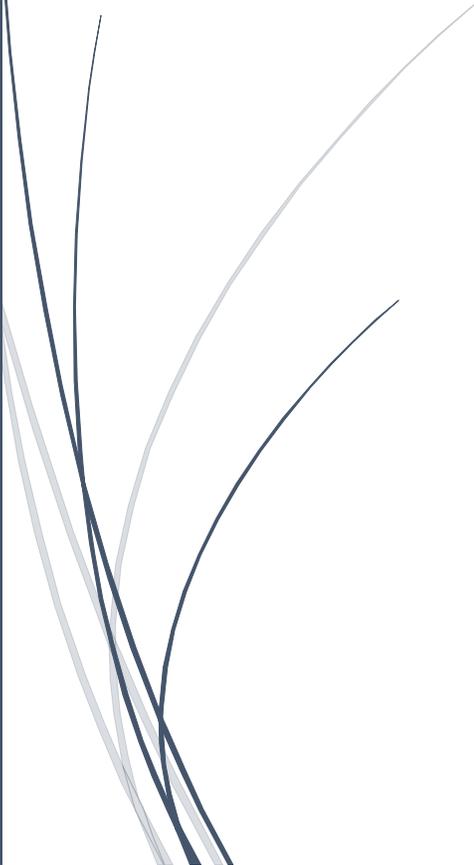




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Proposal Budgeting Basics

Training Workbook



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UNIVERSITY OF CALIFORNIA, DAVIS

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Learning Objectives

After completing this training session, attendees should:

- Know the common direct cost budget categories,
- Know the various indirect cost rates and bases used at UC Davis,
- Understand the different types of collaborators and
- Know the basic formulas for preparing a proposal budget.

Common Budget Categories

Personnel Line Items

The personnel section includes the salary/wages and benefits of all personnel that should be charged to the grant.

Salary and Wages

Step for calculating the salary/wages to charges to the grant.

1. Before calculating the salary to charge to the grant, work with the Principal Investigator (PI) to determine the personnel needs.
2. Determine the salary of each personnel member.
3. Calculate the effort commitment for each personnel member.
4. Calculate the salary to charge to the grant for each personnel member.

These steps are further explained below.

Determine Personnel Needs

Role	Characteristics
(Lead) Principal Investigator/Project Director (PI/PD)	Required
	Designs and conducts the project
	Overall responsibility
	May not be allowed by the sponsor
	Often as equal administrative authority with the PI
	Other senior personnel
	“Brains and briefcase”
	Should not include UC employees
	Not responsible for completing the scope of work
	May or may not be listed as senior personnel depending on role
	May provide as needed advice or be integral to project

Additional Notes:

Determine the Salary

1. Identify the **actual** salary and wages if possible
 - If unknown, use the UC Davis salary scales to estimate.
 - UCOP Academic Salary Scales: <https://www.ucop.edu/academic-personnel-programs/compensation/2018-19-academic-salary-scales.html>.
 - UC Davis Staff Salary Scales: <http://www.hr.ucdavis.edu/Salaryscales>.
2. Determine **wage adjustments**, if any.
 - Identify any known wage adjustments, such as _____?
 - It may be appropriate to escalate wages to standardize projected wage increases.
 - i. The UC Davis standard escalation rates are _____ to _____%.
3. Determine the appointment type for each academic employee.
 - All staff employees have a _____-month appointment.
 - Academic employees may have a 9-, _____ or 12 -month appointment.
 - Knowing the number of appointment months is important for annualizing salary and calculating _____ commitment.

Because UC Davis uses annualized effort, consider using the _____ salary for accuracy.

1. The definition of annualized salary is: _____.
2. Annualizing salary is beneficial because it:
 - _____
 - _____
3. Formula:
 - $Salary \div \# \text{ of Appointment Months} = \text{One Month Salary}$
 - $\text{One Month Salary} \times \text{total number of months worked annually} = \text{Annualized Salary}$
 - i. If estimating or projecting, use 12 months as total months worked.

Let's Practice! Determine Salary of Personnel

Professor Smith is paid \$100,000 per year and has a 9-month appointment. She is allowed to work up to 3 summer months. What is her **Annualized Salary**?

1. Calculate her monthly salary.

$$\text{\$} \underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \text{\$} \underline{\hspace{2cm}}$$

2. Calculate her annualized salary.

$$\text{\$} \underline{\hspace{2cm}} \times 12 = \text{\$} \underline{\hspace{2cm}}$$

Professor Jones is paid \$100,000 per year and has a 11-month appointment. She is allowed to work up to 1 summer months. What is her **Annualized Salary**?

1. Calculate her monthly salary.

$$\text{\$} \underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \text{\$} \underline{\hspace{2cm}}$$

2. Calculate her annualized salary.

$$\text{\$} \underline{\hspace{2cm}} \times 12 = \text{\$} \underline{\hspace{2cm}}$$

Additional Notes:

Calculate the Annualized Effort Commitment

Effort is the amount of time an individual will commit to the grant, if funded. The PI is responsible for determine the amount of effort to commitment. _____ is sufficient. _____ will require effort to be included either as a percent or number of person-months.

Calculate Effort Commitment in % Format

If the investigator will commit the same amount of effort for an entire project period, no calculation is necessary. The effort commitment is the percent given by the investigator. However, calculating the annual effort commitment is often more complex. For example, the PI may provide effort only during the Academic or Summer months or provide a different amount of effort in Academic than in Summer months (referred to as non-annualized effort). When using the OR Budget Template, enter separate lines for Academic and Summer months.

To convert non-annualized effort to annualized effort in **percent format**:

1. Convert Academic Effort to Annual Effort
 $(Academic\ Appointment\ Months \times AY\ Effort\%) \div 12 = AY\ Effort\%$
2. Convert Summer Effort to Annual Effort
 $(Summer\ Months \times Summer\ Effort\%) \div 12 = Summer\ Effort\%$
3. Determine Total Annual Effort
 $Effort\% \text{ for Academic Months} + Effort\% \text{ for Summer Months} = Total\ Annual\ Effort\%$

Let's Practice! Calculate Annualized % Effort Commitment

Professor Smith has a 9-month appointment and can work up to 3 summer months annually. She will commit 3% effort during the academic months and 50% effort during the summer. What is her total **Annualized Effort** commitment for this project?

1. Calculate her effort commitment based on her academic year effort.
 $(______ \times ______\%) \div 12 = ______\%$
2. Calculate her effort commitment based on her summer-months effort.
 $(______ \times ______\%) \div 12 = ______\%$
3. Calculate her total annual effort commitment.
 $______\% + ______\% = ______\%$

Professor Jones has a 9-month appointment and can work up to 3 summer months. She will commit 10% effort during the academic months and 20% effort during the summer. What is her **Annualized Effort** commitment for this project?

1. Calculate her effort commitment based on her academic year effort.
 $(______ \times ______\%) \div 12 = ______\%$
2. Calculate her effort commitment based on her summer-months effort.
 $(______ \times ______\%) \div 12 = ______\%$
3. Calculate her total annual effort commitment.
 $______\% + ______\% = ______\%$

Calculate the Salary to Charge to the Grant

Once the salary has been annualized and the effort determined, the salary to charge to the grant can be calculated. The basic formula is:

$$Annualized\ Salary \times Annualized\ Effort = Salary\ to\ Charge.$$

Note that before making this calculation the salary and effort must be annualized.

Let's Practice: Calculate Salary to Charge Using Annualized Effort%.

Professor Smith has a 9-month appointment. She will commit 10% annual effort and her annualized salary is \$133,333.

What amount should be charged to the grant for her salary?

\$ _____ x _____ % = \$ _____

Professor Smith has a 9-month appointment and a base salary of \$100,000. She will commit 10% academic year effort.

What amount should be charged to the grant for her salary?

\$ _____ x _____ % = \$ _____

Calculate Effort Commitment in Person-Months Format

The sponsoring agency may require effort be reported in person-months format instead of as a percent. Federal sponsors always require effort be included in person-months format. To convert calculate effort in **person-months format**:

1. Determine the total number of months works. Use 12 to estimate.
Appointment Months + Summer Months = Total Months Worked
2. Multiply the number of months worked by the % effort to calculate person-months effort.
Total Months Worked x Effort% = Annual Committed Effort in Person Months

Let's Practice! Calculate Effort Commitment in Person-Months Format.

Professor Smith has a 9-month appointment. She will commit 3% effort during the academic year. **What is her effort commitment in person months for this project?**

1. Determine the number of appointment months.

2. Calculate her effort commitment in person-months.
_____ x _____ = _____ Person-months effort

Professor Smith has a 9-month appointment. She will commit 10% annual effort. **What is her effort commitment in calendar/person months for this project?**

1. Using the shortcut formula, calculate her calendar/person months format.
Shortcut formula: (Appointment Months + Summer Months) x Effort = Effort in Calendar/Person Months
(_____ + _____) x _____ = _____ calendar months effort

Professor Smith has a 9-month appointment. She will commit 10% effort during the academic months and 20% effort during the summer. How many person months is she committing to the project?

Academic Year Effort: _____ **x** _____ = _____

+

Summer Months Effort: _____ **x** _____ + _____

=

Total Annual Effort: _____ **x** _____ = _____

Fringe Benefits

The amount of benefits to charge to a grant is based on the annual salary to charge and the benefit rate. Benefit rates are available at: http://afs.ucdavis.edu/our_services/costing-policy-e-analysis/composite-benefit-rates/.

The rates for Fiscal Year 19/20 and 20/21 are below.

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%

To calculate the amount of benefits to charge annually:

1. Identify the benefit group and rate.
2. Calculate the fringe benefits to charge.

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

Additional Notes:

Equipment and Capital Asset Line Items

Correctly identifying equipment and capital assets is important because they are almost never subject to indirects. The OR Budget Template includes an Equipment section where these costs should be entered.

Equipment	Software	Renovations/Facility Improvements
<ul style="list-style-type: none"> • Capitalized and excluded from F&A • Non-expendable • Standalone • Normal useful life is 1 year or more • Cost is more than \$5,000 	<ul style="list-style-type: none"> • Capitalized and excluded from F&A if: <ul style="list-style-type: none"> ○ Software purchase price is \$5,000 or more per copy ○ Licenses where no period mentioned if the cost is more than \$5,000 per license and useful life exceeds 1 year ○ Included as hardware costs • Treated as supplies and subject to F&A: <ul style="list-style-type: none"> ○ Annual license fees and maintenance costs 	<ul style="list-style-type: none"> • Capitalized and excluded from F&A • Improvements or betterments

Supply and Expense Line Items

Correctly identifying costs as either supplies or expenses is also critical as they have different indirect cost treatment based on the category.

Materials and Supplies	Expenses
<ul style="list-style-type: none"> • Tangible items • Laboratory • Project • Specialty 	<ul style="list-style-type: none"> • Tuition and registration fees • Event registration fees • Facility recharges • Publication Fees • Participant Support Costs

Participant Support Costs

Participant Support Costs are costs paid to or on behalf of trainees/program participants who are not employees. Participants may be students, national scholars and scientists, private sector representatives, agency personnel, teachers, and others who attend and participate in the conference, workshop, or training activity supported by a particular award. University employees cannot be participants. Participants perform no work or services for the project or program other than for their own benefit. A participant is not involved in providing any deliverable to the University or a third party.

The following may **not** be participants:

1. _____
2. _____
3. _____

Participant Support Costs are **not** subject to indirects and thus are _____ from the indirect/F&A base.

Subaward Line Items

Proposals in which UC Davis is a Subawardee are submitted to Sponsored Programs the same as all other proposals. UC Davis treats incoming Subawards the same as Awards. However, outgoing Subawards are handled differently. Outgoing Subawards are those in which UC Davis is the Prime Applicant and will be issuing subaward to other institutions, if funded.

It is important to determine if the relationship is a Subaward or Procurement Contract. An (outgoing) subaward is one in which another organization is performing a portion of the project **and**:

1. Their Scope of Work is intellectually significant and separable from the project's programmatic effort,
2. They have programmatic _____,
3. Their work could result in the development of _____ or _____ and/or
4. They will need _____ approval.

Vendor agreements/procurement contracts are categorized on the proposal budget as _____ and are subject to indirects (F&A costs) and may not be subject to all of the terms of the prime agreement, such as financial audits.

Terms of a subaward **are** influenced by the prime agreement. The **first** \$25,000 of **each** Subaward is subject to indirects (F&A costs) if the Modified Total Direct Cost (MTDC) base is being used **except** when the Subawardee is another UC campus.

Other Basic Formulas

Escalations

Consider using escalations for costs that increase over time when allowed by the sponsor. Read the program and any other sponsor guidelines to determine if escalations are allowed. Costs may be escalated by Project Year/Period (PY) or Fiscal Year (FY) by ____ to ____% for most direct costs, including _____ and _____. Tuition and fees may be escalated up to ____%. Do not include additional escalations in the prime budget for subawards as any appropriate escalations should be included in the Subaward budget.

Let's Practice! Escalating Salary and Wages

Professor Smith has a 9-month appointment. She will commit 2.7% effort (previous calculation), and her annualized salary is \$133,333. Based on the previous calculation, \$3,600 is to be charged the grant annually.

1. $\$133,333 \times 2.7\% = \$3,600$
2. Now let's factor a 3% increase.
 $(\$3,600 \times \text{____}\%) + \$3,600 = \$\text{_____}$

Additional Notes:

Split Rates

Split rates may need to be applied if a project period spans multiple Fiscal Years (FYs). The UC Davis FY is July 1 – June 30. To use calculate costs with split rates:

1. Determine one month of costs.
 $Annual\ Costs \div 12 = One\ month\ of\ costs$
2. Determine the number of months at Rate 1.
 $Months\ before\ end\ of\ the\ FY\ (before\ June\ 30th)$
3. Calculate the costs to charge at Rate 1.
 $One\ month\ of\ costs \times Months\ at\ Rate\ 1 \times Rate\ 1 = Costs\ to\ charge\ at\ Rate\ 1$
4. Determine the number of months at Rate 2.
 $Months\ after\ start\ of\ next\ FY\ (on\ or\ after\ July\ 1st)$
5. Calculate the costs to charge at Rate 2.
 $One\ month\ of\ costs \times Months\ at\ Rate\ 2 \times Rate\ 2 = Costs\ to\ charge\ at\ Rate\ 2$
6. Calculate the total costs for the project period.
 $Costs\ at\ Rate\ 1 + Costs\ at\ Rate\ 2 = Costs\ for\ PY$

Let's Practice! Calculating with Spilt Rates

Professor Smith's salary charged to the grant for the first period is \$3,708. The first project period begins on September 1, 2018 and ends on August 31, 2019. Her fringe benefit rate for FY 2018-19 is 38.9% and for FY 2019-20 is 40.1%. **What is the total amount/cost for her fringe benefits for the first project period?**

1. Determine one month of costs.
 $\$ \underline{\hspace{2cm}} \div 12 = \$ \underline{\hspace{2cm}}$
2. Determine the number of months at Rate 1. $\underline{\hspace{2cm}}$
3. Calculate the costs to charge at Rate 1.
 $\$ \underline{\hspace{2cm}} \times 10 \times .389 = \$ \underline{\hspace{2cm}}$
4. Determine the number of months to charge at Rate 2. $\underline{\hspace{2cm}}$
5. Calculate the costs to charge at Rate 2.
 $\$ \underline{\hspace{2cm}} \times 2 \times .401 = \$ \underline{\hspace{2cm}}$
6. Calculate the total costs for the project year.
 $\$ \underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \$ \underline{\hspace{2cm}}$

Indirect/Facilities & Administrative (F&A) Costs

Indirect costs, also referred to as Facilities and Administrative (F&A) costs, are applied to research awards. These are costs that are costs associated with the general operations of UC Davis and cannot be readily assigned to a specific project. However, they support the infrastructure needed to conduct the project.

Current F&A Rates are included in the OR Budget Templates, in Cayuse SP and can be found on the Sponsored Programs website at: <https://research.ucdavis.edu/proposals-grants-contracts/helpful-links/indirect-cost-fringe-benefit-rates/fa-rates/>. These rates are applicable to all sponsors. If a sponsor will not allow use of the F&A rate, provide the sponsor policy on indirect costs to your Sponsored Programs proposal analyst when submitting the proposal package for review. Sponsored Programs will submit the exception request to UCOP. The F&A Rate is determined by the type/category and location of the activity.

To select and apply the appropriate F&A rate:

1. Identify the activity category/type. Following are the activity categories.
 - 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 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.
 - Clinical Trials (industry sponsored) should be used when a project is being funded by industry, including when such funding is flow-through.
 - Instruction includes 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.
 - Primate Center is a special rate to be used the California National Primate Research Center.
2. Determine the location of the sponsored activity.
 - 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.
 - 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.
3. Identify the appropriate F&A Rate and base. *The OR Budget Templates will calculate indirects using the appropriate rate and base once the activity category is selected.*
 - The indirect bases are listed next to the F&A rate on the Sponsored Programs website. Additionally, some sponsors that do not use the negotiated F&A rates may specify the base that should be used.
 - The indirect bases are:
 - i. Modified Total Direct Cost (MTDC): Excludes equipment, capital expenditures, charges for patient care, student tuition remission, rental costs of off-site facilities, scholarships and fellowships as well as the portion of each subgrant and subcontract in excess of \$25,000.
 - ii. Total Direct Cost (TDC): Includes all direct costs.
 - iii. Total Cost (TC): Includes all costs.

4. Calculate the indirects using the appropriate rate and base. *The OR Budget Templates will calculate indirects using the appropriate rate and base once the activity category is selected.*

- MTDC
 $MTDC \times F\&A \text{ Rate} = \text{Indirect Costs}$
- TDC
 $TDC \times F\&A \text{ Rate} = \text{Indirect Costs}$
- TC
 - i. If the direct costs are known:
 $[TDC \div (1 - F\&A \text{ Rate})] - TDC = \text{Indirect Costs}$
 - ii. If the direct costs are unknown:
 $TC - [TC \times (1 - F\&A \text{ Rate})] = \text{Indirect Costs}$

Let's Practice! Calculating F&A/Indirect Costs

Calculate the indirect costs for the following budget. The F&A Rate is 57%, and the base is MTDC.

Line Item	Cost
PI Salary, 10% Effort	\$12,000
PI Benefits	\$ 4,812
Microscope (equipment)	\$10,000
Subaward to Stanford	\$20,000

1. What costs should NOT be subject to F&A using the MTDC base?

2. Sum the other line items to determine the Total Direct Costs (TDC). What is that amount?
 $\$ \text{_____} + \text{_____} + \text{_____} = \$ \text{_____}$
3. Calculate the indirect costs.
 $\$ \text{_____} \times .57 = \$ \text{_____}$

Additional Notes:

Resources

Common Acronyms

- BAA: Broad Agency Announcement
- BUA: Biological Use Approval
- CGA: Contracts and Grants Accounting
- COI: Conflict of Interest
- F&A: Facilities & Administrative rates; also referred to as indirect cost rate (IDC or ICR) or “overhead”
- FOA: Funding Opportunity Announcement
- IACUC: Institutional Animal Care and Use Committee
- IP: Intellectual Property
- IPF: Internal Processing Form
- IRB: Institutional Review Board
- NICRA: Negotiated Indirect Cost Rate Agreement
- PI: Principal Investigator
- RCI: Research Compliance and Integrity
- RCR: Responsible Conduct of Research
- RFA: Request for Applications
- RFP: Request for Proposals
- SBIR: Small Business Innovation Research
- SPO: Sponsored Programs unit in the Office of Research
- STTR: Small Business Technology Transfer

Websites and Online Documents

- Preparing a Proposal Budget Toolkit: <https://research.ucdavis.edu/wp-content/uploads/Preparing-a-Proposal-Budget-Toolkit.pdf>
- F&A and Fringe Benefit Rates: <https://research.ucdavis.edu/proposals-grants-contracts/helpful-links/indirect-cost-fringe-benefit-rates/#fa>
- Contracts and Grants Accounting: http://afs.ucdavis.edu/our_services/contracts-e-grants/index.html
- Guide to Research Compliance: http://research.ucdavis.edu/wp-content/uploads/UCDavis_Guide_to_Research_Compliance_-20132.pdf
- Office of Research Website: <http://research.ucdavis.edu>
- Sponsored Programs Website: <https://research.ucdavis.edu/proposals-grants-contracts/spo/>
- Office of Research Listservs: <http://research.ucdavis.edu/resources/listserv-subscriptions/>
- Sponsored Programs Research Administration Kiosk (SPARK) Website: <http://spark.ucdavis.edu/training/>
- Training Sessions at Research Park: <https://research.ucdavis.edu/proposals-grants-contracts/spo/spo-training/>
- Cayuse SP and 424: <https://ucdavis.cayuse424.com>
- Composite Benefit Rates: http://afs.ucdavis.edu/our_services/costing-policy-e-analysis/composite-benefit-rates/