Tennessee
TECH

Building a Solid Budget

Office of Research and Economic Development

Center for Faculty Excellence

October 24, 2025

What you should know

- What a good budget can do for your project
- Basic project budget structure
- How to translate project plan into budget
- Potential problem areas
- Basic indirect cost calculation
- Commonly overlooked budget items

Budget Goal #1 – Support Your Proposal

A good budget shows project is well thought out.

- Follow Regulations – reasonable, allowable, allocable, consistent
- Good steward of funds

How do we show that? Transparency

- Specific expenses
- Linked directly to project activity
- Explain estimated expenses when unavoidable

Budget Goal #2 – Help Project Management

The budget sets groundwork for working with your grant manager

- Shared understanding
- Accurate and efficient communication

Regulations limit moving $

- Deficits a problem
- Surpluses also a problem

Helps ensure compliance

- Planned expenses to meet standards, e.g. student work limits
- Removes temptation

Example proposal line items

Weak		Better		Best	
Chemicals	$1000	Preservatives	$600	Preservative compound X, 750-1000 samples	$600
		Reagents	$400	Slide prep reagent Y, 750-1000 samples	$400

It's okay to duplicate some information. Different reviewers will focus on different elements of the proposal. Make it easy for them, no matter where they look.

Basic Budget Structure

- **Personnel**
  - Effort
  - Salary
  - Fringe
- **Non-Personnel**
  - Equipment
  - Travel
  - Participant Support
  - Other Direct
  - Subawards
- **Indirect Costs**

Definitions

Equipment, a.k.a. capital equipment – Durable equipment with high value.

- Federal = >$10,000
- TTU = >$5,000

Check grant guidance for funder limit.

Participant Support – Direct benefit provided to a person, usually 3rd party, from the project. Examples: workshop participants, trainees. GAs working on the project are NOT participants.

Budget Example – PHS398 (NIH)

Program Director/Principal Investigator (Last, First, Middle):

DETAILED BUDGET FOR INITIAL BUDGET PERIOD
DIRECT COSTS ONLY

FROM | THROUGH

List PERSONNEL *(Applicant organization only)*
Use Cal, Acad, or Summer to Enter Months Devoted to Project
Enter Dollar Amounts Requested *(omit cents)* for Salary Requested and Fringe Benefits

NAME	ROLE ON PROJECT	Cal. Mnths	Acad. Mnths	Summer Mnths	INST.BASE SALARY	SALARY REQUESTED	FRINGE BENEFITS	TOTAL
	PD/PI							
SUBTOTALS →								

CONSULTANT COSTS	
EQUIPMENT *(Itemize)*	
SUPPLIES *(Itemize by category)*	
TRAVEL	
INPATIENT CARE COSTS	
OUTPATIENT CARE COSTS	
ALTERATIONS AND RENOVATIONS *(Itemize by category)*	
OTHER EXPENSES *(Itemize by category)*	

CONSORTIUM/CONTRACTUAL COSTS	DIRECT COSTS	
SUBTOTAL DIRECT COSTS FOR INITIAL BUDGET PERIOD *(Item 7a, Face Page)*		$
CONSORTIUM/CONTRACTUAL COSTS	FACILITIES AND ADMINISTRATIVE COSTS	
TOTAL DIRECT COSTS FOR INITIAL BUDGET PERIOD		$

Budget Example – NSF1030 (NSF)

SUMMARY PROPOSAL BUDGET

FOR NSF USE ONLY		
PROPOSAL NO.	DURATION (MONTHS) Proposed	Granted
AWARD NO.		

ORGANIZATION: The Research Foundation for SUNY, University at Buffalo

PRINCIPAL INVESTIGATOR/PROJECT DIRECTOR: 0 0

A. SENIOR PERSONNEL: PI/PD, Co-PI's, Faculty and Other Senior Associates (List each separately with title, A.7. show number in brackets)	NSF Funded Person-mos. CAL	ACAD	SUMR	Funds Requested By Proposer	Funds Granted by NSF (If Different)
1. PI				$	$
2.					
3.					
4.					
5.					
6. ( ) OTHERS (LIST INDIVIDUALLY ON BUDGET EXPLANATION PAGE)					
7. (1) TOTAL SENIOR PERSONNEL (1-6)					
B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)					
1. ( ) POST DOCTORAL ASSOCIATES					
2. ( ) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)					
3. ( ) GRADUATE STUDENTS					
4. ( ) UNDERGRADUATE STUDENTS					
5. ( ) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)					
6. ( ) OTHER					
TOTAL SALARIES AND WAGES (A+B)					
C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS) % Fac % Staff % Summer %Grad %Ugrad					
TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A+B+C)					
D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEEDING $5,000.) See budget justification					
TOTAL EQUIPMENT					
E. TRAVEL 1. DOMESTIC (INCL. U.S. POSSESSIONS)					
2. FOREIGN					
F. PARTICIPANT SUPPORT COSTS					
1. STIPENDS _____					
2. TRAVEL _____					
3. SUBSISTENCE _____					
4. OTHER _____					
( )TOTAL PARTICIPANT COSTS					
G. OTHER DIRECT COSTS					
1. MATERIALS AND SUPPLIES					
2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION					
3. CONSULTANT SERVICES					
4. COMPUTER SERVICES					
5. SUBAWARDS					
6. OTHER Tuition Other					
TOTAL OTHER DIRECT COSTS					
H. TOTAL DIRECT COSTS (A THROUGH G)					
I. INDIRECT COSTS (F&A) (SPECIFY RATE AND BASE) Base: MTDC Amount: FALSE Rate					
TOTAL INDIRECT COSTS (F&A)					
J. TOTAL DIRECT AND INDIRECT COSTS (H+I)					
K. RESIDUAL FUNDS (IF FOR FURTHER SUPPORT OF CURRENT PROJECTS SEE GPG II.D.7.j.)					
L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K)				$	$

M. COST SHARING: PROPOSED LEVEL $	AGREED LEVEL IF DIFFERENT $	
PI/PD TYPED NAME & SIGNATURE* 0 0	DATE 10/17/2024	FOR NSF USE ONLY INDIRECT COST RATE VERIFICATION
INST. REP. TYPED NAME & SIGNATURE* Grant and Contract Administrator	DATE 10/17/2024	Date Checked / Date of Rate Sheet / Initials - ORG

NSF Form 1030 (10/99) *Supersedes All Previous Editions* *SIGNATURES REQUIRED ONLY FOR REVISED BUDGET (GPG III.C)

Budget With Your Project Plan

Building from your project plan will help you:

- Identify all potential expenses
- Factor in unexpected costs (identify where it can go wrong)
- Draft your budget justification/narrative as you go
- Ensure project plan, budget and budget narrative remain aligned

- **DO NOT procrastinate the budget!**

Lay Out Project Plan

Think the project through step-wise.

- Specific tasks/steps
- Timeline of tasks

Assign budget costs to each step.

- Personnel (effort allocated at the time of the task)
- Non-Personnel

Recommendation: Gantt Chart

Benefits of a Gantt Chart

Planning
- Responsibilities
- Deadlines
- Resources

Identify dependencies
- Prerequisite tasks
- Critical time windows

Keeps planning realistic

Project management and tracking

Free Excel templates:
https://create.microsoft.com/en-us/templates/gantt-charts

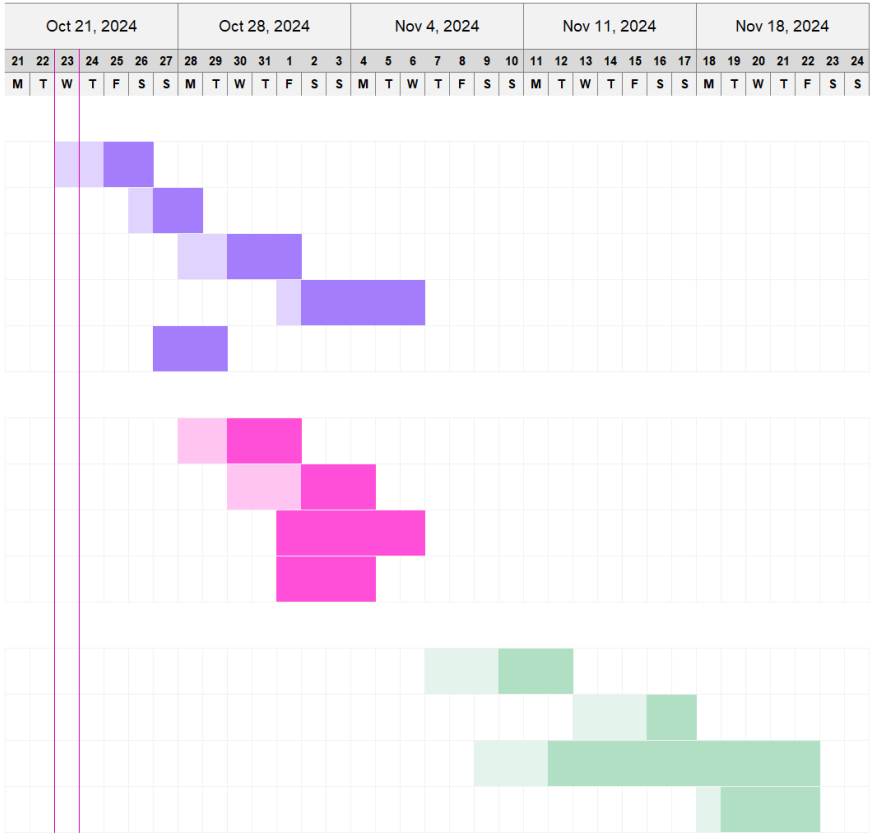
Sample project

Project lead

Project start: **Wed, 10/23/2024**

Display week: **1**

TASK	ASSIGNED TO	PROGRESS	START	END
Initiation				
Define goals	Gokce Aslan	50%	10/23/24	10/26/24
Conduct studies	Hayden Cook	60%	10/26/24	10/28/24
Establish comms	Jens Martensson	50%	10/28/24	11/1/24
Develop charter	Nuria Acevedo	25%	11/1/24	11/6/24
Set up team	Olivia Wilson		10/27/24	10/29/24
Planning and design				
Create schedule	Gokce Aslan	50%	10/28/24	11/1/24
Identify deliverables	Hayden Cook	50%	10/30/24	11/4/24
Define scope	Nuria Acevedo		11/1/24	11/6/24
Identify risks	Olivia Wilson		11/1/24	11/4/24
Execution				
Execute tasks	Gokce Aslan	50%	11/7/24	11/12/24
Monitor progress	Hayden Cook	60%	11/13/24	11/17/24
Provide updates	Nuria Acevedo	25%	11/9/24	11/22/24
Testing and validation	Olivia Wilson	25%	11/18/24	11/22/24



Effort and Salary

Effort can be tracked in a number of ways, depending on the requirements of the call.

- Course Release
- % effort
- Months
- Hours

Most common at TTU are release or months.

9 Month Appointment (Example)			
Course Release Hours	**% effort**	**Months**	**Hours**
1	3.33%	0.3	48.75
2	6.67%	0.6	97.5
3	10.00%	0.9	146.25
4	13.33%	1.2	195
5	16.67%	1.5	243.75
6	20.00%	1.8	292.5
9	30.00%	2.7	438.75
12	40.00%	3.6	585
15	50.00%	4.5	731.25
18	60.00%	5.4	877.5

Course Release Hours	**% effort**	**Months**	**Hours**
1.67	5.56%	0.5	81.25
3.33	11.11%	1	162.5
5.00	16.67%	1.5	243.75
6.67	22.22%	2	325
8.33	27.78%	2.5	406.25
10.00	33.33%	3	487.5

Effort and Salary (Cont'd)

Tennessee Tech includes 3% salary inflation per year.

Note: NIH no longer allows salary inflation.

9 Month Appointment

- 9 Academic + 3 Summer months
- Academic terms
  - Fall Aug 15 to Dec 31
  - Spring Jan 1 to May 15
  - Summer May 16-Aug 14

12 Month Appointment

- 12 Calendar months

Travel

Use **GSA (General Services Administration) rates** for:

- Lodging
- Per diem

GSA rates are regional, so you will need to search.

Use **IRS rate** for:

- Mileage

Use reasonable estimate for:

- Airfare
- Taxi/Ride Share

When the destination is unknown, e.g. future conference location, use a reasonable proxy location for estimate.

Example

	IAFN Conference for PI, CO, and PC							
	YR	Conference (IAFN) Fees	Airfare	Hotel $261 x3	Hotel parking	Airport parking	Meals	Total
	2024-2025	$ 690	$ 650	$ 783	$ 147	$ 75	$ 198	**$ 7,628**
Early Reg	*2025-2026	$ 560	$ 650	$ 783	$ 147	$ 75	$ 198	**$ 7,238**
Disc	*2026-2027	$ 560	$ 650	$ 783	$ 147	$ 75	$ 198	**$ 7,238**

Indirect Costs

Costs which **cannot be identified specifically with a particular project or program,** but are costs incurred in providing services and the operation and maintenance of facilities. Indirect costs go by many names:

- IDC
- F&A (Facilities and Administration)
- Overhead

Examples of Indirect Costs:

- Utilities
- Basic lab supplies (paper towels, soap, ordinary glassware, etc.)
- Normal admin support
- Central office support (HR, Purchasing, ORED, etc.)
- Facilities maintenance

Costs which are ordinarily indirect *may* qualify as direct costs if they are:

1. Integral to the project
2. Project-specific
3. Included in approved budget
4. Not also recovered via F&A

Examples:

- Project manager effort 10% or greater
- Dedicated computer resources
- Mass mailings

Indirect Cost Rates

Indirect cost is calculated by Planning and Finance and negotiated with a federal agency.

Indirect cost rates are sometimes set by the program or agency, superseding the negotiated rate. Foundations often require 10% or disallow indirect costs entirely.

Federal rates:
43.5% on-campus
26.0% off-campus

Common fixed rates at TTU:

Federal training grants	8%
State of Tennessee	15%
CESU*	17.5%

*Collaborative Environmental Studies Unit

Indirect Cost Calculation

Direct cost * IDC rate = Indirect cost

However, certain direct costs are (usually) excluded from the calculation.

- Capital Equipment ($10,000+)
- Subawards over $50,000
- Participant Support
- Tuition reimbursement

Those expenses must be subtracted from before calculating indirect cost. The modified total is referred to as MTDC (Modified Total Direct Cost).

Office of Sponsored Programs (OSP) and **Engineering Research Office** (ERO) are available to answer questions and assist with IDC calculation.

Don’t Forget!

Management/Admin Tasks

- Hiring/scheduling students
- Technical/progress reports
- IRB/IACUC process
- Project Manager?
  ✓10+% admin effort

Academic Production

- Paper writing
- Conference presentation

Facilities Upgrades

- Equipment installation
- Hazmat storage or handling

Post-Project Costs

- Data storage
- Sample storage
- Hazmat disposal

PI and Grant Manager Responsibilities

(Related to the Budget)

PI

- Reviews financial information for accuracy.
- Expends and manages funds in conformity with the approved budget, including for the subaward(s).
- Monitors the budget to eliminate account overages and overdrafts alongside the project bookkeeper.
- Works with funding agency Program Officer to rebudget, if needed.
- Monitors cost share requirements and fiscal documentation.

Grant Manager

- Assists the Principal Investigator with budget monitoring to ensure expenditures are authorized.
- Reviews invoices and expenditures to ensure funds are disbursed for the proposed expenditures to ensure compliance with university policy and agency regulations.
- Audits and reconciles award, invoices and expenses for budget alignment.
- Assists with travel claims, purchase orders, processing of student timesheets and any other transaction to be housed in the award.
- Communicates with the Principal Investigator and university staff to resolve budget management issues.

Questions

Comments

Discussion