

Formatting - [Chapter II. C.](#)

1. Pagination:
 - a. Research.gov will automatically generate page numbers on all sections of the proposal.
 - b. Fastlane: Each section of the proposal that is uploaded as a file must be manually paginated prior to uploading into Fastlane.
2. Font, Spacing and Margin Requirements
 - a. Use one of the following fonts identified below:
 - Arial^L (not Arial Narrow), Courier New, or Palatino Linotype at a font size of 10 points or larger;
 - Times New Roman at a font size of 11 points or larger; or
 - Computer Modern family of fonts at a font size of 11 points or larger.
 - b. A font size of less than 10 points may be used for mathematical formulas or equations, figures, tables, or diagram captions and when using a Symbol font to insert Greek letters or special characters. Other fonts not specified above, such as Cambria Math, may be used for mathematical formulas, equations, or when inserting Greek letters or special characters. PIs are cautioned, however, that the text must still be readable.
 - No more than six lines of text within a vertical space of one inch.
 - Margins, in all directions, must be at least an inch. No proposer-supplied information may appear in the margins.
 - Paper size must be no larger than standard letter paper size (8 1/2 by 11").
 - c. These requirements apply to all uploaded sections of a proposal, including supplementary documentation.

Cover Sheet - [Chapter II.C.2.a](#)

1. The cover sheet is a fillable form within Research.gov/Fastlane with four major components to complete:
 1. Awardee Organization/Primary Place of Performance
 2. Program Announcement/Solicitation/Program Description Number
 3. NSF Unit of Consideration
 4. Remainder of the Coversheet – Project Title, Budget Duration, Budget, Human Subjects, Animal Welfare, etc.
2. Please note a check box has been added titled “**Funding for Foreign organization**” that **MUST** be checked in cases where the PI considers a foreign organization’s involvement to be essential to the project (e.g. through subawards or consultant arrangements).
3. If the “**Funding for Foreign Organization**” box is checked, the PI also **MUST** enter the name of the applicable country(ies) in the “*International Activities Country Names(s)*” box.

Project Summary - [Chapter II.2.B](#)

Each proposal must contain a summary of the proposed project not more than one page in length. The Project Summary consists of an overview, a statement on the intellectual merit of the proposed activity, and a statement on the broader impacts of the proposed activity.

Project Description - [Chapter II.2.B](#)

1. The project description has a 15-page limit unless indicated otherwise in the RFP; must include the following subsections;
 - a. **Broader Impacts:** The Project Description also must contain, as a separate section within the narrative, a section labeled "Broader Impacts". This section should provide a discussion of the broader impacts of the proposed activities.
 - b. **Results from Prior NSF Support:** clarifies that the timeframe during which any PI or co-PI that has received NSF support must report on such funding is for an award with an end date within the last 5 years or any current funding, including any no cost extensions. This section must include;
 1. NSF Award Number, Amount and period of support
 2. Project Title
 3. Summary of results of the completed work
 4. The results must be separately described under two distinct
2. **Subawards** – The description of the work to be performed by the subaward *MUST BE INCLUDED* in the project description. https://www.nsf.gov/pubs/policydocs/pappg22_1/pappg_2.jsp#IIC2gvie
3. **Vertebrate Animals** – Sufficient information must be provided within the 15-page Project Description to enable reviewers to evaluate the following; https://www.nsf.gov/pubs/policydocs/pappg22_1/pappg_2.jsp#IID4
 1. Rationale for involving animals;
 2. Choice of species and number of animals to be used;
 3. Description of the proposed use of the animals;
 4. Exposure of animals to discomfort, pain, or injury; and
 5. Description of any euthanasia methods to be used
4. **Human Subjects** – please refer to the following link for complete information when including human subjects in an NSF proposal; https://www.nsf.gov/pubs/policydocs/pappg22_1/pappg_2.jsp#IID5
5. **Foreign organizations** - NSF rarely provides direct funding support to foreign organizations. NSF will consider proposals for cooperative projects involving U.S. and foreign organizations, provided support is requested only for the U.S. portion of the collaborative effort. In cases however, where the proposer considers the foreign organization's involvement to be essential to the project (e.g., through subawards or consultant arrangements), the proposer must explain why local support is not feasible and why the foreign organization can carry out the activity more effectively. In addition, the proposed activity must demonstrate how one or more of the following conditions have been met:
 - The foreign organization or foreign individual contributes unique expertise, organizational capability, facilities, data resources, and/or access to a geographic location not generally available to U.S. investigators (or which would require significant effort or time to duplicate); and/or
 - The foreign organization or foreign individual offers significant science and engineering education, training, or research opportunities to the U.S.

Such information must be included in the project description section of the proposal. The box for "Funding of a Foreign Organization, including through use of a subaward or consultant arrangement" must be checked on the Cover Sheet if the proposal includes funding for a foreign organization.

Project Description (continued) - [Chapter II.2.B](#)

6. **Conferences** - Requires conference proposers to have a policy or code of conduct that addresses sexual harassment, other forms of harassment, or sexual assault, and that includes clean and accessible means of reporting violations of the policy or code-of-conduct. This policy or code-of-conduct must be disseminated to conference participants prior to attendance at the conference as well as made available at the conference itself.

References – [Chapter II.C.2.e](#)

1. References have no page limit but must include bibliographic citations only. All author names must be listed for each reference and no abbreviations or “et al.” may be used.
2. If there are no references cited, a statement to that effect should be included in this section and uploaded in Research.gov/Fastlane.

Biosketch – [Chapter II.C.2.f](#)

A separate biographical sketch (limited to three pages) must be provided through use of an [NSF-approved format¹⁸](#), for each individual designated as senior personnel and must include the following sections:

- a. **Professional Preparation:** a list of the individual’s undergraduate and graduate education and postdoctoral training listed in chronological order starting with the undergraduate degree.
- b. **Appointments:** A list in reverse chronological order by start date of all the individual’s academic, professional, or institutional appointments beginning with the current appointment.
- c. **Products:**
 1. A list of up to five products most closely related to the proposed project; and second list of up to five other significant products, whether or not related to the proposed project. Acceptable products must be citable and accessible including but not limited to publications, data sets, software, patents, and copyrights. Unacceptable products are unpublished documents not yet submitted for publication, invited lectures, and additional lists of products. Only the list of ten will be used in the review of the proposal.
 2. Each product must include full citation information including (where applicable and practicable) names of all authors, date of publication or release, title, title of enclosing work such as journal or book, volume, issue, pages, website and URL, or other Persistent Identifier. Senior personnel who wish to include publications in the products section of the biographical sketch that include multiple authors may, at their discretion, choose to list one or more of the authors and then “et al.” in lieu of including the complete listing of authors' names.
- d. **Synergistic Activities:**
 1. A list of up to five distinct examples that demonstrates the broader impact of the individual’s professional and scholarly activities that focus on the integration and transfer of knowledge as well as its creation.
 2. Synergistic activities must be specific and must not include multiple examples to further describe the activity.

Please note: for proposals due on or after October 4th a reference to a table has been added to the Biosketch section in the PAPPG entitled [“NSF Pre-award and Post-award Disclosures Relating to the Biographical Sketch and Current and Pending Support”](#). This table has been developed to assist users in completion of these sections of the proposal.

Budget and Budget Justification – [Chapter II.2.g](#)

- Each proposal must contain a budget for each year of support requested. The budget justification must be no more than five pages per proposal. The amounts for each budget line item requested must be documented and justified in the budget justification as specified below.
- Collaborative proposals linked in Research.gov/Fastlane are considered separate proposals, and each proposal may contain 5 pages for the budget justification. For proposals that contain a subaward(s), each subaward must include a separate budget justification of no more than 5 pages.
- For proposals that contain a subaward(s), **each subaward** must include a separate budget justification of no more than five pages. See [PAPPG Chapter II.C.2.g\(vi\)\(e\)](#) for further instructions on proposals that contain subawards. For collaborative proposals submitted by multiple organizations, each organization must include a separate budget justification of no more than five pages.
- The proposal may request funds under any of the categories listed so long as the item and amount are considered necessary, reasonable, allocable, and allowable under [2 CFR §200, Subpart E](#), NSF policy, and/or the program solicitation.
 1. **Senior Personnel Salaries & Wages Policy**, it is the proposing organization's responsibility to define and apply the term "year" and include the definition in the budget justification. **UMass "Year" is fiscal year (7/1 to 6/30)**
 2. **Travel** – Per GPG Chapter II.C.2.g.iv. - "Travel and its relation to the proposed activities must be specified and itemized by destination and cost. Funds may be requested for field work, attendance at meetings and conferences and other travel associated with the proposed work, including subsistence. In order to qualify for support, however, attendance at meetings or conferences must be necessary to accomplish proposal objective, or disseminate its results. Allowance for Air Travel normally will not exceed the cost of round-trip, economy airfares. Persons traveling under NSF grants must travel by U.S. Air carriers, if available.
 3. **Materials and Supplies** – Per GPG Chapter II.C.2.d.vi.a., the proposal budget justification should indicate the general types of expendable materials and supplies required. Materials and supplies are defined as tangible personal property, other than equipment, costing less than \$5,000, or other lower threshold consistent with the policy established by the proposing organization. Cost estimates must be included for items that represent a substantial amount of the proposed line item cost.
- 4. **Participant Support Costs** –
 - This budget category refers to 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 NSF-sponsored conferences or training projects. Any additional categories of participant support costs other than those described in 2 CFR §200.1 (such as incentives, gifts, souvenirs, t-shirts, and memorabilia), must be justified in the budget justification, and such costs will be closely scrutinized by NSF.
 - Speakers and trainers generally are not considered participants and should not be included in this section of the budget. However, if the primary purpose of the individual's attendance at the conference is learning and receiving training as a participant, then the costs may be included under participant support. If the primary purpose is to speak or assist with management of the conference, then such costs should be budgeted in appropriate categories other than participant support.

Budget and Budget Justification (continued) – [Chapter II.2.g](#)

- Funds may not be used to cover room rental fees, catering costs, supplies, etc. related to an NSF-sponsored conference. This section of the budget also may not be used for incentive payments to research subjects. Human subject payments should be included on line G6 of the NSF budget under ‘Other Direct costs,’ and indirect costs should be calculated on the payments in accordance with the organization’s federally negotiated indirect cost rate.”

Current and Pending – [Chapter II.C.h](#)

1. This section of the proposal is used to assess the capacity of the individual to carry out the research as proposed, as well as to help assess any potential overlap/duplication with the project being proposed.
2. Current and pending support information must be separately provided through use of an [NSF-approved format](#), for each individual designated as senior personnel on the proposal. Current and pending support includes all resources made available to an individual in support of and/or related to all of his/her research efforts, regardless of whether or not they have monetary value, except as noted in paragraph (v) below. Current and pending support also includes in-kind contributions (such as office/laboratory space, equipment, supplies, employees, students³⁴). In-kind contributions not intended for use on the project/proposal being proposed that have associated time commitments also must be reported.
3. Current and pending support information must be provided for this project, for ongoing projects, and for any proposals currently under consideration from whatever source irrespective of whether such support is provided through the proposing organization or is provided directly to the individual. This includes, for example, Federal, State, local, foreign, public, or private foundations, non-profit organizations, industrial or other commercial organizations, or internal funds allocated toward specific projects.
4. A brief statement of the overall objectives of the project/proposal being proposed or in-kind contribution must be provided. The submission also should summarize potential overlap with any active or pending proposal or in-kind contribution and this proposal in terms of scope, budget, or person-months planned or committed to the project by the individual.
5. The total award amount for the entire award period covered (including indirect costs) must be provided, as well as the number of person-months (or partial person-months) per year to be devoted to the project by the individual. Person-month information included in current and pending support may differ from the person-months requested on the budget for a given project. The information contained on the budget is separate and distinct from the information entered on current and pending support regarding how much time the individual is or is planning, or has committed to spend on a project. If the individual is not requesting salary, and will not be expending any effort, then the project should not be reported in current and pending support.
6. Concurrent submission of a proposal to other organizations will not prejudice its review by NSF, if disclosed.³⁶ If the project (or any part of the project) now being submitted has been funded previously by a source other than NSF, information must be provided regarding the last period of funding.

Please note: for proposals due on or after October 4th a reference to a table has been added to the Current and Pending section in the PAPPG entitled [“NSF Pre-award and Post-award Disclosures Relating to the Biographical Sketch and Current and Pending Support”](#). This table has been developed to assist users in completion of these sections of the proposal.

Facilities, Equipment and Other Resources Statement – [Chapter II.2.i](#)

- This section of the proposal is used to assess the adequacy of the resources available to perform the effort proposed to satisfy both the Intellectual Merit and Broader Impacts review criteria. Proposers should describe only those resources that are directly applicable. Proposers should include an aggregated description of the internal and external resources (both physical and personnel) that the organization and its collaborators will provide to the project, should it be funded. Such information must be provided in this section, in lieu of other parts of the proposal (e.g., Budget Justification, Project Description). The description should be narrative in nature and must not include any quantifiable financial information. Reviewers will evaluate the information during the merit review process and the cognizant NSF Program Officer will review it for programmatic and technical sufficiency.
- Although these resources are not considered voluntary committed cost sharing as defined in 2 CFR §200.1, the Foundation **does expect** that the resources identified in the Facilities, Equipment and Other Resources section will be provided, or made available, should the proposal be funded. [Chapter VII.B.1](#) specifies procedures for use by the grantee when there are postaward changes to objectives, scope or methods/procedures.

Supplementary Documentation – [Chapter II.2.j](#)

- Data Management Plan – Plans for data management and sharing of the products of research. Proposals must include a document of no more than two pages uploaded under "Data Management Plan" in the supplementary documentation section of FastLane or Research.gov. This supplementary document should describe how the proposal will conform to NSF policy on the dissemination and sharing of research results (see [Chapter XI.D.4](#)), and may include:
 1. The types of data, samples, physical collections, software, curriculum materials, and other materials to be produced in the course of the project;
 2. The standards to be used for data and metadata format and content (where existing standards are absent or deemed inadequate, this should be documented along with any proposed solutions or remedies);
 3. Policies for access and sharing including provisions for appropriate protection of privacy, confidentiality, security, intellectual property, or other rights or requirements;
 4. Policies and provisions for re-use, re-distribution, and the production of derivatives; and
 5. Plans for archiving data, samples, and other research products, and for preservation of access to them.
- Postdoctoral Researcher Mentoring Plan. Each proposal that requests funding to support **postdoctoral researchers** must upload under "Mentoring Plan" in the supplementary documentation section of FastLane, a description of the mentoring activities that will be provided for such individuals. In no more than one page, the mentoring plan must describe the mentoring that will be provided to all postdoctoral researchers supported by the project, regardless of whether they reside at the submitting organization, any subrecipient organization, or at any organization participating in a simultaneously submitted collaborative proposal. Proposers are advised that the mentoring plan must not be used to circumvent the 15-page Project Description limitation. See [Chapter II.D.3](#) for additional information on collaborative proposals. Mentoring activities provided to postdoctoral researchers supported on the project will be evaluated under the Broader Impacts review criterion.
 - Examples of mentoring activities include, but are not limited to: career counseling; training in preparation of grant proposals, publications and presentations; guidance on ways to improve teaching and mentoring skills; guidance on how to effectively collaborate with researchers from diverse backgrounds and disciplinary areas; and training in responsible professional practices.

Supplementary Documentation (continued)– [Chapter II.2.j](#)

- Letters of Collaboration - Documentation of collaborative arrangements of significance to the proposal through letters of collaboration. (See [Chapter II.C.2.d\(iv\)](#)). Letters of collaboration should be limited to stating the intent to collaborate and should not contain endorsements or evaluation of the proposed project. The recommended format for letters of collaboration is as follows:

"If the proposal submitted by Dr. [insert the full name of the Principal Investigator] entitled [insert the proposal title] is selected for funding by NSF, it is my intent to collaborate and/or commit resources as detailed in the Project Description or the Facilities, Equipment and Other Resources section of the proposal."

- Letters of Support - should not be submitted unless they are required by a specific program solicitation. as they are not a standard component of an NSF proposal. A letter of support is typically from a key stakeholder such as an organization, collaborator, or Congressional Representative, and is used to convey a sense of enthusiasm for the project and/or to highlight the qualifications of the PI or co-PI.
 - A letter of support submitted in response to a program solicitation requirement must be unique to the specific proposal submitted and cannot be altered without the author's explicit prior approval. Proposals that contain letters of support not authorized by the program solicitation may be returned without review.
- Collaborators and Other Affiliations Information
 1. The following information regarding collaborators and other affiliations (COA) must be separately provided for each individual identified as senior personnel on the project. The COA information must be provided through use of the [COA template](#). The information in the tables is not required to be sorted, alphabetically or otherwise. For additional information please refer to the frequently asked questions on the COA template page.

There are five separate categories of information which correspond to the five tables in the COA template:

1. COA template Table 1: List the individual's last name, first name, middle initial, and organizational affiliation in the last 12 months.
2. COA template Table 2: List names as last name, first name, middle initial, for whom a personal, family, or business relationship would otherwise preclude their service as a reviewer. In the "Type of Relationship" column please specify the personal, family, or business relationship involved.
3. COA template Table 3: List names as last name, first name, middle initial, and provide organizational affiliations, if known, for the following: The individual's Ph.D. advisors; and All of the individual's Ph.D. thesis advisees.
4. COA template Table 4: List names as last name, first name, middle initial, and provide organizational affiliations, if known, for the following: Co-authors on any book, article, report, abstract or paper with collaboration in the last 48 months (publication date may be later); and Collaborators on projects, such as funded grants, graduate research, or others in the last 48 months.
5. COA template Table 5: List editorial board, editor-in chief and co-editors with whom the individual interacts. An editor-in-chief must list the entire editorial board. Editorial Board:¹¹ List name(s) of editor-in-chief and journal in the past 24 months; and Other co-Editors of journal or collections with whom the individual has directly interacted in the last 24 months.

The template has been developed to be fillable, however, the content and format requirements must not be altered by the user. When completing the template, do not change the column sizes or the font type. The instructions at the top of the template may be deleted, and rows may be inserted as needed to provide additional names.

Required Documentation when an outside institution is a subaward on a UMass NSF Proposal

1. UMass subrecipient form –
 - Long form: <https://www.umass.edu/research/form/sub-recipient-form>
 - Short form for FDP Institutions: <https://www.umass.edu/research/form/fdp-sub-recipient-commitment-form>
2. Scope of Work
3. Budget
4. Budget Justification
5. CV/Biosketch for PI, Co-PI, and all other Senior Personnel
6. Current and Pending documents for PI, Co-PI and all other Senior Personnel
7. Facilities, Equipment and Other Resources Statement
8. Collaborative and Other Affiliations Information Form for PI, Co-PI and all other Senior Personnel