

# **Writing a Proposal Budget**

---

**Presented by the Office of  
Research, Sponsored Programs**



## Table of Contents

What is a Proposal Budget and why is it needed? .....	3
Getting Started.....	4
Talking with the PI about the Budget .....	4
Reviewing Sponsor Guidelines.....	4
Cost Accounting Standards .....	5
Office of Management and Budget – Circular A-21.....	5
Code of Federal Regulations .....	6
UC Davis Charging Practices.....	6
Specific Sponsor Rules .....	7
Direct Costs .....	9
Salaries and Wages .....	9
Fringe Benefits .....	10
Equipment.....	11
Materials and Supplies.....	11
Patient Care Costs.....	12
Travel .....	12
Graduate Student Fees and Tuition .....	13
Consultants .....	13
Subagreements .....	13
Lease Costs.....	14
Other Direct Costs.....	14
Cost Sharing .....	15
Estimating Costs.....	16
Escalating Costs.....	16
Documenting Cost Estimation .....	16
Facilities and Administrative (F & A) Costs .....	17
Sponsored Activity Categories .....	17
Location of Research.....	18
F & A Rate Waivers .....	19
Calculating F & A .....	20
Budget Justification.....	23

## **What is a Proposal Budget and why is it needed?**

Before we get started talking about all the pieces of a budget, let's make sure that we're on the same page about what a budget actually is. 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 that represent the researcher's best estimate of the funds needed to support the proposed work. The term "best estimate" is important here. You will be held to using the costs detailed in your budget, so make sure you've correctly estimated what you will need to complete the project.

The bottom line is that if the work is put into the budgeting process, your post award work will be more hassle free.

Sponsors will look at your budget when they are conducting a Technical Review of the project. They often want to see the details of how a PI is going to complete the work discussed in the project description.

Reviewers also want to know how reasonable the cost of your project is. They will ask themselves whether you are over or underestimating your expenses. A careful review of the budget lets the reviewer know that you're not asking for too much or too little, but rather, just enough funding.

Prepare a detailed budget even for sponsors that accept lump sum budgets. Throughout the review process, sponsors may want more details about how you generated your overall figure, or where the money will be going. You may also need the details to help you complete the UCOP required budget justification.

## Getting Started

First and foremost, talk with the Principal Investigator and familiarize yourself with the project and the resources needed. Communication is the Key! You'll want to make sure that you get any materials you'll need to begin the budget development process. This might include things such as the funding announcement, any other sponsor guidelines, and an outline of the proposed project. The Sponsored Programs office has developed tools that will help you to get the information you need from the PI and from the funding announcement or other sponsor guidelines. You can find them on the "[Guidance and Tools](#)" page of the Office of Research website.

## Talking with the PI about the Budget

If you are a department administrator or coordinator, you may not know the answers to all of the questions that come up when beginning a budget. You'll need to talk with the PI to learn more about their proposed project before you're able to organize the information into a budget.

We suggest you keep a checklist as you go through this process. We have created one for you to start with, called "[Beginning a New Proposal](#)". The questions posed in this list are general and can be applied in most situations. As you gain clarity from the PI about the types of expenses they think the project will have, you will begin to outline the budget categories that will be included. As you have these conversations about what the project will entail, you will begin to develop a list of items for your budget. This list will be all of the things or people that the researcher will need for the project to be successfully completed. Before you can put these items together into a budget, you'll need to evaluate which items will be allowed on the budget, and where they should go on the budget form.

If you're a PI, you can use this checklist to help you organize the information that the department administrator will need to assist you with your budget.

## Reviewing Sponsor Guidelines

You'll also need to check the program guidelines to make certain the budgeted expenses are allowable. If you've taken our "[Proposal Preparation & Submission](#)" class, you may remember hearing about our [Call for Proposals Checklist](#). This tool helps you to identify any budget areas you need to watch out for, or restrictions the sponsor may have. For example, certain expenses may not be allowed, certain expenses may be required (such as travel to meetings), and certain expenses may have limits. We have created this checklist to help you and the PI to identify important information in the specific call. You may also want to use this checklist when reviewing a sponsor's general guidelines.

## Cost Accounting Standards

Researchers at UC Davis have a variety of cost accounting standards they must adhere to when spending extramural funds. The Cost Accounting standards address pointed questions such as, “Did the individuals involved act with prudence under the circumstances?”, “Would you be comfortable explaining to your neighbor how their tax dollars were spent on this item?”, or, perhaps, “Would you be comfortable with your purchase decisions if they appeared on the front page of the Sacramento Bee?”.

Remember that in this class, we're not going to provide detailed information about cost accounting standards. We'll only be providing you with enough background information to help you put the budget items in context. If you want to learn more about the costing principles at UC Davis, Extramural Funds Accounting offers a class focusing on A-21 and cost accounting standards.

## Office of Management and Budget – Circular A-21

Because the majority of UC Davis' research dollars are 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](#) in the executive branch of the federal government. The most relevant circular for UC Davis is [A-21: Cost Principles for Educational Institutions](#). All Federal sponsor policies that govern grant management (such as the NIH Grants Policy Statement) are based on A-21.

A-21 establishes principles for determining allowability of costs applicable to grants, contracts, & other agreements with educational institutions. According to A-21, for a cost to be considered "allowable", it must be reasonable, consistent, allocable, and in general, allowable. We've defined and described these below:

### Reasonable

A reasonable cost is one that would generally be accepted as necessary. For example, compensation for the time spent by a graduate student researcher on the project would generally be accepted as necessary while the purchase of a pleasure cruise would not be reasonable. Or let's say that the project requires replacement of a power supply for an experiment that requires 300 volts of power. Is it reasonable to purchase a power supply that has a maximum 3,000 volts of power at over five times the cost?

### Consistent

Consistent treatment of costs is a basic cost accounting principle and is specifically required by Circular A-21 to assure that the same types of costs are not charged to federally sponsored agreements both as direct costs and as facilities and administrative, or F & A, costs. These cost elements cannot, under routine circumstances, be both. So, consistency in this context means that costs, incurred for the same purpose, in like circumstances, must be treated uniformly as either direct costs or as F & A costs. For example, charging local phone charges to some grants, and not others, would not be consistently treating the charges as direct or F & A.

## **Allocable**

If a cost is allocable, it can be easily allocated in proportion to the benefits received by a specific 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.

You should also ask yourself whether the cost will be incurred solely to advance the work under the sponsored agreement. For example, travel costs incurred for the PI 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.

## **Allowable**

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. Why is it important to ensure that a cost is allowable before including it in a proposal budget? UC Davis will be spending the public's money, and is responsible for the proper stewardship of public funds and for upholding public trust.

## **Code of Federal Regulations**

The [Code of Federal Regulations \(CFR\)](#) is the codification of the general and permanent rules published in the Federal Register by the executive departments and agencies of the Federal Government. It is divided into 50 titles that represent broad areas subject to Federal regulation. Each volume of the CFR is updated once each calendar year and is issued on a quarterly basis. At the department level you'll encounter these rules in the certifications and representations portion of a call for proposals or general sponsor guidelines. When Sponsored Programs reviews the proposal, including the budget, we'll be making sure that the proposal meets the requirements set forth in the Code of Federal Regulations. It would be a good idea for you to become familiar with the rules relating to the types of research performed in your department.

## **UC Davis Charging Practices**

The [UC Davis Charging Practices](#) take into account the rules of our largest sponsor, the federal government, as well as the policies and procedures set forth in the [University of California Office of the President Contracts and Grants Manual](#).

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

As a recipient of federal awards, UC Davis is required to meet all of the guidelines in the applicable OMB circulars, such as A-21. Do you recall the item above which describes A-21's requirement that costs must be treated consistently? The federal [Cost Accounting Standards Board](#) (CASB) has 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 first standard requires that the expenditure classifications used to estimate costs in contract and grant proposals be consistent with those used to accumulate and report costs.

### *Allocating Costs Incurred for the Same Purpose*

The second standard requires that costs incurred for the same purpose, in like circumstances, be treated consistently as either direct or indirect costs. If a private industry sponsor allows us to direct-charge a cost that the Federal government says must be considered an indirect cost, in both cases, we must treat the cost as indirect to demonstrate consistency.

### *Accounting for Unallowable Costs*

The third standard requires that unallowable costs be identified and accounted for independently from allowable costs.

### *Cost Accounting Period*

The fourth standard requires the consistent use of the same cost accounting period for purposes of estimating, accumulating, and reporting costs.

## **Chapter 7 of the UCOP Contracts and Grants Manual**

[Chapter 7](#) of the UCOP Contracts and Grants Manual provides details about the University of California's 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 so you are able to identify areas where the UC's policies differ (and are usually more cautious) than the federal guidelines.

## **Specific Sponsor Rules**

### **Federal Sponsors**

Each sponsor agency or entity will, in general, have their own guidelines about how the funding they provide can be spent. Many of our 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 that work 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 often only referenced in the funding announcement, with directions to read the guidelines posted to the agency's website. 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." Make sure you read these carefully!

### **State of California Sponsors**

Unlike our work with federal agencies, we do not yet have any standard costing guidelines for work with agencies of the State of California. You will need to check each funding announcement and funding agency website to determine whether there are any restrictions. Keep in mind that if the dollars are federal flow through (meaning that the federal government gave the money to the state, which would in turn be giving it to us), then all of the federal guidelines apply, in addition to the state agency guidelines.

### **Private Sponsors**

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



## Direct Costs

Direct costs on a project will vary according to what is in your actual program or project. They do, however, have three things in common: they benefit the specific project for which the budget is written, they are necessary to complete the budget, and they are charged or recharged directly to the sponsored project. On the following pages are common direct cost categories with guidance as to what information you should provide for each category.

## Salaries and Wages

One of the major components of any budget will be accounting for the people who will be working on the project. 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 appropriate subaward budget.

If you know the specific person who will be working on a project, you should use their actual salary to calculate the total cost. If you don't have this information, you should talk to the person in your department or area who processes payroll. You may also need to talk to the payroll staff in another department if an employee on the project works outside of your department.

If the position is not filled, you should use the relevant salary listed on the appropriate salary scale. I've included links on this page to the salary scales you may use most often. When listing the salary of an employee, always make sure to use the Institutional Base Salary, or IBS. This is the total amount of compensation (not including benefits) that the University provides for an individual in a given classification.

You'll also want to report the salary or wage in the way that it is actually paid. For example, if someone is a salaried employee, you would list their salary. If someone is paid hourly, you would list their hourly wage.

When calculating the salary or wage for an employee, find out whether there are any known upcoming wage adjustments or merit increases for that person or classification. For example, was a new collective bargaining agreement signed which increases wages during the project period? Will the person be getting a promotion during the project period? If there isn't a specific increase known, don't include one. In this case, you should just use the UCOP standard 3 to 5% escalation rate.

Make sure to find out the type of appointment for each academic employee. Are they 9, 12, or summer months only? If you don't know this information, you can talk to the person in your office in charge of payroll. They'll be able to provide you with the relevant information.

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

## Effort Commitment

Depending on the sponsor budget format, you will also need to provide either the percent or the months effort for each employee. Keep in mind whether this is academic year, calendar year, or summer only. Remember that determining amount of effort is the responsibility of the principal investigator. The local campus policy of the Office of Research requires a [minimum commitment of effort](#) for sponsored projects. For projects over \$25,000, there must be a minimum level of effort of

2% for all key personnel. For projects less than \$25,000, there must be a minimum level of effort of 1%.

Using the percent or months effort and the salary or wage, you will calculate the total amount of money requested for each employee. Remember that if you state in the proposal that a certain amount of effort will be committed, and that proposal becomes an award, the people listed on the budget have now committed that effort to the project. This means that they are responsible for ensuring that they meet that effort commitment. Circular A-21 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 our online effort reporting system. For more details about how this works, you should contact Extramural Funds Accounting, or view their [Effort Commitment & Cost Sharing](#) page.

### Fringe Benefits

Fringe benefits are listed on a proposal budget as a set percent of salary. For all employees, you will use the [Composite Benefit Rate](#) schedule provided by the Accounting Department. You will find the appropriate job classification for each employee, and use the rate listed for each fiscal year of your project. The composite benefit rate schedule is updated each fiscal year to reflect actual costs of the University. If your project year is not the same as the UC Davis fiscal year, you will want to break out your benefit rates by fiscal year. For example, on a project running from February 1<sup>st</sup>, 2013 to February 28<sup>th</sup>, 2014, you would want to apply the Fiscal Year 2013 benefit rate for the February 2013 to June 2013 portion (5 months), and the benefit rate for Fiscal Year 2014 to the July 2013 to February 2014 portion (8 months). A visual example of this is below:

**Example: Project runs from February 1, 2013 – February 28, 2014**

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb
<b>Project Year</b>													
<b>Fiscal Year 2013</b>						<b>Fiscal Year 2014</b>							
<b>Calendar Year 2013</b>											<b>Calendar Year 2014</b>		

Whether or not you break the composite benefit rates out by fiscal year on your budget, you will be charged the applicable benefit rate in place for each month of the project. Breaking out the information on your budget simply helps you to ensure you are not short of funds at the end of the project.

Unlike salary and wages you won't apply any escalation other than what is listed on the schedule to the fringe benefit rate. Because fringe benefits are listed as a percent, the dollar amount will increase at the same rate as the salary escalation. Escalation of costs has already been determined, and is represented in the rate for each fiscal year.

## Equipment

For something to be considered equipment, its cost must be at least \$5,000. It must also be personal property which has a normal life expectancy of more than one year, can be appraised for value, and is complete in itself. That is, it does not lose its identity when affixed to or installed in other property. Make sure the equipment is not general purpose and the need for it is well documented. Include general purpose equipment costs only if special circumstances exist and they can be documented. You should avoid listing equipment by product name or manufacturer, because it may lock you into purchasing that specific product, even if you've found another product you would prefer to use. For more information about the definition and management of equipment please visit the [Capital Asset Accounting and Equipment Management](#) website.

## Fabricated Equipment

Fabricated equipment costs include: Material components, recharge services or supplies, and services purchased specifically for fabrication. You should identify the piece of equipment to be fabricated in the equipment section of the budget. Indicate the total cost of fabrication, including labor costs for non UCD personnel, such as independent contractors or consultants (if they are not listed as key personnel on the project).

Remember that "fabrication" is creating a new piece of equipment. Replacement "parts" do not qualify as part of fabrication, because they are repairing an old product, not creating a new one. Replacement parts are subject to overhead if they do not cost more than \$5,000 & stand alone. If you have questions about fabricated or other equipment, you should contact [Capital Asset Accounting & Equipment Management](#).

## Materials and Supplies

Materials and supplies are expendables, such as lab supplies and specialty supplies, which the researchers need to complete the project. In the budget, you should list each individual supply item and cost. For example, you might list 3 Knives, 1 roll of Duct Tape, and 30 feet of rope. How much detail about supplies should you put in the budget? A good rule to follow is: the higher the amount for the category, or the less obvious the cost for the work that will be performed, the more detailed the breakdown should be. It's not a good idea to just list "lab supplies" or "research materials". Remember that you should not include miscellaneous or department (general) supplies, like copy paper, office chairs, or pens, because these are included as Facilities and Administrative, or overhead, costs.

## Patient Care Costs

For budgeting purposes, "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.

The following are examples of what are not considered "patient care costs":

- First doctor-patient visit
- Follow-up visits (Physician /Nurses)
- Physical Exam performed by the Physician
- Physical Exam performed by a Nurse
- Taking "patient's history" by a Physician or a Nurse
- Any other services provided by a Nurse, or a Medical Technician
- Referrals to other doctors within the hospital or department

Projects with patient care costs always involve human subjects, so the project must have IRB approval.

- [UCOP Contract and Grant Manual 8-512](#)
- [NIH policy regarding Patient Care Costs](#)

## Travel

General travel costs include a variety of expenses, including ground and air transportation, communications, lodging and subsistence or per diem, foreign travel, currency exchange fees, and passport and visa costs.

When determining what rates you should use for travel, you should use the UC travel guidelines. Some sponsors may insist on using some other rates which is acceptable. However, these are often lower than the rates used by the UC, so make sure you can manage the travel expenses before agreeing to the alternate rates.

Travel and accommodations for non UC Davis personnel can be charged directly to a sponsored project, instead of sending them the money via a subaward.

For foreign travel, you should use US State Department travel rates. When booking flights, remember that to the maximum extent possible, US flag carriers must be used. In your actual budget, you need to make sure that you list the total cost of domestic and foreign travel separately. You can find more details about allowability of travel expenses, rates, and other travel related restrictions and guidelines on the [UC Davis Travel & Entertainment](#) website.

## Graduate Student Fees and Tuition

Graduate students employed on a sponsored project are entitled to have their fees or tuition remitted on their behalf by the University. To be eligible for tuition and fee remittance, the student must have at least a 25% appointment. This can be a combined total of appointments across all sponsored projects. 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 effort charged to the project. As of 2011, the Budget Resource Management office has approved an escalation of 10% for student fees and tuition. You should take this into account on multi-year budgets which involve graduate students.

## Consultants

Consultants work out of their brain, bag, or brief case, and typically work on an hourly basis. They don't use resources of an entity such as a university or company, and don't own the resources of the entity for which they are consulting. If you are calling someone a "consultant" in your budget, but they will be utilizing University resources, you should 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.

UC believes that the use of consultants should be rare, because UC is the home of the experts. Before using a consultant, you should consider whether there is a person or department on campus that can provide the same service. As a part of the budget, you will need to obtain a written scope of services and fee schedule from any consultants. Finally, you will need to determine whether there is any conflict of interest between the institution or PI and the consultant. In general, you'll 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. Make sure you read the [UC Davis Policy and Procedures Manual, Chapter 350, Section 90](#) which discusses UC policy in regards to employee vendor relationships.

## Subagreements

There are two basic types of subagreements. The first is a subaward. This can be in either the form of a grant or a contract, and is typically to another research institution or to a non-profit organization. Subawards outsource all or portions of the project tasks to another entity and typically include terms and conditions of the prime award. Procurement contracts are typically to a self-employed individual or for profit organization, and can be for individuals or for-profit or not-for-profit corporations. 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. The bottom line is that determining which category a subagreement belongs to is a gray area. Call the Sponsored Programs office to be sure!

Remember that when you write your budget, all costs associated with a subagreement should be listed separately from the costs incurred by UC Davis.

## Subawards

If your subagreement is a subaward, there are four standard items which Sponsored Programs will always need. The first is the subawardee's budget. The subaward budget should include everything that institution receiving the subaward will need to complete their subaward. UC Davis only issues subawards 1 year at a time, so the budget should be broken down by year.

You will also need to obtain the subawardee's scope of work. The scope of work should describe the specific tasks and deliverables that will be completed or provided by the receiving institution.

When UC Davis provides a subaward to an institution that is not a part of the Federal Demonstration Partnership (FDP), the subawardee is required to complete a proposal-specific commitment form. This provides UC Davis with information needed to make compliance certifications to the sponsor, as well as identifying any areas where special attention must be paid. This form must be received by Sponsored Programs before a subaward can be given to a non-FDP institution. To determine whether the institution you are working with is a member of the FDP, you can view the list of [FDP Member Institutions](#). To expedite award processing time, it is suggested that PIs working with non-FDP institutions request the [Proposal-Specific Commitment Form](#) when other subrecipient information is requested (e.g., scope of work and budget).

Finally, you will need to obtain institutional approval from the receiving institution. Approval from the receiving institution generally consists of a short letter agreeing to the terms and conditions and any required cost share. It should come from an institution contact with signature authority. For example, at UC Davis, this would be the Sponsored Programs office.

To remind you of the items you need to obtain from subawardees, I have created a [Quick Guide for Subawards](#). You can learn more about subawards by reading about Partnering with Other Institutions on the Office of Research website.

## Lease Costs

When lease costs are charged directly to a sponsored project, you may use off-campus indirect cost rates for your budget calculations. Remember that the lease charges must still be allowable, allocable, and consistent. You must also be able to document the lease and other associated charges.

## Other Direct Costs

Your budget may have other direct costs which don't have their own budget categories. This may include items such as equipment repair and maintenance, computing time, publication costs, animal care, or other costs associated with completing the project. You should list these costs on your budget, and describe them in detail in your budget justification.

## Cost Sharing

Cost sharing occurs when costs of a sponsored project are borne by the applicant institution (UC Davis) instead of by other institutions or agencies. Cost sharing usually occurs with direct costs, but if the sponsor allows it, indirect costs can be used to meet a mandatory cost share requirement. Cost sharing may be in-kind, such as uncompensated effort or a “new” piece of equipment for the project, or it can be cash.

Make sure that cost sharing is appropriate before you commit to it. UC Policy ([APM – 020](#)) says 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. You should never cost share when it is not allowed by the department or Dean's office. You should also not cost share when you cannot afford it. If your proposal includes cost sharing that you (or your department) can't afford, the University may not be able to accept any subsequent awards.

When you submit a proposal with cost sharing, you will need to make sure you have a formal letter or memo from the party that has authority to commit to the cost share, such as the Dean or department chair. In some cases, the signatures on the data sheet can serve this purpose. If you're 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 in your proposal, and your proposal gets awarded, that cost sharing is now mandatory as part of the award agreement. Don't ever tell yourself that you can take the cost sharing out later if you don't need it!

For more information about UC policy regarding cost sharing, please read [Chapter 5 of the UC Contract and Grant Manual](#). To learn more about cost sharing at UC Davis, visit the Extramural Funds Accounting [Effort Commitment & Cost Sharing Help](#) page.

## Estimating Costs

Once you know your budget categories, you'll need to determine what numbers to use in the budget. This is the process of identifying and projecting the costs for a sponsored project using generally accepted cost estimation methods. For salaries and wages, you'll use the methods we discussed earlier. However, for other categories, you'll need to estimate your costs. Depending on the cost category, there may be multiple ways to do this. One way would be to look at historical costs for similar projects. You could also try to obtain current cost information. If you're using this method, the web is a great source of information. If you are looking for supplies and materials, catalogues are especially useful. You might also use vendor quotes. Make sure that you obtain a written copy of what the quote includes, so you can verify that all the costs are included in the quote. You may need a service which can be performed on campus. In this case, you may be able to obtain approved campus recharge rates. It's ok to use methods other than these to estimate your costs. Just be sure that your process is logical, you can explain it to someone else, and you are able to document how you obtained your numbers.

## Escalating Costs

When you estimate your costs, you should remember that costs increase over time. Because of this, we recommend that you include a modest escalation in the estimate of costs for direct charges. 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 your project receives adequate funding. You should use an escalation rate of 3 to 5% for most direct costs. There are two exceptions to this. As mentioned, tuition and fees should be escalated at a rate of 10% per year. You should also not include any escalation in your budget for subcontracts. The subcontracting institution or agency should include the appropriate escalation within their own budget.

## Documenting Cost Estimation

Once you've estimated your direct costs, you'll also need to make sure you keep detailed documentation. Documentation supports how the costs were estimated and the reasons why costs were proposed. This is our proof that we are not just making up all of the numbers.

Auditors rely on this information, and will need more than just your memory to support your costs. Auditors will focus on the source documents that were relied upon during the preparation of the budget and budget justification. It is also possible that you will not be in your current position when an audit is conducted, so you'll want your documentation to be so clear and organized that someone who didn't work on this budget can follow your logic. You can use any of the materials you used for your cost estimation as documentation. These could be things like payroll records, published merit & range increases, catalogues, on-line or other, vendor quotes, proposals, or documentation of historical costs for like projects.

If you are using web-based information as your documentation, you should save either a printed copy or PDF version of the page, not just the link. The auditors will need to see the information you used when you wrote your proposal budget, and the website will most likely update the information, or may not be available at the time of an audit.



## Facilities and Administrative (F & A) Costs

As we discussed earlier, allowable costs can be either direct or indirect. Indirect costs are also known as facilities and administrative costs. You may also have heard them referred to as overhead costs. The determination that a cost is indirect, rather than direct is primarily determined by its allocability with a specific cost objective (i.e., project) and consistency in how the cost is applied across the organization. F & A Costs are associated with the general operation of UC Davis. They are costs such as facilities and maintenance, general and departmental administration, clerical and administrative salaries and fringe benefits, general office supplies, general purpose equipment like computers, routine postage, building maintenance and utilities, and library expenses. You'll notice that all of these examples are benefitting multiple projects, and it would be difficult to determine how much of each resource was given to each project.

The F & A rate is a federally approved rate, applicable to all sponsors. Remember that consistency principle? The Federal government expects to pay the same or less for projects than other sponsors do, not more! This includes overhead. This is why we use the negotiated rate on all proposals for funding. The Office of Research website provides details about [indirect cost rates](#), as well as 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.

### Instruction

Instruction is all the teaching and training activities of an institution. This consists of departmental research, development, and scholarly activities that are not separately budgeted and accounted for. It excludes research training, which is part of organized research.

### Organized Research

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.

### Other Sponsored Activities

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.

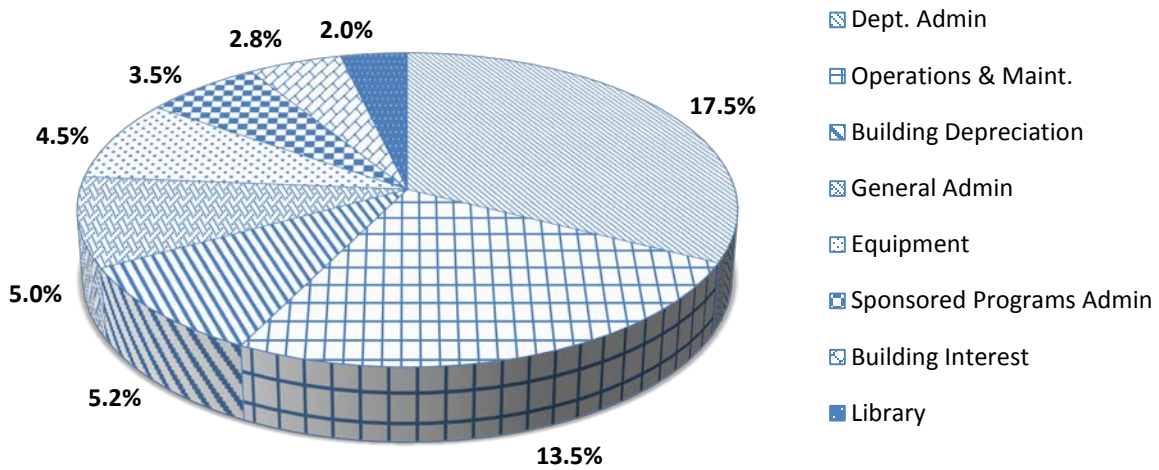
## Location of Research

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

### On-Campus Rates

If the research is conducted on-campus, you will pay a higher rate. Research does not happen in a vacuum, and it takes resources to provide the infrastructure required for successful completion of research and other projects. As you can see on this graph, much of the F & A monies on the UC Davis campus are apportioned to what might be considered "upkeep" or "keeping the lights on"; things such as operations & maintenance, or general purpose equipment, like office computers & copiers.

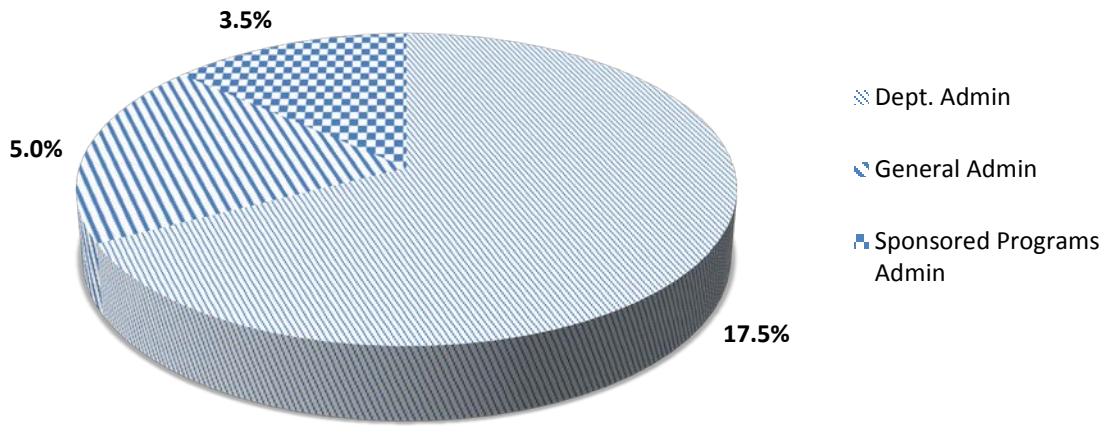
### On-Campus Organized Research (Rate = 54%)



### Off-Campus Rates

The off-campus rate applies to research that is primarily conducted somewhere other than a UC Davis facility. Please remember that "fieldwork", or collecting data off-campus, does not in and of itself create a justification for using an off-campus rate. If University facilities are used to, for example, analyze and interpret the data, then it would be more appropriate to use the on-campus F & A rate. Similarly, if a University facility could reasonably have been used, but a researcher chooses to say, analyze the research data from home for personal convenience, it would still be appropriate to use an on-campus rate.

### Off-Campus Organized Research (Rate = 26%)



### F & A Rate Waivers

Sometimes, researchers ask to use a rate other than the Federal Negotiated rate for their sponsored research. You should try to avoid this if at all possible! Remember that the money from the F & A portion of the budget is essentially reimbursing the University for costs related to the sponsored project. If a lower F & A rate is used, the expenses are still being generated, but the cost is absorbed by the University, rather than by the sponsor. This is especially problematic if the sponsor is for-profit. Allowing a lower F & A rate would essentially mean the University was subsidizing research for a private company which would be able to make money off of the results.

Some sponsors have established policies of not paying above a particular rate for overhead charges. If you run in to this situation, you should first ask the sponsor for their indirect cost policy. When I say "policy", I am referring to an actual, written policy which applies to all sponsored projects funded by that sponsor. If a sponsor does not ordinarily place a cap on the F & A rate used, asking for special consideration for this one project is not the same as an actual policy.

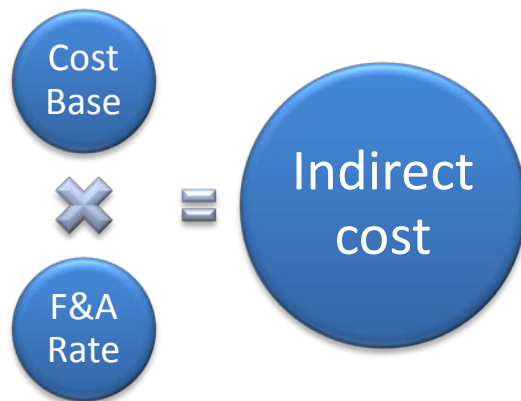
If you are working with a sponsor who does not have a written policy placing caps on your indirect costs, but still want to use a lower rate, the Office of Research can request a vital interest waiver

from UCOP for that specific project. In this context, "vital interest" refers to the interest of the University, not the researchers or the project. Departments should be aware that "vital interest" waivers from UCOP are approved very rarely, especially given the ongoing state and UC budget cuts. When you prepare a proposal budget, you should avoid making the project's success contingent on receiving a vital interest indirect cost waiver.

### Calculating F & A

Once you've figured out which F & A rate applies to your project, how do you know the total dollar amount of your indirect costs? It's actually just a quick calculation.

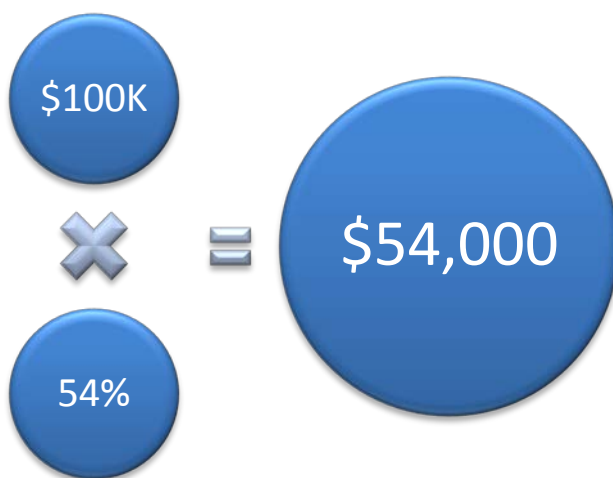
You take your cost base and multiply it by your F & A rate. The resulting number is the dollar amount of your indirect costs. Let's look at how this might work with a couple of different cost bases.



**F & A Rate Formula**

### Modified Total Direct Costs

The Modified Total Direct Cost base, or MTDC, is used per the University's negotiated rate agreement. This includes most direct costs, including all salaries and wages, fringe benefits, materials and supplies, services, travel, and subgrants and subcontracts up to the first \$25,000 of each subgrant and subcontract (regardless of the period covered by the subgrant or subcontract). Equipment, capital expenditures, charges for patient care and tuition remission, rental costs, scholarships, and fellowships, as well as the portion of each subgrant and contract in excess of \$25,000 shall be excluded from modified total direct costs.



**F & A Rate Example: MTDC**

If you had a negotiated rate of 54%, and your MTDC was \$100,000, using our formula, your total indirect costs would be \$54,000.

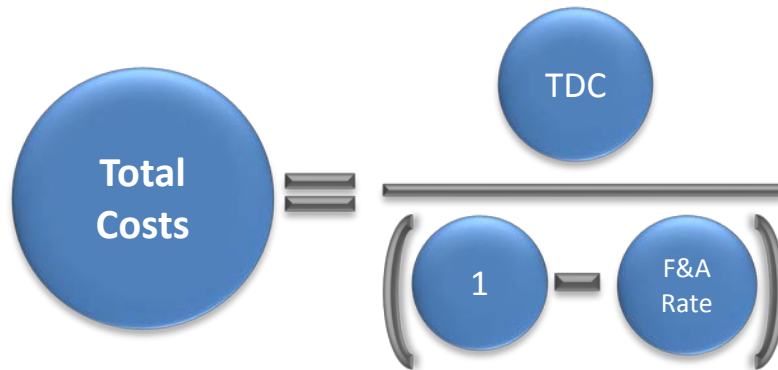
### Total Direct Costs

Total Direct Costs are calculated the same way that we calculated MTDC. The difference is that there are no direct cost category exclusions. Because this is not the cost base on which our negotiated rate agreement is based, you should only use this cost base if the sponsor specifically requires you to do so.

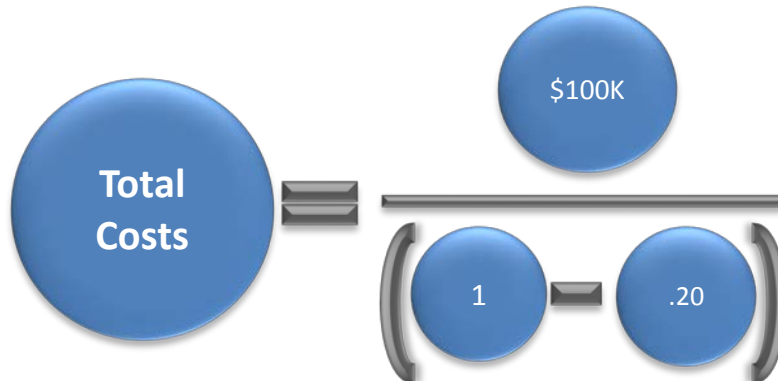
### Total Costs

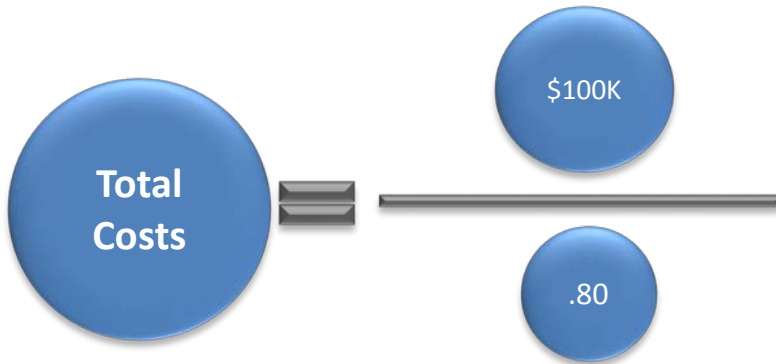
As with Total Direct Costs, you should only use Total Costs as a cost base if the sponsor specifically requires it. Calculating your indirect costs using a cost base of Total Costs is a bit more complicated than MTDC and Total Direct Costs. Your first step will be to determine your Total Costs.

You will first subtract your F & A rate from one. You will then divide your Total Direct Costs by this number. This, in practice, appears as follows:



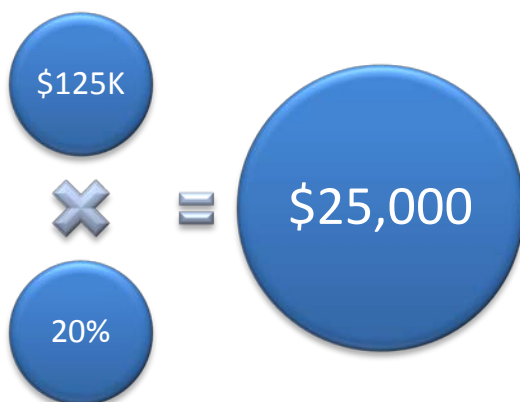
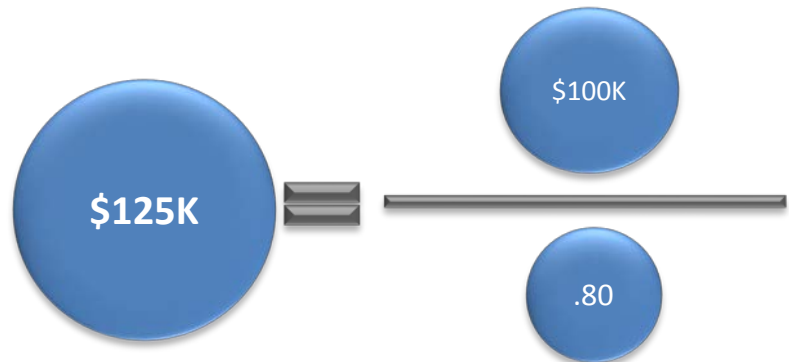
Your Total Direct Costs are \$100,000, and your F & A rate is 20%.





You subtract your F & A rate from 1, giving you 0.80.

You divide \$100,000 by 0.80, which gives you total costs of \$125,000.



You'll then continue your calculation of indirect costs in the same way we discussed for MTDC and Total Costs.

Multiply your cost base, here, Total Costs, by the F & A rate, 20%, which gives you total indirect cost of \$25,000.

## Budget Justification

After you've completed your budget, UCOP requires the researcher to create a written description of the estimated costs used to prepare a project budget, as well as an explanation and description of the types of individual costs that make up each larger budget category. This is known as a budget justification, and is required by the University, even if the sponsor doesn't require it.

Your budget justification provides the reviewer, and potentially an auditor, with an explanation of the cost estimation methods used to project the costs, an explanation of why the projected costs are necessary for the research or project, a description of the types of costs that make up a larger budget category such as "other" or "supplies", and a rationale for why this situation is special. Your budget justification should also include some sort of accommodation for payment of unusual costs. This last portion is especially important if your budget includes something that might raise a flag for sponsors or auditors, like equipment (especially any equipment that sounds like general purpose equipment), or non-resident graduate student fees and tuition, which is required by the UC Davis remission policy. Make it clear that all budget requests are reasonable and consistent with sponsor and UC Davis policies.

Remember that the person who is conducting the research is the person who should be justifying the project costs! If you are assisting a researcher in creating the budget justification, it may be helpful to discuss the project budget with them, using prompt questions such as "What will graduate student A be doing on the project?" or "How did you determine that piece of equipment B would cost \$6,525?" The materials and information used during cost estimation will be invaluable in creating the budget justification, so you may find it helpful to have them on hand.

## Formatting and Completing the Justification

There is no University-required format for budget justifications, but in general, they 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, you should describe their role, their % effort, any changes to personnel costs (such as for merit increases), 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. The justification is not the appropriate section of the budget for a lengthy explanation of an individual's qualifications. This information should be provided in the bio sketch and/or management plan of the technical proposal. In most cases, two or three sentences are sufficient to address someone's qualifications in the budget justification.

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

If you have any items in your budget that would ordinarily be considered indirect costs, such as general office equipment or administrative support, you will want to provide details in the

justification about why this project requires those items in greater quantity than would be considered "normal" use. The direct relationship of these items to 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 if you have already spent the money. You will also want to provide details about any unusual categories or items on the budget, and explain in detail how they relate to the research or project.

## Useful Website Links

<http://research.ucdavis.edu/gt>

<http://research.ucdavis.edu/pgc/d/spo/NewProposalChecklist>

<http://ortraining.ucdavis.edu/proposal-submission/>

<http://research.ucdavis.edu/pgc/d/spo/CallProposalsChecklist.pdf>

[http://www.whitehouse.gov/omb/circulars\\_default](http://www.whitehouse.gov/omb/circulars_default)

[http://www.whitehouse.gov/sites/default/files/omb/assets/omb/circulars/a021/a21\\_2004.pdf](http://www.whitehouse.gov/sites/default/files/omb/assets/omb/circulars/a021/a21_2004.pdf)

<http://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=CFR>

<http://accounting.ucdavis.edu/EX/ChargesPractices.pdf>

<http://www.ucop.edu/research-policy-analysis-coordination/resources-tools/contracts-and-grants-manual/index.html>

[http://www.whitehouse.gov/omb/procurement\\_casb/](http://www.whitehouse.gov/omb/procurement_casb/)

<http://www.ucop.edu/research-policy-analysis-coordination/resources-tools/contracts-and-grants-manual/chap07.pdf>

<http://sites.nationalacademies.org/PGA/fdp/index.htm>

<http://www.ucop.edu/academic-personnel/compensation/index.html>

<http://www.hr.ucdavis.edu/Salaryscales>

<http://accounting.ucdavis.edu/costshare/enteringec.cfm>

<http://accounting.ucdavis.edu/costshare/>

[http://accounting.ucdavis.edu/doc\\_help/labor/composite\\_benefit\\_rate/index.cfm](http://accounting.ucdavis.edu/doc_help/labor/composite_benefit_rate/index.cfm)

<http://accounting.ucdavis.edu/ca/>



<http://www.ucop.edu/research-policy-analysis-coordination/resources-tools/contracts-and-grants-manual/chap8.html>

[http://grants1.nih.gov/grants/policy/nihgps\\_2003/NIHGPS\\_Part13.htm#\\_research\\_patient\\_care](http://grants1.nih.gov/grants/policy/nihgps_2003/NIHGPS_Part13.htm#_research_patient_care)

<http://travel.ucdavis.edu/>

<http://manuals.ucdavis.edu/PPM/350/350-90.pdf>

[http://sites.nationalacademies.org/PGA/fdp/PGA\\_055518](http://sites.nationalacademies.org/PGA/fdp/PGA_055518)

<http://research.ucdavis.edu/pgc/d/spo/SubMntrFormEachProposal82712FillableForm.pdf>

<http://research.ucdavis.edu/pgc/d/spo/SubawardsQuickGuide.pdf>

[http://www.ucop.edu/academic-personnel/\\_files/apm/section1.pdf](http://www.ucop.edu/academic-personnel/_files/apm/section1.pdf)

<http://www.ucop.edu/research-policy-analysis-coordination/resources-tools/contracts-and-grants-manual/chap05.pdf>

<http://accounting.ucdavis.edu/costshare/>

<http://research.ucdavis.edu/pgc/hl/icr-fbr>

<http://research.ucdavis.edu/pgc/hl/d/spo/f-a-rate-agreement>