors**

Private sponsors often have the most restrictions on how money can be spent, especially concerning indirect/overhead costs. Because not all private sponsors list their costing restrictions in their funding announcements, review the sponsor's website for any other guidelines. With any sponsor, if you are unclear about whether a cost is allowed, call the contact person listed in the funding announcement or on the sponsor's funding website.

### **Department and School or College Specific Rules**

Some UC Davis departments and schools/colleges have additional rules that must be followed when preparing a proposal budget. For example, there may be requirements regarding effort commitment and cost sharing. Consult with the contract and grant resources at the department and school/college level to gain an understanding of any rules that must be adhered to in addition to the rules discussed above.

## Plan/Outline the Budget

### Discuss the Budget with the Principal Investigator

Learn more from the Principal Investigator about the proposed project before beginning budget development. Make sure to obtain any materials needed to begin the budget development process, such as the funding announcement, any other sponsor guidelines and an outline of the proposed project. A checklist, such as the Sponsored Programs [New Proposal Checklist](#) can be very helpful in organizing the proposal preparation process including developing the budget. As the Principal Investigator provides clarity regarding potential projects costs, begin an outline of the budget categories and develop a list of specific budget line items. This list should include all of the things and people the researcher will need for the project to be completed. Before these items are compiled into a budget, evaluate which items will be allowed on the budget and in which budget category they should be classified. Principal Investigators can also use this checklist to help organize the information that the department administrator will need to provide budget assistance.

### Review the Sponsor Guidelines

Read the funding opportunity announcement, program guidelines and the general sponsor rules to make certain the budgeted expenses are allowable. It may be helpful to complete the [Call for Proposals Checklist](#) while performing this step. This tool helps identify budget areas to pay special attention to and sponsor restrictions. For example, certain expenses may not be allowed, others may be required (such as travel to meetings) and some may have limits.



What questions should I consider while reviewing the sponsor guidelines?

Is there a maximum amount of funds that can be requested from the sponsor? If so, is it a total cost limitation (direct plus indirect costs) or a direct cost limitation? Are there other restrictions in the solicitation regarding what must be charged, such as travel to an annual meeting? Or does it list specific costs that cannot be charged such as Principal Investigator salary? Keep the limitations in mind or make a note of them, so they can inform your work as you develop the budget.

### Determine the Project Period

The project period is important as it determines what fringe benefit rates, Facilities and Administration (F&A)/indirect cost rates and salary amounts to use. Project periods may be specified in the solicitation (earliest start date), the Principal Investigator may have a specific project period in mind (season or event dependent) or there may be start and end dates specified by the sponsor. Usually the start date is within six to nine months of submission. However, this varies greatly based on the sponsor and funding opportunity.



When using the OR Budget Templates, the project periods effect the calculations for Composite Benefit and F&A rates and all fiscal year escalations.

### Use Current Templates and Rates

It is important to use the current templates and rates when preparing proposal budgets. The current F&A and Fringe Benefit Rates can be found on the [Sponsored Programs website](#). The [OR Budget Templates](#) include the current rates and tuition fees. Always download a new version before starting your budget to ensure the current rates and fees are applied. Download the Budget Sheet FAQs for instructions on using the templates.

If a sponsor requires a specialized budget or cost/business proposal, contact Sponsored Programs at [proposals@ucdavis.edu](mailto:proposals@ucdavis.edu) to request guidance and samples.

## Prepare the Budget

### Direct Costs

Direct costs benefit the specific project for which the budget is written, are necessary to complete the project and are charged or recharged directly to the sponsored project. Direct costs on a project will vary according to what is in the actual program or project.

### Personnel

A major component of most budgets is personnel. The budget category "salaries and wages" is designed to account for **ONLY** UC Davis faculty or staff. Non-UC Davis employees will be listed on their subaward budget or in the consultant section of the UC Davis budget, as appropriate.

#### *Determine the Personnel Needs*

Senior/key personnel are the “non-replaceable” expertise on the project. They are usually faculty level investigators, but may also include others at the discretion of the Principal Investigator. Common types of senior personnel include the following:

- **Principal Investigators or Project Directors** will design and conduct the project and have overall responsibility for its compliance and its success.
- **Co-Principal Investigators often** have equal administrative authority with the Principal Investigator. Sponsoring agencies have varying guidelines for the number of Principal Investigators. For example, NSF allows one overall Principal Investigator plus four co-PIs. While, NIH will allow multiple principal investigators (PIs) but no co-Principal Investigators (co-PIs).
- **Co-Investigators** are senior personnel not in the official Co-PI or PI role. This role denotes a lesser administrative or management role for the project but is not scientifically diminutive.
- **Consultants** offer advice, but do not have responsibility for completing the scope of work of a project and are often referred to as providing a “brains and briefcase” contribution. A UC employee **should not** be listed as a consultant on a proposal being submitted from UC Davis. See the [Consultants](#) section for more information.
- **Unpaid collaborators** may be integral to the project and listed as senior personnel or may offer occasional advice. It is important to find out their role on the project before determining which way to classify. If a non-paid collaborator will be senior personnel and is employed outside of UC Davis, obtain a letter from their university or institution approving the collaboration. This allows their institution to record committed effort and approve use of facilities for the project.

More details are available on the [Senior/Key Personnel Descriptions](#) table prepared by Sponsored Programs.

#### *Calculate Salaries and Wages*

Use actual salaries to calculate the salary costs if possible. This information can be provided by the staff that process payroll or manage department accounts. If the position is not filled, use the relevant salary listed on the appropriate salary scale. When listing the salary of an employee use the Institutional Base Salary (IBS) unless otherwise indicated by the sponsor. This is regular compensation (not including benefits, bonuses, overtime, or stipends, etc.) that the University provides for an individual in a given classification.

- [UCOP Academic Salary Scales](#)
- [UC Davis Staff Salary Scales](#)

Determine whether there are any known upcoming wage adjustments or merit increases for that person or classification, such as a new collective bargaining agreement signed or upcoming promotion that would increase wages during the project period. If there is not a specific increase known, some sponsors will allow the UCOP standard 3 to 5% escalation rate.

## Annualizing Salary

Salary is often annualized at UC Davis to determine annual effort commitment if salary will exceed a sponsor-imposed salary cap, such as the National Institutes of Health (NIH) cap. Annualized salary is a person's salary over 12 months and is different than someone's 9- or 11-month appointment. If the person has a 12-month appointment their base salary is the same as their annualized salary and no calculation is needed.

Appointment Type	Appointment Months	Summer Months
Academic Year	9	0 to 3
Fiscal Year	11	Up to 1
Calendar Year	12	0 (included in appointment months)

Calculate the Annualized Salary as follows.

1. Calculate a person's one-month salary as follows.

$$\text{Salary} \div \# \text{ of Appointment Months} = \text{One Month Salary}$$

$$\text{Example: } \$100,000 \div 9 = \$11,111$$

2. Multiply the one-month salary by 12 months as follows:

$$\text{One Month Salary} \times 12 = \text{Annualized Salary}$$

$$\text{Example: } \$11,111 \times 12 = \$133,333$$

*Short Cut Formula:*

$$\text{Salary} \div \# \text{ of Appointment Months} \times 12 = \text{Annualized Salary}$$

$$\text{Example: } (\$100,000 \div 9) \times 12 = \$133,333$$

### ***Determine/Calculate Effort Commitment***

The proposal budget will include the effort committed to the project for Principal Investigators, and often, other personnel. Indicate the amount of effort each person will work on the project. At minimum, Uniform Guidance requires Principal Investigators to commit some level of reasonable effort to each federal research award. Unless a specific level of effort is required by the program or sponsor, the Principal Investigator is responsible for determining what constitutes a reasonable level of effort. Non-federal sponsors may also require some level of committed effort even if the university does not. It is therefore important to read the sponsor and program guidelines to determine effort requirements. Remember that effort levels committed to a project become incorporated into the conditions of the award. This means that key personnel are responsible for ensuring they meet their effort commitment. Uniform Guidance requires a certification as to the actual effort spent by all key personnel that committed effort to a sponsored project in a proposal. At UC Davis, this is done through an online effort reporting system. For more details about effort reporting, view the [Effort Commitment](#) and [Cost Share Tracking](#) pages.

Sponsors may require that effort is reported as a percent of annual commitment or by the number of person months he/she will commit annually.

**If a person has a 12-month appointment and will provide the same level of effort for the entire project year, no additional calculation is needed to determine annual effort. The percentage of effort or person months indicated by the PI will equal annual effort.**

**Convert annual effort in percent format to Person-months format** as follows:

$$\text{Annual Effort \%} \times 12 = \text{Effort in Person} - \text{months}$$

Example: Professor Smith is commitment 10% effort for the project year and has a 12-month appointment.

$$10\% \times 12 = 1.2 \text{ Person-months}$$



If an investigator is committing effort only during certain months of the year, such as during the Summer or Academic year, calculate their effort commitment as follows.

1. Determine the number of months they are working.
  - a. If the investigator is committing effort during their Academic Year, use the number of Academic months of their appointment.
  - b. If the investigator is committing effort during their Summer months, use the number of summer months they may work.
  - c. If the investigator is committing the same level of effort for the entire year, use 12.
2. Calculate the annual commitment effort:

$$(\text{\#of Applicable Months} \times \% \text{ Effort Provided}) \div 12 = \text{Annual Effort\%}$$

Example: Professor Davis will commit 10% effort for the first 6 months of the year.  
 $(6 \times 10\%) \div 12 = 5\% \text{ Annual Effort}$

If the person will be commit differing levels of effort during certain months of the project year, calculate the annual effort commitment as follows.

1. Determine the number of months they are working.
2. Calculate the % of annual effort using partial year effort:

$$(\text{\#of Applicable Months} \times \text{Effort\%}) \div 12 = \text{First Effort\%}$$

Example: Dr. Daniels is committing 3% effort during Academic Months (AY). She has a 9-month appointment.  
 $(9 \times 3\%) \div 12 = 2.25\%$

3. Calculate the % annual effort using a second partial year effort:

$$(\text{\#of Applicable Months} \times \text{Effort\%}) \div 12 = \text{Second Effort\%}$$

Example: Dr. Daniels is committing 10% during Summer Months (SMR). She has a 9-month appointment and will work 1 month during the summer.  
 $(1 \times 10\%) \div 12 = .83\%$

4. Add the % effort for the academic months and the % effort for the summer months.

$$\text{First Effort \%} + \text{Second Effort\%} = \text{Annual Effort\%}$$

Example:  $2.25\% + .83\% = 3.08\%$

*Short Cut Formula:*

$$[(\text{\# of AY Months} \times \% \text{ Effort for AY}) \div 12] + [(\text{\# of SMR Months} \times \% \text{ Effort for SMR}) \div 12] = \text{Annual Effort\%}$$

**Calculate Salary to Charge to the Grant**

1. Calculate the salary to charge to the grant annually using either:
  - a. Annual Effort Percent

$$\text{Annualized Salary} \times \% \text{ Annual Effort} = \text{Annual Salary to Charge}$$

Example:  $\$133,333 \times 2.7\% = \$3,600$

- b. Person-months effort

$$\frac{\text{Salary}}{\text{SalaryBasis}} \times \text{Person - months Effort} = \text{Annual Salary to Charge}$$

Example:  $\$133,333/12 \times 0.324 \text{ (calendar-months effort)} = \$3,600$

### *Fringe Benefits*

Fringe benefits are listed on a proposal budget as a set percent of salary. Unlike salary and wages, do not apply any additional escalation to rates listed on the composite rate schedule published by Costing and Policy. A 3% annual escalation may be added to fringe benefit rates in years **not yet** listed on the composite rate schedule. Always view the current [Composite Benefit Rate schedule](#) before calculating the fringe benefits. Some common codes are as follows:

CBR Group	Personnel Category	FY 19/20 Rate	FY 20/21 Rate
HCOMP Faculty & SMG	SOM faculty and Senior Management	25.3%	26.1%
Nurses and Physicians	Nurses, Nurse Practitioners and Clinical Physicians	30.2%	31.1%
Faculty, Acad, MSP, Safety	Non-SOM faculty; Other Academic appointment such as project scientists and specialists; MSP positions such as directors; and safety services such as Fire and Police officers.	38.3%	39.4%
Faculty Summer Salary	Faculty Summer Salary	10.2%	10.5%
All Other Staff	Staff including analysts, SRAs, programmers	52.7%	54.3%
Service Staff	E.g., Janitors	65.4%	67.4%
Postdoc Employees	Postdocs	25.9%	26.7%
Grad and Undergrad	GSRs and Undergrads	1.9%	2%
Limited Benefits	Employees not eligible for full benefits (e.g., FTE % is too low)	17.2%	17.7%
No Benefit Eligibility	E.g., not eligible based on appointment type	3.6%	3.7%

**Calculate the annual fringe benefits to charge** as follows.

1. Calculate the annual salary to charge to the grant (see above section).
2. Determine the fringe benefit rate (see above table).
3. Calculate the annual fringe benefits to charge.

$$\text{Annual Salary Charged} \times \text{Fringe Benefit Rate} = \text{Annual Fringe Benefits to Charge}$$

$$\text{Example: } \$3,600 \times .389 = \$1,400$$



The OR Budget Templates include the current fringe benefit rates and will calculate the fringe benefits to charge based on the selected.

## Equipment and Capital Assets

Equipment or other capital assets receive special treatment in the budget. The three most common capital costs are:

- [Equipment](#)
- [Software](#)
- [Renovations/Facilities Improvements](#)

### Equipment

According to [UC Davis PPM 350-50](#), equipment is:

- Non-expendable (not consumed in use),
- Standalone (not built into a wall; it has to be moveable),
- Has normal useful life of one year or more and
- Qualifies as tangible property with an acquisition cost of \$5,000 or more.

The following can be included in the equipment total when a new piece of equipment is initially purchased:

- ✓ Invoice price of equipment, including any modifications, attachments, accessories or auxiliary apparatus necessary to make it usable for the purpose for which it was acquired. Attachments, accessories and auxiliary apparatuses must meet the following requirements:
  - Must be permanent dedicated components of the equipment
  - Cannot function as independent stand-alone items
  - Cannot roam from asset to asset
  - Must have an expected lifespan of at least a year
  - Cannot be replacement parts
- ✓ The cost to put it in place (excluding renovations)
- ✓ Minor spare parts and software acquired with the initial purchase if they are not itemized separately
- ✓ Taxes, freight and installation

An add-on can be considered equipment if it is an intricate functioning part of the equipment, significantly extends the useful life of the inventorial equipment or significantly increases capacity, productivity or output of the existing inventorial equipment and if the cost of the add-on is \$5,000 or more. These must be specifically approved by the sponsor to be allowable.

Items that are NOT considered equipment include:

- ✗ Replacement or spare parts purchased subsequent to the initial equipment acquisition unless they significantly extend the useful life, increase productivity or increase the value of the equipment.
- ✗ Repairs are considered normal, regularly recurring disbursements to keep property in an efficient operating condition.

### Software

Generally, software expenses will be budgeted one of two ways.

- 1) Capitalized and excluded from F&A. For example:
  - a. Software purchase (not license) price is \$5,000 or more per copy (consultant costs associated with readying the software for use may be included).
  - b. Licenses where no period is mentioned (i.e., perpetual licenses) if the cost per license is \$5,000 or more and the useful life of the license exceeds one year.
  - c. Software costs included with the purchase cost of hardware (not separately identified on the vendor's invoice) will be capitalized as hardware costs.
- 2) Treated as supplies and subject to F&A. For example:
  - a. Annual software license fees and maintenance costs. This applies to software "leases" where the university does not own the software, but may operate it for as long as the license/maintenance fees are paid.

View the [Equipment Management webpage](#) for further information.

### *Renovations/Facilities Improvements*

These are rarely included in proposals, but there are specific solicitations for these costs. For example, animal facilities renovation grants or upgrades to research facilities grants. When deciding whether or not to capitalize facility expenditures, consider the following definitions (from [Accounting Manual P-415-1](#)).

- ✓ **Improvements or Betterments:** Significant alterations or structural changes which increase the usefulness, enhance the efficiency or prolong the life of property. This type of expenditure should be capitalized. If expenditures are determined to be capitalized (per the definitions above), the total cost (total cost of the job not per item) must be \$35,000 or more.
- ✗ **Repairs:** Regularly recurring expenses to keep property in an efficient operating condition that do not significantly add to the value of the property or significantly lengthen the life of the entire asset (rather these costs ensure the asset retains its value). This type of expenditure should NOT be capitalized.
- ✗ **Replacements:** Replacing component parts of buildings or structures that do not significantly lengthen the life of the entire asset (again these costs help the asset retain its value). This type of expenditure should NOT be capitalized.

### **Travel**

General travel costs include a variety of expenses, such as ground and air transportation, communications, lodging and subsistence or per diem, currency exchange fees and passport and visa costs. Travel and accommodations for non UC Davis personnel can be charged directly to a sponsored project instead of sending the money via a subaward.

Use UC travel guidelines to determine the appropriate travel rates. Some sponsors may insist on using other rates, which is acceptable. However, these are often lower than the rates used by UC, so make sure the travel expenses can be managed before agreeing to the alternate rates. For foreign travel, use US State Department travel rates. When booking flights, remember that to the maximum extent possible, US flag carriers must be used. [AggieTravel](#) is the university-approved system for arranging travel and processing expense reimbursements. In the actual budget, list the total cost of domestic and foreign travel separately. Guidelines on travel and entertainment are available on the [UC Davis Travel & Entertainment website](#).

As a general guideline, a national two-three-day trip can be budgeted at \$1,500 to \$2,000; an in-state trip can be budgeted at around \$1,200; and an international trip at \$3,000 to \$4,000 depending on location. It is often important to show how the trip was costed in your justification. Consider the cost of:

- Mileage: Per mile rate determined annually by the IRS (remember to [check for updates!](#))
- Airfare: Based on actual cost; check online for rates for estimated time of year and destination
- Hotel: Domestic - Based on actual, reasonable costs up to \$275 per night; Foreign - up to [max per diem](#).
- Meals and Incidentals (domestic): Currently \$62 per day with some restrictions based on length of travel.
- Meals Per diem (foreign): Budget by [destination city](#).
- Registration Fees: \$300 to \$600 dollars or more. Ask the investigator the usual cost for their society meetings, or look up meetings online and budget an average rate.

A sample travel table in a budget justification looks as follows:

YEAR 1 Itemized Trips					
Purpose	Destination	Item	Rate	# travelers	Cost
Travel to relevant XY meeting to collaborate and disseminate information on research results.	TBD	Airfare	\$779/Flight	2	\$1,558
		Lodging	\$224/night x2	2	\$896
		Meals & Indic.	\$71 per day x3	2	\$426
		Registration	\$300 per person	2	\$600
		Taxi/shuttle	\$60 per person	2	\$120
				<b>Trip Total</b>	<b>\$3,600</b>

## Participant Support Costs

If allowed by the awarding agency, “participant support costs” may be included as a direct cost category. A participant is an individual receiving a service or training opportunity from a workshop, conference, seminar, symposium or other short-term instructional or information sharing activity funded by a sponsored award. A participant does not perform work or services for the project or program other than for their own benefit and is not required to deliver anything or provide any service to the university in return for these support costs.

A participant may be a:

- ✓ UC Davis student/scholar
- ✓ Student/scholar from another institution
- ✓ Private sector company representative
- ✓ K-12 teacher
- ✓ State or local government agency personnel

Some personnel categories are **NOT** considered participants:

- ✗ Employees of UC Davis
- ✗ Students or project staff who receive compensation for work performed directly or indirectly from the grant
- ✗ Research subjects receiving incentive payments
- ✗ Federal employees
- ✗ Paid speakers or other invitees providing a service

### *Expenses*

The guidance below is provided to assist with classifying the most common types of participant support. However, analyze the solicitation requirements and/or check with sponsored programs or the sponsor contact to ensure allowability.

Participant support costs may include the following expenses:

- ✓ Tuition and registration fees if required to participate in the project
- ✓ Event registration fees
- ✓ Stipend (predetermined amount regardless of actual costs) for housing and subsistence
- ✓ Travel costs when the sole purpose of the trip is to participate in the project activity
- ✓ Event support costs for lodging and meal expenses paid directly to the event facility, only if the payment is made on behalf of, or reimbursed directly to, the participant
- ✓ Meals and incidentals when on travel status
- ✓ Training materials paid directly on behalf of the participant
- ✓ Lab supplies paid directly on behalf of the participant

All costs reimbursed or paid on behalf of the participant must be incurred within the project period and specifically allowed by the sponsoring agency. Participant support costs are budgeted on a separate line and must be accounted for separately. Funds provided for unspent participant support costs cannot be rebudgeted for use in other categories, except with the prior written approval of the sponsor. In most cases, unspent participant costs must be returned to the sponsor.

Equally important, the following are costs that generally should **NOT** be budgeted as participant support costs:

- ✗ Travel for project Principal Investigator or staff
- ✗ Multi-purpose travel (e.g., to perform research in addition to attending a project related meeting)
- ✗ Travel for a consultant who is providing service to the university
- ✗ Event support cost (e.g., facility rentals, media equipment rentals, food/refreshments) not made on behalf of or paid to participants
- ✗ Entertainment/food for non-participants
- ✗ Honoraria paid to a guest speaker or lecturer
- ✗ Incentive payment to encourage an individual to participate as a research subject

- ✗ Subaward to a provider for multiple training events (e.g., an ongoing contract with specific terms and conditions)
- ✗ Payments to a participant’s employer for reimbursement of the costs related to sending the employee to the project event
- ✗ Expenses related to meetings of an administrative nature

### Other Direct Costs

Other direct costs may also be required for the project. List these costs on the budget and describe them in detail in the budget justification.

### Materials and Supplies

Materials and supplies are tangible items not meeting the definition of equipment, such as laboratory, project and specialty supplies, which the researchers need to complete the project.

If a lump dollar sum for “general supplies” is requested without additional explanation at time of proposal, the sponsor will most likely request more detail before an award can be made — usually with very little turnaround time (one to two days). To preempt this request, include a breakdown of dollars by supply category. The budget should be prepared in table format or in paragraph form depending on the sponsor requirements. Remember not to include miscellaneous or department (general) supplies, like copy paper, office chairs or pens, because these are included as F&A, or indirect costs.

Example Budget Table:

Lab Supplies detail					
Estimated Expense Item	Year 1	Year 2	Year 3	Year 4	Year 5
Computer: A laptop computer is necessary to record the histories of village inhabitants	\$1,500				
Data Storage Devices will enable the storage of all histories and data associated with the project.	\$2,000			\$4,000	
Software: Specialized software will be purchased to catalog personal histories of village inhabitants.	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
<b>Total</b>	<b>\$8,500</b>	<b>\$5,000</b>	<b>\$5,000</b>	<b>\$9,000</b>	<b>\$5,000</b>
<b>5 Year Total:</b>					<b>\$32,500</b>



*How do supplies differ from expenses?*

Proposal budgets should distinguish between supplies and expenses even though in the university accounting system both costs are budgeted under Sub3- supplies and expense. Ideally, expenses (recharges, printing costs, publication costs and services) should be separated from supplies (tangible supply items). If it is difficult to separate supplies from expenses, using a best estimate will work. Always check non-federal sponsor guidelines to see if they have alternative instructions.



*What if my supply costs vary per year?*

Provide an explanation for the variance. Common reasons supply budgets may vary by year include: (1) Supplies are bought in bulk initially and used over more than one year (to obtain a discount or best pricing); (2) The scope of work requires more supplies in some years than others based on needed sample size, etc.

### *Consultants*

Consultants are often referred to as “brain and briefcase”, and typically work on an hourly basis. They do not use resources of an entity or own the resources of the entity for which they are consulting. If someone is labeled a "consultant" in the budget, but will be utilizing university resources, evaluate whether they are, in fact, a subcontractor. Consultants provide advice, counsel or recommendations and NOTHING more. They do not have any authority over how their advice is acted upon.

Per UC, the use of consultants should be rare, because UC is the home of the experts. Before using a consultant, consider whether a person or department on campus can provide the same service. UC employees should **NOT** be listed as consultants on a proposal from UC Davis. As a part of the budget, obtain a written scope of services and fee schedule from any consultants. Finally, determine whether there is any conflict of interest between the institution or Principal Investigator and the consultant. Examine whether the consulting agreement is with a current or recent employee, their near relatives or an entity in which an employee controls or owns a financial interest. Read the [UC Davis Policy and Procedures Manual, Chapter 350, Section 90](#) which discusses UC policy in regards to employee vendor relationships.

### *Graduate Student Fees and Tuition*

Graduate students employed on a sponsored project are entitled to have their fees or tuition remitted (paid) by the University. Check the [Graduate Studies webpage](#) for current rates. To be eligible for tuition and fee remittance, a student must have at least a 25% appointment. Appointments may be split across multiple sponsored projects and still qualify for remittance. The fees and tuition remitted must be charged to the contracts or grants on which the student is appointed. The fees and tuition must also be charged in proportion to the student’s appointment split; however, if a student is only appointment part-time on one project, the entire cost of the student’s tuition and fee remission will be charged to that single grant. It is therefore prudent to ensure enough funds are budgeted to cover the entire cost of tuition and fees.

For budgeting purposes, GSR tuition and fees estimates may be escalated up to 10% per year. Because this rate of escalation can consume a large portion of the budget, some investigators choose to use a lower rate of 5% to 7% in their projections.

As part of UC Davis’ continuing effort to improve graduate student support, the Provost allocates funds to partially buy-down Tuition & Fees and Nonresident Supplemental Tuition (NRST) for GSRs supported on extramural sources. Under the GSR Buy-Down Program, the campus pays 25% of the Tuition & Fees and NRST for a GSR appointment paid by certain extramural funds; the balance is charged to the extramural contract or grant. Learn more about the GSR buy-down program and see current amounts on the [Graduate Studies webpage](#).

### *Subagreements*

To aid in determine the appropriate type of agreement, view the [Subaward or Contractor/Vendor Guidance](#) document. There are two basic types of subagreements:

- [Subawards/subcontracts](#)
- [Contractor/vendor agreements](#)

#### *Subawards/Subcontracts*

Subawards/subcontracts can be in the form of a grant or a contract and are typically to another research institution or non-profit organization. Subawards enable the prime awardee to outsource portions of the project tasks to another entity in order to add necessary expertise to the project and typically include terms and conditions of the prime award. A subaward agreement is appropriate when an organization other than the prime applicant is performing a portion of the project and:

- Their Scope of Work is intellectually significant and separable from the overall project’s programmatic effort,
- They have programmatic decision making,
- Their work could result in the development of intellectual property or publishable results and/or
- They will need animal and/or human subjects’ approval.

Subawardee costs will appear on the prime proposal's budget as a lump sum per year by institution. This lump sum will be based on the Subawardee's detailed budget, which will usually be placed in the proposal directly after UC Davis' budget. It is important to know that all of the subawardee's costs- direct and indirect- are part of UC Davis's direct costs. However, some sponsors, such as the National Institutes of Health (NIH) do not include subaward indirect costs toward the direct cost limit. Always check the sponsor guidelines and with Sponsored Programs if you have questions. For non-University of California organizations, **only the first \$25,000 of each** outgoing subaward is subject to indirect (F&A) costs if using the MTDC basis. No indirect costs are calculated on subawards to another University of California campus because we are all under the umbrella of the UC system, and therefore cannot double charge the sponsor for indirect costs.

Subawards must be included in the proposal package submitted to Sponsored Programs for review. Learn more about the required forms and other elements on the [Sponsored Programs website](#).

- If the subrecipient is participating in the [Federal Demonstration Partnership \(FDP\) Expanded Clearinghouse](#), submit the [FDP Subrecipient Pilot – Supplemental Project Information Form](#).
- If the subrecipient is another UC Campus the [Multiple Campus Award \(MCA\) Commitment Form](#) must be completed instead of the UC Davis Subrecipient Commitment form.
- If the subrecipient is not another UC campus or participating in the FDP Clearinghouse, obtain approval using the [UC Davis Subrecipient Commitment Form](#) (preferred) or in the form of a short letter signed by an authorized official agreeing to the collaboration.

### [Contractor/Vendor Agreements](#)

Procurement contracts secure goods and services needed to support a project and typically do not include any of the terms and conditions of the prime award. Procurement contracts can be to individuals or organizations.

A contractor/vendor agreement is appropriate when:

- The contractor/vendor:
  - Is an individual or sole proprietor
  - Is a university and the transactions are done via recharge rates, through service agreements or through other sponsored activity agreements
  - Is a professional consultant OR is not significantly using its own computers/equipment for simply providing advice to the UC Davis personnel, including individual's in another school/college
  - Does not have a PI on the proposal
  - Provides similar goods or services within normal business operations or to many purchasers
  - Operates in a competitive environment
  - Does not have programmatic decision-making
- Their scope of work does not reflect a specific, clearly defined, intellectually significant part of the scope of work of the sponsor's award to UC Davis.
- The goods/services are:
  - Off-the-shelf or specialized services that are commercially available, usually at a fixed price or rate
  - Ancillary to UC Davis' sponsored project
  - Not subject to the sponsor's compliance requirements
  - Equipment, fabrication of equipment or components of fabricated equipment (unless fabricating specialized equipment for the project's scope of work or to meet sponsor deliverables)
  - A survey using de-identified data; not requiring IRB approval
  - A test on data provided by UC Davis and the results are given to UC Davis to analyze and/or they provide result analysis as a routine professional service
  - Routine in nature and follow established or previously invited/discovered procedures



### *Single Institutional Review Board (IRB) Fees-NIH Specific*

Sites and personnel who are not part of UC Davis are not covered by UC Davis' Institutional Review Board (IRB) review unless certain agreements are in place. If the project involves sites and/or personnel from other institutions, work with the UC Davis IRB and the other individual/institution to ensure that all reliance issues are addressed. UC Davis IRB may opt to serve as the IRB of Record for collaborating research sites (or single investigators) or rely on another IRB for certain studies. Only certain NIH-supported or funded research requires a single IRB.

Federal proposal budgets should include the single IRB fees if multiple sites should have IRB review. The increased cost of Single IRB (sIRB) may be charged as Direct Costs.

UC Davis IRB will charge the following fees for each external site when acting as the IRB of Record for research funded by a federal funding agency, federal department or an industry sponsor. This table is from May 1, 2018. Always ensure you are using the most current rates by visiting the [UC Davis IRB web page](#).

<b>Relying Institution</b>	<b>Using an Existing Agreement?</b>	<b>Initial Review</b>	<b>Continuing Review</b>
UC Campus	Yes	\$1,000	\$800
UC Campus	No	\$1,600	\$800
Non-UC Campus	Yes	\$1,337	\$1,070
Non-UC Campus	No	\$2,139	\$1,070

### *Patient Care Costs*

Per the [NIH Grants Policy Statement](#), Patient Care Costs are... “the costs of routine and ancillary services provided by hospitals to individuals participating in research programs. The costs of these services normally are assigned to specific research projects through the development and application of research patient care rates or amounts (hereafter "rates"). Research patient care costs do not include: (1) the otherwise allowable items of personal expense reimbursement, such as patient travel or subsistence, consulting physician fees, or any other direct payments related to all classes of individuals, including inpatients, outpatients, subjects, volunteers, and donors, (2) costs of ancillary tests performed in facilities outside the hospital on a fee-for-service basis (e.g., in an independent, privately owned laboratory) or laboratory tests performed at a medical school/university not associated with a hospital routine or ancillary service , (3) recruitment or retention fees or (4) the data management or statistical analysis of clinical research results.”

Projects with patient care costs always involve human subjects, so the project must have IRB approval. See the [UCOP Contract and Grant Manual 8-512](#) and [NIH policy regarding Patient Care Costs](#) for more information.

### *Lease Costs*

When lease costs are charged directly to a sponsored project, it is often appropriate to use the off-campus indirect cost rates for budget calculations. Remember that the lease charges must still be allowable, allocable and consistent. The lease and other associated charges must also be documented.

### *Cost Sharing*

Cost sharing is the contribution of resources, often money, towards the completion of a project by someone other than the funding sponsor. It is important to read all sponsor guidelines as the sponsor will indicate if cost sharing is allowed or even required. However, note that the UC Davis **strongly discourages voluntary cost sharing**, or cost sharing that is not required.

Cost sharing may be personnel effort, money or an item or service. Cost sharing may be provided in the form of cash matching or be in-kind. In-kind contributions must be able to be valued but do not appear on the financial ledgers.

Ensure cost sharing is appropriate before including it in the budget. [UC Policy: APM – 020](#) states that UC must recover all direct and indirect costs from extramural sponsors. When we cost share, the campus is essentially subsidizing the

research. This is why it is not appropriate to cost share on most government contracts or in proposals to for-profit companies. Never cost share if the department or dean's office does not allow it or cannot afford the commitment.

When submitting a proposal with cost sharing that is not comprised of investigator effort, include a letter or memo from the party that has authority to commit to the cost share, such as the dean or department chair. Authorization on the Cayuse SP Internal Processing Form (IPF) provides the necessary approvals for cost-shared effort (time spent on a project) only. If you are unsure who has the authority to commit to a cost share, contact your [Proposal Team Leader in the Sponsored Programs Office](#). Always keep in mind that if cost sharing is committed in the proposal, and the proposal is awarded, that cost sharing is now mandatory as part of the award agreement. Sponsored Programs has prepared [guidance for submitting a proposal that involves cost sharing](#).

More information about cost sharing is located at [Chapter 5 of the UC Contract and Grant Manual](#) and at the [Contract and Grant Accounting Effort Commitment and Cost Sharing page](#).

## Calculating Direct Costs

### *Estimating Costs*

Once the budget categories are identified, determine the budget line items. Identify and project the costs for a sponsored project using generally accepted cost estimation methods. For salaries and wages, use the methods discussed earlier. However, estimate the costs for other categories. Depending on the cost category, there may be multiple ways to do this, including reviewing historical costs for similar projects and obtaining current cost information. If using the latter method, the internet, catalogues and vendor quotes are especially useful sources. Obtain a written copy of what the quote includes and verify that all the costs are included. If the project includes a re-charge service performed on campus, obtain the approved campus recharge rates. Other methods for estimating costs are appropriate as long as the process is logical, can be explained to someone else and can be documented.

### *Escalating Costs*

When estimating costs, remember that they increase over time. Because of this, consider including a modest escalation in the estimate of costs for direct charges. Read the sponsor and program guidelines before including escalations to ensure the sponsor does not limit or prohibit escalations. Escalating costs is consistent with the University's cost principles and with the University's policy of recovering all costs of conducting sponsored projects. Escalation helps to ensure that the project receives adequate funding. Use a rate between 3% to 5% when escalating most direct costs. Two exceptions- tuition and fees may be escalated up to 10% per year, and subawardees may use their own institution's guidelines when including escalations on their own costs. Do not add any additional escalations to subawards beyond what the partnering organization indicates.



The budget templates include an option for escalating direct costs.

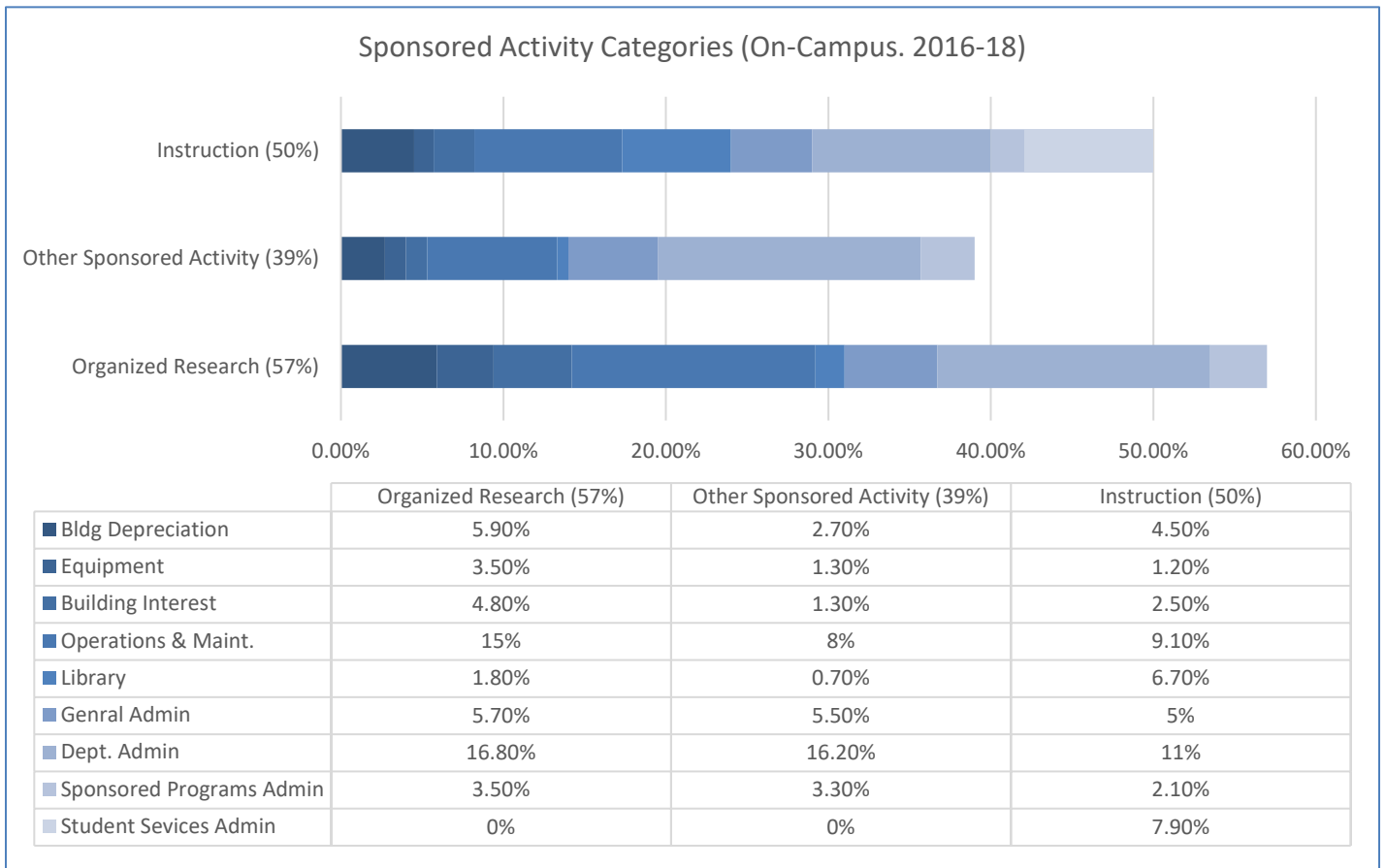
## Facilities and Administrative (F&A)/Indirect Costs

Indirect costs are also known as facilities and administrative (F&A) costs or overhead. F&A costs are associated with the general operation of UC Davis and cannot be readily assigned to individual projects. These costs include facilities and maintenance, general and departmental administration, clerical and administrative salaries and fringe benefits, general office supplies, general purpose equipment, routine postage, building maintenance and utilities and library expenses. The F&A rate is a federally approved rate, applicable to all sponsors. The Federal government expects to pay the same or less for projects than other sponsors, not more, including indirect costs. The [Sponsored Program webpage](#) provides the current F&A rates and the Federally Negotiated F&A Rate Agreement.

### Sponsored Activity Categories

The federal rate agreement lists three major sponsored activity categories, each with its own F&A rate. Understanding how these functional areas are defined will aid in determining which F&A rate applies to a proposed sponsored project.

1. **Instruction** includes all teaching and training activities of an institution. This consists of departmental research, development and scholarly activities that are not separately budgeted and accounted for. Research training, which is part of organized research, is excluded.
2. **Organized Research** is all research and development activities of an institution that are separately budgeted and accounted for. This includes sponsored research, which is all research and development activities that are sponsored by Federal and non-Federal entities, including activities involving the training of individuals in research techniques where such activities utilize the same facilities as other research and development activities.
3. **Other Sponsored Activities** are programs and projects financed by Federal and non-Federal agencies and organizations that involve the performance of work other than instruction and organized research. This might be activities such as health service projects, like a community vaccination clinic, or community service projects, like literacy programs.



## Location of Sponsored Activity

The appropriate F&A rate is also determined by where the research or project will be conducted.

1. **On-Campus Rates:** This is the most commonly used rate. Use this rate if the majority of the research team's effort occurs in facilities owned or leased by the university. This is the most appropriate rate as these projects require resources to provide the infrastructure required for successful completion of research and other projects.
2. **Off-Campus Rates:** The off-campus rate applies to projects primarily conducted at facilities not owned, or leased by the University. However, if the project is conducted in leased space and the lease costs are directly charged to the project, the off-campus rate may be used. Projects with a subaward or with field work **do NOT** automatically count as off-campus, but rather the majority of the research has to be associated with off-campus locations and resources.

To ensure you have made the appropriate on/off campus classification for a particular project, contact [proposals@ucdavis.edu](mailto:proposals@ucdavis.edu) early, so they can assist you in determining the rate based on the specific details of your project.

## Determine the Indirect Cost Base

Once the appropriate F&A rate has been determined, identify the correct F&A base to use. This may be:

- [Modified Total Direct Costs](#)
- [Total Direct Costs](#)
- [Total Costs](#)

### Modified Total Direct Costs

All negotiated rates at UC Davis are applied on a Modified Total Direct Cost (MTDC) basis. The MTDC base includes salaries and wages, fringe benefits, materials, supplies, services, travel and subgrants/subcontracts up to the first \$25,000 of each subgrant or subcontract. Equipment, capital expenditures, charges for patient care, student tuition remission, rental costs of off-site facilities, scholarships and fellowships are excluded from the indirect cost base.

Calculate the indirect costs as follows.

1. Calculate the Total Direct Costs and subtract items not subject to indirects, such as equipment.

$$TDC - Equipment = MTDC$$

2. Multiple the Indirect Cost Base by the F&A Rate.

$$MTDC \times F\&A \text{ Rate} = F\&A \text{ Costs}$$

### Total Direct Costs

Some sponsors limit the indirect costs, but allow indirect costs to be calculated on all direct costs. This is a total direct cost basis (TDC). Total Direct Costs are calculated the same as MTDC. However, the only direct cost category that should not be included in the indirect cost base is subawards to other UC campuses. Because this is not the cost base on which our negotiated rate agreement is based, this cost base should only be used if the sponsor specifically requires it.

Calculate the indirect costs as follows.

$$TDC \times F\&A \text{ Rate} = F\&A \text{ Costs}$$

### Total Costs

As with Total Direct Costs, only use Total Costs (TC) as a cost base if the sponsor specifically requires it. This can seem complicated, but you can determine indirect costs with the following formula:

1. Formula if only the direct costs are known:

$$[TDC \div (1 - F\&A \text{ Rate})] - TDC = F\&A \text{ Costs}$$

2. Formula if only the total budget limit is known:

$$TC - [TC \times (1 - F\&A \text{ Rate})] = F\&A \text{ Costs}$$

### Calculate the Indirect Costs

Using the appropriate formula from above, calculate the indirect costs.

Sample Budget (1 year project) - TDC	
<b>Personnel</b>	
Professor Smith's Salary - PI	\$13,333
Professor's Smiths' Benefits	\$ 670
<b>Personnel Total</b>	<b>\$14,003</b>
<b>Equipment</b>	
MRI	\$15,000
<b>Equipment Total</b>	<b>\$15,000</b>
<b>Total Direct Costs</b>	<b>\$29,003</b>
Indirect Cost Base	
Indirect Costs (rate 57%)	
<b>Total Project Costs</b>	

### MTDC Base

1. Total Direct Costs - Equipment = MTDC  
 $\$29,003 - \$15,000 = \$14,003$
2. MTDC x F&A Rate = Indirect Costs  
 $\$14,003 \times 57\% = \$7,982$  (rounded)

### TDC Base

1. TDC x F&A Rate = Indirect Costs  
 $\$29,003 \times 57\% = \$16,532$  (rounded)

### TC Base

1.  $[TDC \div (1 - F\&A \text{ Rate})] - TDC = \text{Indirect Costs}$   
 $\$29,003 \div (1 - .57) - \$29,003 = \$38,446$

### Calculate the Total Project Costs

Once the indirect base and costs have been calculated, add the indirect costs to the Total Direct Costs to obtain the total project costs.

$$\text{Total Direct Costs} + \text{Indirect Costs} = \text{Total Project Costs}$$

## Write the Budget Justification

A budget justification is a written description and explanation of the estimated project budget. The budget justification is a required proposal component for most sponsors and highly encouraged even when not required. The budget justification provides the reviewer, the sponsor- and potentially an auditor- with an explanation of cost estimation methods, a description of the types of costs that make up a larger budget category such as "other" or "supplies" and an explanation of why the projected costs are necessary to conduct the project. Providing a robust budget justification that includes explanation of why costs are necessary helps the reviewers and sponsor understand that the budget request is reasonable and can prevent automatic budget cuts at time of award. Make it clear that all budget requests are reasonable and consistent with sponsor and UC Davis policies.

## Format and Complete the Justification

There is no university-required format for budget justifications. However, read the FOA and guidelines before beginning as some sponsors require specific formats. In general, budget justifications should follow the same line item format and contain the same costs as the budget form. A reviewer should be able to place the two documents next to each other and see the connection between each item.

For each person listed on the budget, describe their role, their effort- % or person months- any changes to personnel costs (such as increased effort), and anything else needed to explain why that person is needed on the project and how you determined the cost of their salary and benefits. Do not include "course" or "teaching buy-out" unless the sponsor specifically indicates that as an allowable cost. The effort commitment should indicate how much time will be spent working on the specific project.

Also justify the materials and supplies. Remember that the more general the categories are, and the higher the dollar amount of each category, the more detail that should be provided in the justification about specific items and how they relate to the research or project.

If any items in the budget would ordinarily be considered indirect costs, such as general office equipment or administrative support, provide details in the justification about why these costs are direct costs and how they are integral to the project. For example, if you need postage stamps to send out notices to research participants, these stamps could be considered a direct cost rather than an indirect cost. This cannot be determined if the justification simply indicates "postage" and a dollar amount.

The direct relationship between budget items and the actual work of the project should be made extremely clear, as this information may eventually be reviewed by an auditor. You want to avoid an auditor not being able to determine a clear relationship post-award.

## Examples of Budget Justification Language

Personnel Costs	
Senior/ Key Personnel	<ul style="list-style-type: none"> <li>• <i>Name of Researcher</i>, PhD (1 summer month effort; 1 academic month effort)               <ul style="list-style-type: none"> <li>○ <i>Dr. Researcher</i>, an associate professor of X and an expert in A and B, will lead this project, providing oversight and management, designing and conducting the research and ensuring success.</li> </ul> </li> <li>• <u><i>PI Researcher</i></u> <ul style="list-style-type: none"> <li>○ 0.25 summer months support per year are requested to support the PI's effort toward the program, providing general management and oversight and leading the research efforts.</li> </ul> </li> <li>• <u><i>Co-PI Researcher</i></u> <ul style="list-style-type: none"> <li>○ 0.25 summer months support per year is budgeted to support <i>Co-PI Researcher</i> in directing the education and training components of the program.</li> </ul> </li> <li>• <u><i>Senior Participant Researcher</i></u> <ul style="list-style-type: none"> <li>○ <i>Dr. Researcher</i> is a soft-funded professional researcher; we therefore request 3.0-month support- commensurate with his/her effort toward the program- to enable his/her work on remote collaboration and related outreach activities of <i>this NSF project</i>.</li> </ul> </li> <li>• <i>Name of Researcher</i> DVM, MPVM PhD. (Principal Investigator, Deputy Director, 80%)               <ul style="list-style-type: none"> <li>○ Expertise: <i>Area of expertise</i> and large scale program administration.</li> <li>○ Role: As Principal Investigator and Deputy Director, <i>Dr. Researcher</i> will work hand-in-hand with the Director (<i>Dr. Researcher</i>) to manage and administer the overall program. He/she will supervise the administrative support staff at UC Davis and oversee all UC Davis activities and work related to Objectives 1-5.</li> </ul> </li> </ul>
Postdoctoral Researchers	<ul style="list-style-type: none"> <li>• <u><i>Postdoctoral Researchers</i></u> (2.25 calendar months' effort)               <ul style="list-style-type: none"> <li>○ Postdoctoral researchers will be funded 2.25 calendar months per year to work on the bioinformatics components, supervise the graduate students, and contribute to reporting.</li> </ul> </li> </ul>
Graduate Student Researchers	<ul style="list-style-type: none"> <li>• 3 graduate student researchers (GSRs) will be employed in year 1, and 1 GSR will be employed in year 2. All three will work 50% time during the academic year and 100% time in the summer. In year 1, the GSRs will assist with data coding, cleaning, reliability testing and preparation of the database for data analysis; during the second year, the GSR will assist with data analysis and manuscript preparation.</li> <li>• <u><i>Graduate Student Researchers</i></u> (4 FTE @ 7.5 calendar months' effort each)               <ul style="list-style-type: none"> <li>○ We request support for graduate student researchers, who will work 50% time in the academic year and 100% time in the summer. The graduate students, anticipated from Dept. A, Dept. B and the Dept. C will participate on interdisciplinary research teams, developing visualization tools, software frameworks and their career skills. It is anticipated that several students will each be supported with these funds for an academic quarter at a time in order to maximize the project's reach and broaden its impact. The remainder of the participating students' effort will go toward complementary projects with independent funding, providing year-round support and a robust training program for all students.</li> </ul> </li> <li>• <b>Graduate Student Researchers</b> – Two graduate students, one with programming expertise and the other with humanities and/or social science expertise, are allocated to the project to assist in development of the X application, maintenance of the prototype S module, testing of the platform and the module, and evaluation of the project as a pedagogical and research tool.</li> </ul>

<b>Personnel Costs</b>	
Undergraduate Researchers	<ul style="list-style-type: none"> <li>• <u>Undergraduate Student Researchers (500 hours per year)</u> <ul style="list-style-type: none"> <li>○ Funds are budgeted to allow undergraduate researchers from a variety of disciplines to fully participate in the project, including contributing to the specific visualization modules of the project, exploring cyberinfrastructure tools, and entering and manipulating data. Undergraduate researchers on the project will be strongly encouraged to present their work as a poster or talk at the UC Davis annual undergraduate research conference, which is modeled after professional research conferences.</li> </ul> </li> </ul>
Fringe Benefits	<ul style="list-style-type: none"> <li>• Fringe Benefits <ul style="list-style-type: none"> <li>○ Fringe Benefits are calculated using the UC Davis composite rates developed by the UC Davis Costing and Policy office as required per institutional policy. Rates are applied by title code and fiscal year.</li> </ul> </li> <li>• <b>Fringe Benefits</b> - Fringe benefits are budgeted at UC Davis' federally negotiated rates, which are applied by fiscal year and title code.</li> </ul>

<b>Travel</b>	
Domestic Travel	<ul style="list-style-type: none"> <li>• Travel funds for domestic travel in the amount of \$9,500 per year are requested for travel to Center workshops, clinics, pilot courses, meetings at collaborating intuitions, meetings with industrial and other partners and engineering education technical meetings.</li> <li>• External Advisory Board Travel <ul style="list-style-type: none"> <li>○ \$2,000 per year will allow the external advisory board to meet in person for planning, decision making, and advising.</li> </ul> </li> <li>• Objective Team Meetings <ul style="list-style-type: none"> <li>○ An annual 3-day meeting will be scheduled to coordinate and plan activities for each of the 5 objectives. Five participants from key partner institutions will travel to UC Davis or Name of location for each of the 5 yearly meetings. Objective Team meetings will be scheduled to coincide with other senior management meetings as a cost efficiency. Cost per meeting includes airfare @ \$600, hotel @ \$200/day for 3 days = \$600, per diem at \$50/day for 3 days = \$150, ground transportation @ \$50/day for 3 days = \$150; 5 trips/meeting @ \$1,500 = \$7,500; 5 meetings/yr. @ \$7,500 = \$37,500/yr. (total of 5 years \$37,500/yr. = \$187,500).</li> </ul> </li> </ul>
Foreign Travel	<ul style="list-style-type: none"> <li>• International – Administrative <ul style="list-style-type: none"> <li>○ <i>Name of staff</i> – 4 foreign trips per year from Davis to 4 surveillance hotspot regions in name of countries to conduct site visits and coordination/facilitation with country coordinators and partners; as a cost efficiency one of these trips will correspond to the Annual Meeting each year; airfare @ \$2,500, hotel @ \$150/day for 10 days = \$1500, per diem at \$50/day for 10 days = \$500, ground transportation @ \$50/day for 10 days = \$500; 4 trips @ \$5,000 = \$20,000/yr.; (5 years @ \$20,000/yr. = \$100,000)</li> </ul> </li> </ul>



<b>Travel</b>	
Conferences	<ul style="list-style-type: none"> <li>• <b>Professional Conferences</b> – Funds in the amount of \$1,500 per domestic trip and \$3,000 per international trip are requested to enable the principal investigator to attend four related professional conferences in year 1, and 2 in year 2, to disseminate the results of the study. Planned conferences are as follows:               <ul style="list-style-type: none"> <li>○ American Sociological Association, Denver, Colorado, August 2012</li> <li>○ American Psychological Association, Orlando, Florida, August 2012</li> <li>○ International Sociological Association, Research Committee on Social Stratification (RC28), Hong Kong, May 2012</li> <li>○ Association for the Study of Higher Education, Las Vegas, Nevada, November, 2012</li> <li>○ American Sociological Association, New York City, New York, August 2013</li> <li>○ American Psychological Association, Honolulu, Hawai`i, August 2013</li> </ul> </li> </ul>

<b>Materials and Supplies</b>	
Computer/ Software	<ul style="list-style-type: none"> <li>• In year 1, \$1,145 is requested to purchase a Stata/SE license with PDF documentation, which will be used to conduct the statistical analysis necessary for completion of the study. \$650 is also requested in year 1 to purchase NVivo, a qualitative data analysis program that will be used for the coding and qualitative analysis of the content of the evaluation reports. Both licenses will remain valid for the 2 years of the project.</li> <li>• <b>Software Licenses</b> - We have budgeted funds to cover the costs of the licensing fees associated with the necessary software programs for the module.</li> <li>• <b>Materials and Supplies</b> <ul style="list-style-type: none"> <li>○ Computer Supplies – \$1,500 is budgeted to cover the costs of necessary computer supplies, such as back-up media, peripherals and supporting applications.</li> <li>○ Servers – \$4,000 is budgeted for the purchase of three servers for hosting, distributing and maintaining the x platform and related software, data and materials.</li> </ul> </li> </ul>
Laboratory Supplies	<ul style="list-style-type: none"> <li>• Laboratory supplies are requested for evaluating and validating diagnostic tests used for wildlife surveillance (PCR reagents @ \$100/sample x 3000 samples = 30,000/yr.; 5 year total = \$150,000)</li> </ul>

<b>Other Costs</b>	
ATS/ MediaWorks Charges	<ul style="list-style-type: none"> <li>• Funds in the amount of \$22,000 have been budgeted to cover the recharge fees of ATS/MediaWorks programmers and instructional designers. Their recharge rate is \$77.50 an hour and we have estimated our use at 284 hours.</li> </ul>
Graduate Student Tuition and Fees	<ul style="list-style-type: none"> <li>• Graduate student tuition and fees are budgeted for the GSR employed on the project per UC Davis' policy. Amounts are based on current rates in year 1 with projected rates in years 2 through 5.</li> </ul>

<b>Indirect Costs</b>	
Indirect Costs	<ul style="list-style-type: none"> <li>• Indirect costs are budgeted at UC Davis' federally negotiated rate for on-campus research- 57% which is applied on a Modified Total Direct Cost Basis (MTDC.)</li> </ul>

## Resources

- Accounting & Financial Services site has additional information on calculating effort: <http://afs.ucdavis.edu/systems/effort-commitment-system/scenarios.html>.
- Budget Justification Checklist: [https://research.ucdavis.edu/wp-content/uploads/Budget-Justification\\_Checklist.pdf](https://research.ucdavis.edu/wp-content/uploads/Budget-Justification_Checklist.pdf)
- Call for Proposals Checklist: <http://research.ucdavis.edu/wp-content/uploads/03-Call-for-Proposals-Checklist.pdf>
- Code of Federal Regulations (CFR): <http://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=CFR>
- Code of Federal Regulations: <https://www.govinfo.gov/help/cfr>
- Composite Benefit Rate schedule: [http://afs.ucdavis.edu/our\\_services/costing-policy-e-analysis/composite-benefit-rates/](http://afs.ucdavis.edu/our_services/costing-policy-e-analysis/composite-benefit-rates/)
- Contract and Grant Manual: <http://www.ucop.edu/research-policy-analysis-coordination/resources-tools/contract-and-grant-manual>
- F&A Rates: <https://research.ucdavis.edu/proposals-grants-contracts/helpful-links/indirect-cost-fringe-benefit-rates/#fa>
- Federal circulars: <https://www.whitehouse.gov/omb/circulars>
- Federal Cost Accounting Standards Board (CASB): [https://obamawhitehouse.archives.gov/omb/procurement\\_casb/](https://obamawhitehouse.archives.gov/omb/procurement_casb/)
- Federal Demonstration Partnership (FDP): <http://thefdp.org/default/>
- Fringe Benefit Rates:
- New Proposal Checklist: <http://research.ucdavis.edu/wp-content/uploads/New-Proposal-questions-for-PIs-1-18-2012.pdf>
- New Proposal Checklist: <https://research.ucdavis.edu/wp-content/uploads/New-Proposal-questions-for-PIs-1-18-2012.pdf>
- NIH Person Months information: <https://nexus.od.nih.gov/all/2017/03/31/what-is-a-person-month-how-do-i-calculate-it/>
- NIH policy regarding Patient Care Costs: ([https://grants.nih.gov/grants/policy/nihgps\\_2011/nihgps\\_ch19.htm](https://grants.nih.gov/grants/policy/nihgps_2011/nihgps_ch19.htm)
- Office of Management and Budget Circulars: <https://www.whitehouse.gov/omb/information-for-agencies/circulars/>
- Office of Research Budget Templates and FAQs: <https://docs.or.ucdavis.edu/spo/>
- OMB Uniform Guidance: <https://www.gpo.gov/fdsys/pkg/FR-2013-12-26/pdf/2013-30465.pdf>
- Senior/Key Personnel Descriptions: [https://research.ucdavis.edu/wp-content/uploads/Senior\\_Key-Personnel-Table\\_110618.pdf](https://research.ucdavis.edu/wp-content/uploads/Senior_Key-Personnel-Table_110618.pdf)
- Senior/Key Personnel Descriptions: [https://research.ucdavis.edu/wp-content/uploads/Senior\\_Key-Personnel-Table\\_110618.pdf](https://research.ucdavis.edu/wp-content/uploads/Senior_Key-Personnel-Table_110618.pdf)
- Single IRB and Reliances: <https://research.ucdavis.edu/policiescompliance/irb-admin/researchers/coll-research/>
- Sponsored Programs Administration and Research Kiosk (SPARK): <http://spark.ucdavis.edu/>
- Sponsored Programs Call for Proposals Checklist: <http://research.ucdavis.edu/wp-content/uploads/03-Call-for-Proposals-Checklist.pdf>

- Sponsored Programs webpage: <https://research.ucdavis.edu/proposals-grants-contracts/spo/>
- State of California AB20 Model Contract/Agreement: <https://www.dgs.ca.gov/PD/Resources/Page-Content/Procurement-Division-Resources-List-Folder/Contract-Model-Language>
- UC Davis Accounting and Financial Services Effort Commitment and Cost Share Tracking: <http://afs.ucdavis.edu/systems/effort-commitment-system/effort-commitment-defined.html>
- UC Davis Charging Practices: [http://afs.ucdavis.edu/our\\_services/accounting-e-financial-reporting/fiscal-certification/ChargesPractices.pdf](http://afs.ucdavis.edu/our_services/accounting-e-financial-reporting/fiscal-certification/ChargesPractices.pdf)
- UC Davis Staff Salary Scales: <http://www.hr.ucdavis.edu/Salaryscales>
- UCOP Academic Salary Scales: <http://www.ucop.edu/academic-personnel/compensation/index.html>
- UCOP Contract and Grant Manual 8-512: <http://www.ucop.edu/research-policy-analysis-coordination/resources-tools/contract-and-grant-manual/chapter8/index.html>