

PREPARING A BUDGET FOR YOUR GRANT PROPOSAL

Farin Kamangar, MD, PhD
Office of Research Administration
Morgan State University

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Your grant can bring much needed funds to the university. You can pay individuals (eg, your summer salary, wages for graduate students, or stipends for undergraduate students). You can pay for your travel and your student travel. You can purchase supplies and equipment, and much more.

We have prepared this document to assist you with preparing budgets for your grant application. This document will cover the following topics:

1. Mechanisms used to pay individuals;
2. A potential list of allowable expenses;
3. Total costs, direct costs, modified total direct costs, and indirect costs;
4. Allowability of costs;
5. Cost principles;
6. Practical steps in preparing your budget;
7. Sample budget justification;
8. Modular budgets.

1. Mechanisms used to pay Individuals (salaries, wages, stipends, consultancy fees, etc.)

Individuals can be paid using various mechanisms, via salaries, wages, stipends, tuition benefits, consultancy fees, gift cards and cash incentives, honoraria, fellowships, and scholarships. The differences between these categories and their implications for your grants are briefly discussed below. Please note that these terms are not always used consistently in different settings. However, the definitions provided below are the mostly commonly used ones and are acceptable for writing federal grants. Using each of these mechanisms is contingent on their allowability. Please review the funding opportunity announcement very carefully to ensure that they are allowable before you write them into your grant.

1.1. Definitions

- a) **Salaries** are usually fixed amounts paid to employees for conducting their duties. The amount is usually fixed and does not change each pay period. For example, you might want to hire a full-time laboratory technician with a salary \$45,000 per year.
- b) **Wages** are hourly payments to employees for each hour they work. Although the rate usually remains constant, the total sum paid may fluctuate from pay period to pay period. For example, you hire a graduate student to conduct some experiments in your lab, at a rate of \$20/hour. The graduate student may work 15 hours this pay period but only 6 hours the next pay period. Payment is commensurate with hours worked.
- c) **Stipends** are different from salaries and wages. Stipends are typically predetermined (fixed) amounts paid to trainees to defray the cost of living. Unlike salaries and wages, which are given to employees to accomplish the work, stipends are mostly for the benefit of the trainees. For example, you may want to give a stipend of \$6,000 per year to an undergraduate student who participates in a training program. Many of the stipend amounts are set federally - Ruth L. Kirschstein National Research Service Award (NRSA) Stipends – and are adjusted annually. While the student has some responsibilities, their main function is not to work for you. Stipends can be given to undergraduate students, graduate students, and postdoctoral fellows. Stipends may

also be considered for faculty of other universities who participate in a training conference or workshop. But stipends cannot be given to faculty members to conduct research, nor can they be used to pay graduate students who work on an hourly basis to accomplish the required research. Think of benefit to the trainee, not to the project.

- d) **Tuition benefits** may be considered for students. For example, a training grant may allow you to pay up to 60% of the tuition of the students. If Morgan's annual tuition is \$9,000 per year, 60% will be \$5,400 per student.
- e) **Consultancy fees** may be paid to external experts, such as scientists who have their own business or faculty members who work for other universities (as long as their institution allows them to do so). Consultancy fees cannot be paid to faculty members of your own institution (Morgan State University). For example, you may pay Dr. Jane Doe of Harvard University a total of \$5,000 as your consultant. But you cannot pay Dr. John Doe, a faculty member at Morgan State University, a consulting fee.
- f) **Speaker fees (honoraria)** can be paid, at a reasonable rate, to external experts who give a talk or provide some expertise. For example, you may want to pay \$400 to Dr. Jim Jones of University of Michigan who gave a talk at your interdisciplinary seminars.
- g) **Gift cards and cash incentives** may be given to study participants for various purposes, such as completing a survey. These are usually small amounts and need to be accounted for very carefully. At Morgan State University, funds for incentives for study participants are arranged under the research working fund mechanism.
- h) **Subawards** may be given to other institutions who work with you on your grant. Subawards may include salaries, hourly wages, stipends, etc.
- i) **Scholarships** are usually a fixed amount given as an award to a student, trainee, or scholar. For example, the university or a benefactor may set up a \$5,000 scholarship for students with certain criteria. The student who qualify can compete for that scholarship. Scholarships may be used for tuition and other qualified expenses, or they may be used as stipends. In fact, sometimes they are used to mean stipends. Because the definition is vague and may include a few budget items (e.g., tuition or stipend), they are usually not written into a single budget line of the grant as such.
- j) **Fellowships** are sometimes used interchangeably with scholarships and are used for students or other trainees. Alternatively, they may denote short-term professional or work opportunities (e.g., postdoctoral fellowships) used for training or doing research. The term has some ambiguities and may come with a variety of benefits. Fellows may be paid stipends or salaries (depending on the program or visa requirements); may receive tuition remission, travel allowances, book allowances, etc. Because fellowships are complex, they are usually not written into a single budget line of the grant as such.
- k) **Fringe benefits** are supplements to salaries and wages, given to employees for their retirement, health insurance, disability insurance, etc. Further information is provided in the FAQs at the end of this section.

1.2. Budget lines and budgeting implications

It is very important to pay attention to this section when you prepare your proposal budget, as it may significantly affect your budget. Some items may require fringe benefits (discussed above and in the FAQ section) and indirect costs (discussed in the FAQ section), whereas others don't.

- a) **Salaries:** Personnel line (key personnel or other personnel). Fringe benefits and indirect costs will be added.
- b) **Wages:** Personnel line (usually other personnel). Fringe benefits and indirect costs will be added.
- c) **Stipends:** Participant Costs line. There are no fringe benefits. Indirect costs may or may not be required. For example, NSF does not pay indirect costs for stipends that are included in the participant costs (Line F). In contrast, NIH training grants often provide 8% indirect costs on stipends.
- d) **Tuition:** Other Direct Cost line. Fringe benefits and indirect costs are often not required.
- e) **Consultancy fees:** Contractual services line. No fringe benefits, but indirect costs are required.
- f) **Speaker fees:** Contractual services line. No fringe benefits, but indirect costs are required.
- g) **Gift cards and cash incentives:** Other Direct Cost line, or Participant costs (e.g., for clinical trials), depending on the purpose. No fringe benefits but indirect costs may be required. If in the participant cost line, there will be no indirect cost.
- h) **Subawards:** Other Direct Costs line. Separate budget and budget justification. Any fringe benefits and indirect costs will be that of the recipient, not MSU's. So, the MSU PI should not worry about them. After we receive the subaward budget from the recipient, the total will be treated as a direct cost for us. MSU will charge indirect costs on the first \$25,000 of each subaward.

1.3. After funding, which office pays these funds?

This information may be useful only after your grant proposal is funded. This is an oversimplification, as there are often multiple offices involved in each payment.

- a) **Salaries:** Human Resources
- b) **Wages:** Human Resources
- c) **Stipends:** Accounts Payable
- d) **Tuition:** Financial Aid
- e) **Consultancy fees:** Accounts Payable
- f) **Speaker fees:** Accounts Payable
- g) **Gift cards and cash incentives:** The PI will work with the Office of the Comptroller to set up a Working Fund. The PI will disburse the cash and needs to maintain and submit detailed paperwork to account for it.
- h) **Subawards:** Contract specialist at the Office of Research Administration.

1.4. Tax implications

The PIs and budget officers do not need this information, and what is presented here is not a reference. However, we have provided this for general information purposes, and as a starting point. Please contact HR or your tax accountant for accurate information and any questions in this regard.

- a) Salaries: taxable. Form W2 is often issued.
- b) Wages: taxable. Form W2 is often issued.
- c) Stipends: taxable. Stipends are not taxed for Social Security or Medicare but they are considered taxable income, unless they are spent on qualified expenses, such as tuition, when applicable. See [this link](#) (to George Washington University) and [this link](#) (to IRS).
- d) Tuition: may or may not be taxable. Undergraduate tuition is often not taxable at the federal level. Graduate tuition in excess of \$5,250 is taxable at the federal level, unless receiving the graduate degree is required for the job. State taxes depend on the state of residence. Please see [this link](#) (to University of Maryland) and [this link](#) (to University of Pennsylvania).
- e) Consultancy fees: taxable. Form 1099-MISC may be issued.
- f) Speaker fees: taxable. Form 1099-MISC, if above a certain level.
- g) Gift cards and cash incentives: taxable to recipient. Form 1099-MISC, if above a certain level.

1.5. Summary Table

	Primary target	Budget line	Fringe benefits	Indirect Costs	Office	Taxable
Salaries	Key personnel; Other full-time or part-time personnel	Personnel	Yes	Yes	HR	Yes
Wages	Part-time personnel; Graduate students	Personnel	Yes	Yes	HR	Yes
Stipends	Trainees	Participant support	No	Maybe	AP	Maybe
Tuition	Students	Other Direct Costs or Participant Support	No	No	Financial Aid	Maybe
Consultancy fees	External experts	Consultant services	No	Yes	AP	Yes
Speaker fees	External experts	Consultant services	No	Yes	AP	Yes
Gift cards/cash	Study participants	Other Direct Costs or Participant Support Costs	No	Yes	AP	Yes

- HR: Human Resources; AP: Accounts Payable
- Please always review the funding opportunity announcement to be sure that each payment category is allowable.
- Primary target, budget line, fringe benefits, and indirect costs are important in the pre-award stage, when you prepare your budget.
- Which office issues the payment is more complex than is shown here. There are often multiple offices involved. This information is important only after the grant is awarded.
- Taxability of income may change over time and it is not a matter of concern for the PIs. This information is provided for the PIs as a general guideline and starting point. If you do have questions, please consult with the HR or your tax accountant.

1.6. Examples of Frequently Asked Questions

- 1. I am a faculty member and my 9.5-month salary is \$95,000. I want to work 2 months during the summer and 2 months during the academic year on this grant. How do I calculate my salary, fringe benefits, and indirect cost?**

Your 9.5-month salary is \$95,000. Therefore, your monthly salary is \$10,000 ($\$95,000 / 9.5$).

During the academic year:

Two months:	$2 \times \$10,000 =$	\$20,000
Fringe benefits (42% for the academic year)	$0.42 \times \$20,000 =$	\$8,400
Total		<u>\$28,400</u>

During the summer:

Two months:	$2 \times \$10,000 =$	\$20,000
Fringe benefits (9% for the summer)	$0.09 \times \$20,000 =$	\$1,800
Total		<u>\$21,800</u>

Therefore, the total salary will be \$40,000 and the fringe benefit will be \$10,200, for a total of \$50,200. If you add indirect costs, at a rate of 51%, indirect cost = $0.51 \times \$50,200 = \$25,602$

If you add all up, the total will be $\$50,200 + \$25,602 = \$75,802$. Therefore, while your salary is only \$40,000, the total charged to the grant is almost twice as much.

Please note that for 9.5- or 10-month faculty, summer salary is in addition to regular salary, and the fringe benefit rate is low. During the academic year, the university—not the faculty member—would receive additional money; the faculty member would receive release time, which would need to be negotiated with and agreed upon by the relevant chair and/or dean. Also, the fringe benefit rate is much higher.

- 2. I am a faculty member with a 9.5-month contract. Can I get a 3-month contract for the summer on my grant?**

No. If you are a 9.5-month faculty member, you can get a contract for up to 2.5 months during the summer. Your total effort cannot exceed 12 months.

Some funding organizations pay even less. For example, NSF will only pay up to 2 months of summer salary, even if you have several grants with them. However, you may be able to justify more than 2 months, if there are very good reasons.

- 3. What are fringe benefits and how much are they?**

Fringe benefits pay for various benefits, including health insurance and retirement. Currently (in 2020), fringe benefit rates at Morgan State University are:

- 42% for 12-months for full-time staff all year;
- 42% for full-time faculty during the academic year;
- 9% for faculty members during the summer;

- 9% for part-time contractual staff. These are employees who work under 30 hours per week, or those who work more than 30 hours but less than a total of 6 months. This includes their total effort, not just their effort on your grant. For example, if a person works 20 hours on Dr. X's grant and simultaneously 20 hours on Dr. Y's grant for a period of 2 years, then that person is not part-time contractual. So the fringe benefits for this person will be 42%.

4. What are indirect costs and how much are they?

Indirect costs are also known as overhead or, technically, facilities and administrative (F&A) costs. Conducting research requires more than just paying for the research items (direct costs) such as PI salaries, equipment, or supplies. It requires buildings, electricity, staff who help with submission of grants and invoicing, personnel who advocate for bringing in grants, library, etc. Facilities and administration costs (indirect costs) are used to pay for such expenses. The rate depends on the type of activity (eg, research versus training), place of the research activity (on campus versus off campus), line item (e.g., salaries versus tuition), and the funding agency. Morgan State University's indirect cost rates are discussed later in this section.

5. My doctoral student, Sam, will be working 15 hours per week to run some important experiments. I need him 40 weeks each year. How do I calculate his wages?

Let's assume you will be paying a wage of \$20/hour to Sam.

$$\text{Weekly rate} = \$20 \times 15 = \$300$$

$$\text{Annual} = 40 \times \$300 = \$12,000$$

Because Sam is part time, his fringe benefits are only 9%.

$$\text{Fringe} = 0.09 \times \$12,000 = \$1,080$$

$$\text{Total compensation} = \$12,000 + \$1,800 = \$13,800$$

$$\text{Indirect cost} = 0.51 \times \$13,800 = \$7,038$$

$$\text{Total charged to the grant} = \$20,838$$

Again, note that although Sam is paid only \$12,000, the total charge to the grant is much higher.

6. That is too much indirect and fringe benefits. Poor Sam is getting only so much, and my grant is charged a whole lot. I want to pay Sam a stipend instead, so that I avoid fringe and indirect. Is that OK?

It depends. If Sam already has the expertise and the purpose of his being on the grant is to conduct research that he is an expert on, you need to pay him a wage. If Sam is a trainee who is learning the research, you can pay him a stipend. While stipends can be below the minimum wage and does not need fringe and indirect, they are fixed amounts paid to the student each month. They cannot be increased or decreased each payroll period to reflect the number of hours that Sam is working with you. So there are disadvantages there.

Before you choose any method of payment, please review the funding opportunity announcement for allowability. Some funding mechanisms do not allow for stipends, and others may not allow for paying research assistants.

7. I am from the Department of Biology. I want to pay a colleague at the Department of Public Health Analysis a consulting fee to do my statistical analysis. Is this allowable?

No. Consultancy fees can **ONLY** be paid to external experts. If your MSU colleague is helping you, she can be paid a summer salary (during the summer), release time (during the academic year), or she may want to do this for you as a courtesy (in-kind).

8. Dr. Doe is a faculty member at Washington University whose expertise I need for successful conduct of my research. Do I pay him using a subaward? Or do I pay him a consulting fee?

It depends. If Dr. Doe is offering you his individual expertise and has permission from his institution to do some hours of consulting – that is between him and his institution – you can pay him a consulting fee. If Dr. Doe is paid to use his laboratory and equipment at Washington University, then you need to give a subaward. In the latter case, you are not dealing only with Dr. Doe but with the university.

9. Dr. Expert, a very well-known scientist, is giving a one-hour talk at Morgan. I would like to pay him \$5,000 as speaker fee because he is very famous and commands that much. Is that allowable?

Typically, that high a speaker fee is not allowed, particularly not for government grants. Any payment should be reasonable, for example \$400 for a one-hour talk.

10. Can 12-month employees, such as department chairs, receive salary from grants?

The total effort of each person should not exceed 12 months. Therefore, if a department chair receives a grant with three months of salary and benefits included, that person should be released from duties equivalent to three months. Typically, department chairs teach 50% of their time. With 3 months of salary included in the grant (25% effort), they should be released from the equivalent amount of teaching. For deans (a full-time, 12-month job), someone else needs to take the burden of some of the administrative duties. Preferably, this should be documented.

11. I have heard that salary requests on NSF grants are limited to 2 months per year. Is that correct? I cannot hire a technician for only two months, as my project needs somebody year-round.

The two-month NSF rule applies only to the Senior Personnel (the PI and other faculty members). Technicians, postdocs, and other soft-funded research employees (e.g., research faculty) can be paid all year.

More than 2 months can be requested for senior personnel too, if it is approved by the NSF in advance. It has to be disclosed in the budget and budget justification, and it should be well justified. According to the NSF revised policy: *“any compensation for such personnel in*

excess of two months must be disclosed in the proposal budget, justified in the budget justification, and must be specifically approved by NSF in the award notice.”

12. Can we include cost of living adjustments on the grants? My annual salary is \$80,000 this year but it is reasonably expected to increase 3% each year. So next year, it may be \$82,400 and I don't want to under-budget.

Unfortunately, the answer is not very clear. NIAID, one of the NIH institutes, has given three contradictory messages in 2018, 2019, and 2020. While the answer in [2018](#) was “no”, in [2019](#) and [2020](#) the answer was “potentially” or “maybe”. Here is some recent directions from the NIH: *“NIH has no rule that explicitly disallows salary escalation, but keep these three points in mind: 1) You should be mindful of any salary policies internal to your institution; 2) If you propose salary escalation, you'll need to provide an explanation in section L. Budget Justification (link is external) of the SF 424 R&R grant application; 3) You cannot exceed the NIH Salary Cap or salary limitations stated in a given funding opportunity announcement. Further, you cannot assume the salary cap will increase in future years; stay within the current year's cap when budgeting for subsequent years.”*

Please note that if your salary escalation budget has been approved by the funding agency (eg, NIH or NSF), you are not entitled to increased salary. Your salary will increase only if the university decides to increase your salary (and perhaps many others in the university) and commensurate with what the university has approved.

13. Can I ask for both stipend and tuition support for my trainee?

If the funding mechanism allows for it, yes.

14. I have applied for tuition support in my grant. Can I change it to stipend, because the student wants some money in his pocket to defray the cost of living?

Only if the funding agency allows for it. Please note that if you give a stipend to your trainee, he/she can use it for tuition, but the reverse is not true. Tuition cannot change into a stipend, unless the funding agency allows for it.

15. Can a student receive stipends and tuition support from more than one source?

It depends. Typically, federal government grants do not allow supporting trainees using two or more federal grants. According to the [NSF guidelines](#): “Participant support allowances may not be paid to trainees who are receiving compensation, either directly or indirectly, from other Federal government sources while participating in the project.”

2. A potential list of allowable expenses

In addition to paying individuals, discussed in the previous section, you can potentially request other legitimate direct costs, such as communications (eg, letters to study participants), supplies (eg, gloves and pipettes), research equipment, consultancy fees, speaker fees, etc. A potential list of asks is shown below. The reason we use the term “potential” several times here is that depending on the type of funding, recipient institution, and other factors, some costs are “allowable” and some are not. We will discuss allowability of costs later in this section.

2.1 Salaries and Wages

Salaries and wages have been discussed earlier in this section. Salaries are calculated either monthly or as a percentage of effort, and wages are calculated on an hourly basis. There is a long list of people who may contribute to the project, such as: academic personnel, graduate research assistants, undergraduate research assistants, research technicians, etc. computer programmers, statistical programmer, tabulator, administrative assistants, editorial assistants, and research technicians. **[Indirect cost: Yes]**

2.2. Fringe Benefits

When you calculate budget, fringe benefits are usually calculated as a fixed percentage of salaries and wages. Please see instruction provided earlier. They cover FICA/Medicare, retirement, healthcare insurance, unemployment insurance, tuition remission, TIAA/CREF, and worker’s compensation. **[Indirect cost: Yes]**

2.3. Supplies and Materials

Supplies are research material that cost less than \$5,000 or are expected to last less than a year. For example, a computer that costs \$3000 is considered supplies (not equipment). Other examples include office supplies, test materials and instruments, animals, animal food, laboratory supplies, chemicals, electronic supplies, and project-related books. **[Indirect cost: Yes]**

2.4. Equipment

Equipment are those items that cost over \$5000 and are expected to last over a year. For example, a computer system that costs \$6500 is considered equipment. Equipment installation, rental equipment, and accessories included with equipment is also considered here. **[Indirect cost: No]**

2.5. Travel for research personnel

Travel may be considered for faculty, staff, and students. Local, domestic, or international travel may be allowed to conduct the research, supervise research sites, meet with collaborators, or attend conferences. Airline tickets (or train tickets, or mileage), ground transportation, lodging, per diem, and meeting registration fees are often requested. **[Indirect cost: Yes]**

2.6. Participant support costs

Per Uniform Guidance and NSF instructions *“Participant support costs are direct costs for items such as stipends or subsistence allowances, travel allowances and registration fees paid to or on behalf of participants or trainees (but not employees) in connection with meetings, conferences, symposia or training projects.”* **[Indirect cost: No]**

2.7. Contractual services

This may include consultants (honoraria, travel, per diem), subcontractors, photographic services, audiovisual production, printing and copying services, report preparation, editorial services, central computer services, library loans, etc. **[Indirect cost: Yes]**

2.8. Space alterations and renovation

This is to renovate a space such that it is of benefit to the research or training. One example at MSU's campus is the ASCEND Student Research Center, where a vacant apartment was renovated for students to discuss research and enhance their leadership skills. **[Indirect cost: No]**

2.9. Other direct costs

Tuition/Fees: For students in a training programs **[Indirect cost: No]**

Communications: Such as postage, express delivery service, Zoom **[Indirect cost: Yes]**

Software: Such as SPSS, SAS, Stata **[Indirect cost: Yes]**

Journal page charges: For publishing peer-reviewed papers **[Indirect cost: Yes]**

Recruiting costs: Such as advertising for new personnel **[Indirect cost: Yes]**

Maintenance Contracts: Such as for equipment **[Indirect Cost: Yes]**

2.10. Subawards

Subawards are used to pay other institutions that collaborate with you in conducting the project. A subaward may have multiple expense categories (eg, personnel, stipends, supplies, etc). Subawards requests are prepared by the collaborating institute and negotiated with you, as the PI. The subaward appears as one of your direct costs. **[Indirect cost: yes, but only on the first \$25,000 of each subaward.]**

3. Total costs, Direct Costs, Modified Total Direct Costs, and Indirect Costs

3.1. Definitions

Total costs are the sum of direct costs and indirect costs.

Directs costs are those costs that directly benefit the research project. Examples are those given earlier, such as salaries and wages, stipends, travel costs, supplies, equipment, and consultancy fees. Please see Section 1 and 2 for a detailed list of potentially allowable direct costs.

Modified total direct costs are that part of total direct costs that do receive indirect costs. Please see below for further details.

Indirect costs, or facilities and administration (F&A) costs, are given to the institution (in our case, MSU) to defray the facilities and administrative costs. The University President spends time advocating for research and meets with researchers. So do the Provost and VP for research, deans, and department chairs. The University has staff in the Office of Research Administration who assist with reviewing budget and submission of proposals, preparing subawards and contracts, and oversight and compliance; and personnel in the Restricted Funds Accounting who assist with accounting and draw downs. All of this (and more) factors into administrative costs. The University also pays for maintenance of laboratories, office space for researchers, library journals for researchers, etc, which is part of the facilities component.

F&A rates vary based on the type of the activity (eg, research vs. training), the funding agency, and on-campus vs. off-campus. The current F&A rates (until 2023) at Morgan State University are:

Organized Research, on campus:	51%
Other Activities, on campus:	38%
Organized Research, off campus:	26%
Other Activities, off campus:	26%

Please note that some budget items do receive F&A costs but others don't.

DO Add F&A on: Salaries, wages, fringe benefits, supplies, travel, subawards (only the first \$25,000). These items will be part of the modified total direct costs.

DO NOT Add F&A on: Equipment, construction and renovation, off-site facility rents, tuition and fees, patient care charges, training participant costs (stipends, travel for students). These items are not part of the modified total direct costs.

Please also note that there are exceptions to the above rules. For example:

- The NIH allows for only 8% F&A on training grants.
- Some funding agencies (eg, American Heart Association) have a limit on their F&A rate.
- Most State of Maryland agencies allow for 10% F&A rates for inter-agency agreements.

More nuances are discussed in the FAQs (Section 1.6 and Section 3.2). A few examples are also provided where Budget Justification is discussed (Section 7.1).

3.2. Frequently Asked Questions

- 1. I have got confusing messages about indirect cost rate with regards to inter-agency agreements with the State of Maryland. What rate should I use?**

The State agencies guidelines for indirect costs are not quite as clear as those of the federal government. As a general rule, please use 10% of ALL DIRECT costs (not total modified direct costs).

- 2. I am applying for an NSF grant, and I want to include some funds for my graduate research assistant. Can I put it as stipend under “participant cost”, so that I pay less indirect costs?**

No. If the student is working as a researcher, stipends are not allowable. Please refer to the definitions in Section 1.

- 3. My office is in PEARL. Is that considered off campus?**

No. The University is paying for the facilities that PEARL, Portage Campus, and several other off-campus facilities. The researchers have access to the university-supported internet, library, etc. Therefore, they are considered on campus.

- 4. Which items on NIH training grants receive F&A?**

According to the NIH Grants Policy Statement (NIH GPS): “F&A costs under Kirschstein-NRSA institutional research training grants, educational and K awards will be budgeted and reimbursed at a rate of 8 percent of modified total direct costs, exclusive of tuition and fees, expenditures for equipment, and consortiums in excess of \$25,000.”

- 5. The funding opportunity announcement states that the total allowable budget is \$300,000 but I really need \$310,000. What happens if I budget for \$310,000?**

Most likely, your application will be rejected without scientific review.

4. Allowability of Costs

4.1. Definitions

Allowable costs are those that you can charge to the grant. Please note that while we have listed many “potential” categories that can be asked when you budget for a grant proposal, certain expenses are allowable, while others are not, for each grant. Let’s discuss a few scenarios.

4.2. Scenarios

Example 1: You want to apply for an NIH grant to train the future generation of biomedical students. Which of the following are allowable?

- Pay stipends of \$36,000 a year to sophomores?
- Pay 100% of the tuition and fees that Morgan charges to the trainees?
- Buy a yacht which you and your family can enjoy because you worked so hard on this grant and many previous grants?
- Buy tickets to an Orioles game to enhance the sense of camaraderie among the trainees?
- Pay a stipend of \$8000 per year to the trainees?
- Pay travel costs to the trainees for a scientific meeting each year?
- Pay a full-time coordinator for the training activity?

Example 2: You apply for an Excellence in Research (EiR) award to the NSF. Which of the following expenses are allowable?

- Pay for 2.5 months of your salary during the summer and 3 months during the academic year?
- Pay for stipends of students?
- Pay for the salary of a postdoctoral fellow?
- Pay for research equipment in excess of \$25,000?

Example 3: You apply for a SCORE 2 research grant to the NIH. Which of the following are allowable?

- Pay for 3 months of your salary each year?
- Pay for the salary of a postdoctoral fellow?
- Pay for research equipment in excess of \$25,000?
- Pay for travel to scientific meetings?
- Pay for membership in scientific societies?

Some answers are clear, some not. First and foremost, review the funding opportunity announcement very carefully for allowability of costs. If the answer is not clear, consult the Office of Research Administration. We will review the announcement, review the NIH or NSF guidelines, and will consult with the relevant agency officers if need be.

5. Cost Principles

5.1. Definitions and criteria

As discussed earlier, for allowability of costs, review the funding opportunity announcement when you write your proposal. After funding, review the notice of award. However, it is important to know that allowability is determined based on certain principles. For example, the NIH uses four principles to determine allowability: reasonableness (including necessity), allocability, consistency, and conformance. Let's discuss each of these principles.

- a) **Reasonableness (including necessity):** A cost is "reasonable" when a prudent person determines that the expense for the good or service needs to be paid, and the cost is reasonable. For example, most of us may agree that a trainee needs to have some time to spend on her training activities. As such, we consider a stipend for the trainee to defray the cost of living, so that she does not need to work at Target after the class. What we pay the trainee is for subsistence living, not for a lavish life. Therefore, stipends, as subsistence level payments to defray the cost of living, may be considered for the trainees participating in the training grants.
- b) **Allocability:** An expense is "allocable" as a direct cost if it is solely for the research project that the grant is written for. For example, if conducting a project needs a lab technician for 6 months every year, the technician's salary for 6 months (+ fringe benefits) is considered allocable. Even when allocable, the salary should be reasonable. By contrast, some costs may not be allocable. For example, society memberships are often not considered allocable to any project, because society membership is beneficial for the growth of researcher overall, and not just for one project.
- c) **Consistency:** The recipient institution should treat all expenses consistently, regardless of the source of funding. For example, if MSU pays a full professor \$10,000 per month using state funds, it cannot pay \$12,000 per month using federal grant funds. Please note that the professor's salary is allocable, as she is working on the project; \$12,000 per month is reasonable for a full professor; but there is a consistency issue if MSU treats federal money differently from its other funds.
- d) **Conformance:** This cost principle stipulates that the cost should conform with the general federal regulations, the terms of a specific Award, and/or the institution's F&A rates. For example, federal rules may prohibit spending funds for alcoholic drinks (except perhaps when a clinical study requires giving alcohol to the study participants). Conformance may depend on the type of award, the type of recipient institution, or the study participants. For example, while hiring postdoctoral fellows are not prohibited in the general guidelines, certain awards may not allow hiring postdocs. Likewise, certain training grant stipends are only for American citizens or green card holders.

Please read the funding opportunity announcement and the notice of award very carefully.

Although cost principles are very useful in guiding us for spending federal funds, there are many shades of gray. For example, how much tuition benefits are reasonable for trainees? 0%? 30%? 60%? Or 100%? We do not determine those figures; the funding opportunity announcement and the notice of award determine that. For example, some training grants allow up to 60% of tuition benefits for the trainees.

Important note: That the funding agency approved the requested funding does not mean that the costs are necessarily allowable. For example, if you wrote funds for weekly parties with alcohol into

the grant and it skipped the attention of the grants management officer, you should still not use that money.

5.2. Practice scenarios

Identify the potential problem in each of the examples below.

1. A PI has a technician who is written into his grant for 12 months a year. For a period of 2 months, the project is slow because an instrument is not set up. The PI allows his technician to work for another project during that time.
2. A PI wants to do a simple statistical analysis of data from 200 people. He buys a laptop for \$5000 and puts the most advanced version of Stata on it.
3. A faculty member receives \$95,000 per year for a 9.5-month contract. She has 2 months of summer funding, for which she requests \$30,000 of salary + fringe benefits.
4. NSF only agrees to 2 months of PI time for the project but the PI believes there is a lot of work and provides 4 months of salary to himself.
5. The PI has some extra money and decides to buy a \$2000 computer for his other project, which really needs one.
6. The PI pays \$26 per hour to a 3rd year doctoral student in biology but \$18 per to another one with similar qualifications.

5.3. Frequently Asked Questions

1. **What is my best source to determine allowability of costs?**

Please refer to the funding opportunity announcement when you write your proposal, and to the Notice of Award after you receive the grant.

2. **My current salary is \$95,000. Can I request \$120,000 and, if approved, be paid higher?**

No. It is not allowable. Please refer to “consistency” criterion.

3. **I have budgeted for a 3% cost of living adjustment (COLA) in my grant, and it has been approved by the funding agency. Can I get a 3% raise next year?**

Only if the University allows for it. This is typically when a COLA is approved for all employees. The fact that you are paid on a grant is not sufficient cause for an exception. Consistency matters.

4. **Morgan State University, as an agency and instrumentality of the State of Maryland, gives preference for purchasing furniture to the Maryland Correctional Enterprises (MCE). However,**

I would like to buy furniture using my grant funds from a privately-owned small business. Their prices are very reasonable and they have very good customer service. Is that allowable?

No. Any purchases need to conform to the rules and regulations of Morgan State. Consistency matters.

- 5. My friends who have NIH grants use their funds for international travel. However, the funding opportunity announcement my notice of award states that international travel is not allowable using this grant. Can I use the funds for international travel?**

No. Each award has its own allowable costs. While an R01 grant may allow for international travel, some training grants do now allow it.

- 6. With respect to the previous question, what if I put international travel in my budget and NIH approved it?**

Again, the answer is no. If the NIH budget officer missed that, we are still obligated to abide by the funding opportunity announcement and notice of award.

6. Steps to Develop Your Budget

Now it is time to discuss how you practically develop a budget. There are many ways to develop your budget but perhaps the following steps help.

- **Review the allowable items and the grant requirements:** Have a sense of what the allowable items are, which ones are definitely necessary, and which ones are good to have.
- **Make a list of the “must have” and “good to have” items:** Calculate the most important items, without which you cannot do the project.
- **Have a rough estimate of direct costs:** Have a rough estimate of your direct cost, and then direct cost per year.
- **Put the numbers in a spreadsheet and write your budget justification:** Use formulas in the spreadsheet. Write your budget justification. Do a couple of iterations until you get it right.

6.1. Review the allowable expenses

Review the funding opportunity announcement (FOA) carefully. While many expense items may be allowable in general, they may not be allowable in using that funding mechanism. For example, while equipment can be purchased using federal grants, the NSF Excellence in Research (EiR) mechanism does not allow for purchasing equipment. Nor does it allow paying stipends to undergraduate students.

Review the main purpose of issuing the FOA. Pay attention to items that are allowable (eg, salaries, fringe benefits, stipends for undergraduate students, travel for students, etc). Pay attention to items that may not be allowable (eg, equipment). Pay attention to items that you “must” include. For example, some grants need the PI to spend at least 2 months on the project each year.

6.2. List the “must have” and “good to have” items

The items that you must have in your grant are either those that are required by the FOA, or those that you cannot do without. For example, the FOA may stipulate that you need to spend at least two months each year on this grant. Alternatively, you may need at least two months on this grant to get the work done. Make a list like this:

Must have:

- Two months of salary and fringe benefits for myself as the PI (about \$20,000/year)
- Twelve months of salary and fringe benefits for the lab technician (about \$60,000/year)
- Research supplies (roughly \$10,000/year)
- Equipment (about \$50,000; only the first year)

If so, the minimum you need for direct costs is \$140,000 in the first year, and \$90,000 each year thereafter.

Good to have:

- A graduate research assistant (200 hours per year, roughly \$4,000/year)
- Stipends for two undergraduate students (roughly \$10,000 per year)
- Travel for myself (\$3000 per year)
- Travel for the graduate student (\$1000 per year)
- Travel for the undergraduate trainees (\$2000 per year)

The optional items are roughly \$20,000.

By this point, you have a good estimate of what you need. But there is more work to do. Do you have sufficient funds in your direct costs for these items? If not, which ones are you willing to reduce? If you have more, what else would you add? It is important to have an estimate of the direct costs and adjust accordingly.

6.3. Estimate the direct costs

When reviewing the FOA, pay attention to whether the FOA is giving you the direct cost or the total cost. Also, pay attention to whether there is a limit set on each year.

Some FOAs give you the **direct cost**. For example, an NIH FOAs may tell you that the total direct cost over three years is \$300,000 with a limit of \$100,000 per year. In that case, exactly know how much you are working with.

Other FOAs may give you the **total cost**, which is the sum of direct and indirect. Figuring out the direct cost may be tricky, as it may depend on the F&A rate, and items that you include that do or do not need indirect. A few examples are shown below.

Example 1: The total funding for a grant is \$630,000 over 3 years. This is a total, and there is no annual limit. Assume this is research, and all items requested in this research (salaries, fringe benefits, supplies, travel) need indirect costs. In this case, the F&A rate 51%.

- $\$630,000 \div 1.51 \approx \$417,000$ direct costs (the rest, or \$213,000 will go to the university as indirect.)
- If you want to divide it equally over three years, $\$417,000 \div 3 = \$139,000/\text{year}$. That is how much you, the PI, should work with each year.

Example 2: The total funding for a project that you receive from Foundation X is \$300,000, of which \$200,000 has to be spent in the first year and \$100,000 has to be spent in the second year. All items receive indirect but the cap of indirect for this foundation is 25%.

- Year 1: $\$200,000 \div 1.25 = 160,000$ direct costs (\$40,000 to the university for indirect)
- Year 2: $\$100,000 \div 1.25 = 80,000$ direct costs (\$20,000 to the university for indirect)

Example 3: The total funding for a federal grant is \$500,000 over 3 years. It is research, so the F&A rate is 51%. Roughly half the money may go toward items that need indirect (salaries, fringe benefits, faculty travel) and half toward items that don't need indirect (stipends, tuition support, student travel).

- One half (\$250,000) does not need indirect, so you have the entire amount.
- The other half needs indirect: $\$250,000 \div 1.51 \approx \$165,000$.
- So, you will have a total of \$415,000 ($\$250,000 + \$165,000$) to work with.
- You need to purchase a \$115,000 equipment in the first year. What remains for you in \$300,000. If you divide the rest equally through the 3 years, you will have roughly \$100,000/year to cover other direct costs.

6.4. Put the numbers on a spreadsheet and write your budget justification

The Office of Research Administration can provide you with spreadsheets that you can use for preparing your budget. In Section 7, we have provided sample budget justifications.

7. Sample Detailed Budget Justification

7.1. Sample 1

Sample 1 shows budget justification for Year 1 of a study, with maximum allowable total cost of \$200,000. Here, the PI has requested a total of \$194,716 which is close to the limit but below that.

A. Senior/Key Personnel: \$72,390

Principal Investigator (\$49,800)

Dr. XX is a Professor in the Department of XX at Morgan State University (MSU) working on XX, and is responsible for managing this study including hiring and supervising XX involved in this study. Dr. XX is requesting \$40,000 salary support with fringe benefits \$9,800.

9.5-month salary of \$95,000 = monthly salary of \$10,000

Salary for two academic months = \$20,000 (fringe benefits of \$8,400, at a rate of 42%)

Salary for two summer months = \$20,000 (fringe benefits of \$1,800, at a rate of 9%).

Total \$40,000 \$9,800

Co-Principal Investigator (\$22,590)

Dr. XX is a Professor in XX Department at MSU. He will oversee the training of new staff in the techniques XX, will participate in the review and writing of manuscripts, and will participate in XX the entire project weekly. Dr. XX is requesting \$18,000 in salary support with fringe benefits of \$4,590.

9.5-month salary = \$85,500 = monthly salary of \$9,000

Salary for one academic month = \$9,000 (fringe benefits of \$3,780, at a rate of 42%)

Salary for one summer month = \$9,000 (fringe benefits of \$810, at a rate of 9%).

Total \$18,000 \$4,590

B. Other Personnel \$27,752

Graduate student (\$8720)

TBN will be assisting in this project with the execution of experiments by preparing lab procedures. The student will be paid 10 hours per week, at a rate of \$20/hour, for 40 weeks per year. The requested salary is: \$20/hr x 10hrs/week x 40 weeks = \$8,000. With a 9% fringe rate, the fringe benefits will be \$720.

Undergraduate student (\$5,232)

TBN will be assisting in this project with the execution of experiments by preparing lab procedures. The student will be paid 20 hours per week, at a rate of \$12/hour, for 20 weeks per year. The requested salary is: \$12/hr x 20hrs/week x 20 weeks = \$4,800. With a 9% fringe rate, the fringe benefits will be \$432.

Technician to be named (\$13,800)

Morgan State University requires intense XX teaching at XX Program and thus having a part-time technician to assist with the ordering and lab maintenance and perform assays will promote generation

of data proposed in the project at a faster pace. The estimated annual salary is \$48,000, and we are requesting 0.25 FTE.

Salary support = \$48,000 x 0.25 = \$12,000
 Fringe benefits (at 9%) = \$12,000 x 0.09 = \$1,800

C. Supplies \$14,500

A computer (\$2,000) and XX software (\$1,000) will be purchased for data analysis. A Printer (\$1,000) is also needed for XX. Reagents for XX (\$5,000); Reagents for YY (\$3,000); General supplies (glassware, disposables, etc) (\$2,500).

D. Equipment: \$8,000

There is a need to express and purify XX proteins via XX chromatography. Heterologous gene expression often requires XX. Thus, the lab needs a XX (\$8,000), which currently does not exist at MSU in the Department of XX (see attached quote).

E. Travel \$3,700

Professional Meeting: The PI, Co-PI, and graduate student will travel to XX, in Nov 2021, to attend the International XX Meeting. The requested travels costs are shown below.

	Hotel	Meal	Rent Car	Gas/ Parking	Registration	Totals
PI	\$200*3=\$600	\$60/day*3=\$180	\$75/day*4=300	\$300	\$300	
Co-PI	\$200*3=\$600	\$60/day*3=\$180			\$300	
Grad Std	\$200*3=\$600	\$60/day*3=\$180			\$160	
Totals	\$1,800	\$540	\$300	\$300	\$760	3,700

F. Participant/Trainee Support Costs: \$5,000

Two undergraduate students will be trained for techniques XX and YY in this program. They will each receive \$25,00 of stipend per year.

G. Other Direct Costs: \$2,000

Publication costs: We anticipate publication costs of \$2,000 for publishing the results of this study in peer-reviewed journals.

G. Total Direct Costs \$133,342

Modified Total Direct Costs \$120,342 (excluding participant costs and equipment)

H. Indirect Costs \$61,374

Morgan State University negotiated indirect cost rate is 51%, and is applied to the modified total direct costs of \$117,726.

I. Total Direct and Indirect Costs \$194,716

8. Modular Budgets

8.1. When do we use them?

Modular budgets are used only for NIH grant applications with a maximum total annual direct cost of \$250,000. Therefore, if you are applying for a grant that is \$200,000 (which is less than \$250,000) per year, you should submit a modular budget.

NIH uses modular budgets to simplify budgeting for grants. The budgets are created in modules of \$25,000 up to \$250,000 total direct costs in each year. A detailed budget, with clear breakdown and detailed explanation, is no longer required.

8.2. Notes

8.2.1. While the NIH does not require a detailed budget, it is useful to prepare a detailed budget for yourself, so that:

1. You ensure that the total budget will not exceed \$250,000;
2. When you receive the award, you are ready to distribute the budget correctly.

8.2.2. Your budget should be rounded up to the closest multiple of \$25,000. For example, if your estimated budget is \$223,500, you will round it up to \$225,000.

8.2.3. A typical modular budget has the same number of modules each year. For example, in a 3-year grant, if there are 8 modules (\$200,000) in Year 1, there should be 8 modules in Year 2 and Year 3 too. If the number of modules change, the details for the change need to be described in budget justification.

8.2.4. No future escalations are allowed in modular budgets.

8.2.5. If a subaward is included in the budget, only the subaward direct cost is used in calculating the modular amount.

8.2.6. A simplified budget justification for modular submission as required by the NIH must be submitted with the modular budget.