NSF Faculty Career Development (CAREER) Program
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503214

This document summarizes information about the CAREER Program found in the following four documents:

- **Program Solicitation** (important review criteria are highlighted in red) - http://www.nsf.gov/pubs/2008/nsf08557/nsf08557.htm
- **2010 NSF CAREER Proposal Writing Workshop** – Presentation by Dr. George Hazelrigg, NSF Program Director - Available at http://aries.imse.ksu.edu/nsf/Workshopdoc.htm

Other Resources:
- **2010 NSF CAREER Proposal Writing Workshop**
  Workshop Documents – http://aries.imse.ksu.edu/nsf/Workshopdoc.htm
  Workshop Resources - http://aries.imse.ksu.edu/nsf/resource.htm

Proposals should be prepared and submitted in accordance with the guidelines specified in the NSF Grant Proposal Guide (GPG). See (see Chapter II, Sections A & B) of the GPG for format requirements.

The NSF CAREER program solicitation contains supplemental instructions to the standard GPG proposal preparation guidelines. All standard sections of the proposal are required (i.e., the cover sheet, project summary, table of contents, project description, references cited, biographical sketch, budget, budget justification, current and pending support, facilities/equipment/other resources, and supplementary documentation).

**2010 Full Proposal Deadlines:**
Proposals must be submitted via FastLane or Grants.gov by 5:00 p.m., submitter's local time, on or before the applicable deadline date below:
- July 20, 2010 : BIO, CISE, EHR,OCI
- July 21, 2010: ENG
- July 22, 2010: GEO, MPS, SBE, OPP

For proposals that are submitted for consideration by more than one unit with different deadline dates, the deadline date associated with the primary unit of consideration will be enforced (i.e., the program listed first on the FastLane cover sheet).

**Limit on Number of Proposals per PI:**
Each PI may only submit one CAREER proposal per annual competition. In addition, a PI may not participate in more than three CAREER competitions.
REMEMBER:
- The CAREER proposal is not a research proposal
- The CAREER proposal is a proposal detailing how you will spend $400,000 to enhance your career development
- Your career involves a research path, not a research project
- Determine your research path - your lifelong research goals - and then identify milestones toward your goals
- Detail the first one or two as the research projects for your CAREER proposal

Register for NSF FastLane
Principal investigators planning to submit a proposal to the NSF should register for a FastLane account. Principal investigators use FastLane to submit proposals, check the status of a review, and submit project reports. University research administrators use FastLane to authorize proposals for submission to NSF, and generate reports on their institution's recent and active awards, recent proposals and status of Final Project Reports.
To register for NSF FastLane, visit http://www.research.ufl.edu/research/fastlane/index.html.
1) The Cover Sheet:

- **Program Solicitation Number.** Select the CAREER program solicitation number shown at the beginning of this solicitation from the drop-down menu.

- **Unit of Consideration.** Select at least one specific disciplinary program from the drop-down list in FastLane as the unit of consideration. For assistance in determining which program to choose, refer to the NSF Guide to Programs, which provides descriptions of NSF’s research-supporting programs.
  
  o If your proposal seems to fit in two different programs, you may designate more than one disciplinary program in FastLane if you think two or more programs should jointly review your proposal. It is very important that you select the most relevant program as the primary organization since that is the organization that is most likely to have primary responsibility for reviewing your proposal. Do not submit duplicate CAREER proposals to multiple disciplinary programs. Your proposal must be submitted by the CAREER deadline for the primary Directorate or Office you select. You are strongly encouraged to contact the program officer most closely related to the subject matter when preparing a cross-disciplinary proposal.
  
  o NSF encourages multidisciplinary proposals and every attempt is made to ensure the best fit for these proposals. Proposals with a multidisciplinary focus are commonly reviewed by different programs, or by special multidisciplinary panels and/or ad-hoc reviewers.
  
  o If NSF determines that your proposal is more appropriate for a different program than the primary one you selected, the proposal will be reassigned to the appropriate organizational unit. NSF will make the final determination of where your proposal will be assigned and considered. You can track your proposal’s assignment and progress through FastLane.

- **Project Title.** The project title must begin with "CAREER:" and follow with an informative title.

- **Co-PIs.** No co-PIs are permitted.

- **PI eligibility information.** As part of the cover sheet entry, proposers must complete and submit the CAREER and PECASE certifications, thereby self-certifying their eligibility for the CAREER Program and their eligibility to be considered for the PECASE award, if desired. Note: information regarding PECASE eligibility will not be released to reviewers.

2) Project Summary: (must not exceed one page)

Summarize the research and education objectives, and plans for the integration of education and research activities. The Project Summary must clearly address in separate statements how the proposal meets both the Intellectual Merit and Broader Impact review criteria.

**Suggested Outline:**

First paragraph
- My long-term research goal is...
- In pursuit of this goal, the research objective of this CAREER proposal is...
- The research approach is...

Second paragraph
- My long-term educational goal is...
- In pursuit of this goal, the educational objective of this CAREER proposal is...
- The educational approach is...

Third and fourth paragraphs - use headings
- Intellectual Merit (What is already known? What is new? What will your research add? What will this do to enhance or enable research in your or other fields?)
- Broader Impact (What is the benefit to society at large as a result of your research? Means to benefit society include: Economic/environment/energy; Education and training; Providing opportunities for underrepresented groups; Improving research and education infrastructure)
3) Table of Contents (automatically generated by FastLane)

4) Project Description: (must not exceed 15 pages)

Reviewers want to know four things:

- What is it about (the research objective)?
- How will you do it (the technical approach)?
- Can you do it (you and your facilities)?
- Is it worth doing (intellectual merit and broader impact)?

The Project Description section should contain a well-argued and specific proposal for activities that will, over a 5-year period, build a firm foundation for a lifetime of contributions to research and education in the context of the PI's organization.

The Project Description should be developed in consultation with the department head or equivalent organizational official and should include:

- a description of the proposed research project, including preliminary supporting data where appropriate, specific objectives, methods and procedures to be used, and expected significance of the results;
- a description of the proposed educational activities, including plans to evaluate their impact on students and other participants;
- a description of how the research and educational activities are integrated with one another ("Integrated research and education" means you should be able to integrate your education plans into the research description); and
- results of prior NSF support (must be included, if applicable).

Question: If I held an NSF postdoctoral fellowship, do I need to include a "Results from Prior Support" section?

- Yes, you must include a "Results from Prior Support" section whenever you have served as a PI or co-PI on any NSF grant within the last 5 years. This includes postdoctoral fellowships, grants in equipment programs such as Major Research Instrumentation, and educational grants. If you have received more than one prior award (excluding amendments), you must report on the award that is most closely related to the CAREER proposal. (See the GPG for the required information.)

TIPS

- Start with a restatement of the goals and objectives outlined in the summary. Clarify them, and provide a plan to accomplish them
- Restate and provide detail on your intellectual merit and broader impact

Successful applicants will propose creative, effective and integrated research and education plans as well as plans for assessing these components. While excellence in both education and research is expected, activity of an intensity that leads to an unreasonable workload is not. For instance, teaching additional courses or taking on additional duties is not expected. A justification for released time may be appropriate for extraordinary curriculum development or education innovation. What is expected is a well-argued and specific proposal for activities over a 5-year period that will build a firm foundation for a lifetime of integrated contributions to research and education. Refer to the CAREER Program Solicitation for representative examples of educational activities. CAREER proposers may also find the document “Merit Review Broader Impacts Criterion:
Representative Activities” useful in preparing their CAREER proposals. 


How many pages should I devote to describing research and how many to education? 

No number is specified. Use the 15 pages allowed for proposal Section C, Project Description, including any results from prior NSF support, to your best advantage. A major objective of the CAREER Program is to encourage the integration of research and education. The research and educational activities do not need to be addressed separately, if the relationship between the two is such that the presentation of the integrated project is better served by interspersing the two throughout the Project Description.

Proposed research activities may be in any area of science, mathematics, engineering and education normally supported by NSF. To help determine the appropriateness of the project for NSF and identify the disciplinary program to which it should be submitted, proposers are urged to refer to the NSF Guide to Programs. Program information can also be found on Directorate web pages, which can be accessed from the NSF home page (www.nsf.gov). Proposers are also encouraged to contact the appropriate NSF Program Director. For guidance on submitting information about field work proposed in the Arctic or Antarctic, proposers should contact the program officer in the Office of Polar Programs who is associated with the program most closely aligned with the research being proposed.

Plans for international cooperative research and education activities are encouraged (not required). The opportunity to collaborate with outstanding foreign researchers and educators, and to gain access to unique sites, equipment or facilities, may provide substantial benefits to the research and education activities proposed.

If an international component is included, proposers are encouraged to contact the relevant program officer in the Office of International Science and Engineering (OISE) (http://www.nsf.gov/od/oise/about.jsp). The proposal must describe specifically how the collaboration with a foreign partner enhances the research, benefits students and/or contributes to the integration of education and research.

Proposed education activities may be in a broad range of areas and may be directed to any level: K-12 students, undergraduates, graduate students, and/or the general public, but should be related to the proposed research. Some examples are:

- designing innovative courses or curricula;
- supporting teacher preparation and enhancement;
- conducting outreach and mentoring activities to enhance scientific literacy or involve students from groups that have been traditionally underrepresented in science;
- researching students' learning and conceptual development in the discipline;
- incorporating research activities into undergraduate courses;
- linking education activities to industrial, international, or cross-disciplinary work; and
- implementing innovative methods for evaluation and assessment.

Education activities may also include designing new or adapting and implementing effective educational materials and practices. Such activities should be consistent with research and best practices in curriculum, pedagogy, and evaluation. Proposers may build on NSF or other educational projects. Publications such as the following from the National Academy of Sciences/National Research Council (http://www.nap.edu/) may be helpful in developing the educational activities.

additional material from the Committee on Learning Research and Educational Practice. Donovan, M.S., Bransford, J.D., and Pellegrino, J.W., Editors.


A CAREER proposal must indicate the goals and objectives of the education and integration of education plans, as well as the criteria for assessing that these goals are met. Principal investigators are strongly encouraged to describe how the impact of the educational activities will be assessed or evaluated. A helpful document for information on evaluating educational activities is the NSF publication *The 2002 User-Friendly Handbook for Project Evaluation* (NSF 02-057).

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5) **References Cited:**
Provide references in support of both research and education aspects of the CAREER proposal.

6) **Biographical Sketch of Principal Investigator:**
The Biographical Sketch should be prepared following the instructions in the GPG and should include both research and education activities and accomplishments. The list of publications should include no more than ten publications, including up to five publications most closely related to the proposed research and educational activities and up to five other significant publications, whether or not they are related to the proposed project. The Biographical Sketch may not exceed two pages in length.

7) **Budgets (Including Budget Justification)**
Budget: One budget for each year of support requested. The Cumulative Budget is automatically generated by FastLane. Entered using standard on-line FL form and/or uploaded excel spreadsheet (available for download in the FastLane Proposal Preparation application). Salary support for any senior personnel other than the PI is not permitted, either in the primary budget or within subawards.

Budget Justification: Not to exceed three pages. Entered as text or uploaded as a file.

The minimum CAREER award size is $400,000, including indirect cost or overhead, for a five-year period for all directorates except BIO. For proposals submitted to the BIO directorate, the minimum award size is $500,000 over five years. Before preparing a CAREER proposal, PIs are strongly encouraged to contact their disciplinary program director or the appropriate division's CAREER contact to discuss appropriate budget requests for their proposed CAREER activities, and typical funding levels for their discipline. Many programs and Directorates fund CAREER proposals at the minimum award size. Proposers should also review the list of recent CAREER awards made in their discipline. A list of CAREER Contacts can be found on the CAREER web page at http://www.nsf.gov/crssprgm/career/contacts.jsp.

No salary support for other Senior Personnel (i.e., Budget Category A) is permitted, in either the primary budget or in any subawards. All other allowable costs, as described in the Grant Proposal Guide, are permitted. Allowable costs include funds for postdoctoral fellows, graduate students, undergraduate students, summer salary, education or outreach activities and funds for an evaluator. In some cases, it may be appropriate to include academic year salary support for the PI on a CAREER budget (for example, PIs who have heavy teaching responsibilities or who must conduct fieldwork during the academic year). Proposers should talk to the cognizant Program Director about his/her individual case.

NOTE: Proposers should make sure that they request at least the appropriate minimum amount and that the proposal is for five years. There is no maximum award amount, but proposers should talk with the appropriate Program Director about the average award size in a program.

**May I request academic year salary on a CAREER proposal?**
In some cases it may be appropriate to include academic year salary support in a CAREER budget. A PI who has heavy teaching responsibilities or whose proposed activities may involve a limited period of fieldwork or other extraordinary career-development activity in research or education may be justified in requesting academic year salary support on their budgets. Before including any academic year salary support on your CAREER budget you should contact your disciplinary program officer to discuss your individual case.
8) Current and Pending Support Form

Submission is required. Information requested in standard FL form. You can upload all Current and Pending Support items of your proposal as one file by selecting the PI's name and editing an existing form or creating a new one. Entered as text or uploaded as a file.

9) Facilities, Equipment and Other Resources

Submission is required. Information requested in standard FL form.

10) Special Information and Supplementary Documentation:

Scan the signed original(s) of the following document(s) and upload the scans as a PDF file into the Supplementary Documents section of the proposal. Do not send paper copies to NSF. All documents must be submitted with the proposal in Fastlane by the deadline.

a) Departmental Letter. (Be careful to put this in the Supplementary Documents section, not the Single Copy Documents section)

In recognition of the teacher-scholar role of beginning faculty members, NSF encourages organizations to value and reward the integration of research and education. This integration of research and education requires close collaboration between the CAREER principal investigator and his/her organization throughout the award. To demonstrate the department’s support of the integrated research and education plan of the CAREER awardee, the proposal must include one (and only one) letter from the PI’s department head (or equivalent organizational official). If a proposer is in two departments, the letter should be signed by the Department Head in which tenure will be granted. In those cases where tenure is a joint decision, the letter should be signed by both Department Heads. The letter, which will be included as part of the consideration of the overall merits of the proposal, should demonstrate an understanding of, and a commitment to, the effective integration of research and education as a primary objective of the CAREER award. A letter that fails to acknowledge institutional commitment to the professional development and mentoring of the PI in both research and education may disadvantage an otherwise outstanding proposal.

The Departmental Letter should be approximately one page in length, and include the department head's name and title, below the signature. The letter should contain the following elements:

- An indication that the PI's proposed CAREER research and education activities are supported by and integrated into the educational and research goals of the department and the organization, and that the department is committed to the support and professional development of the PI;
- A description of a) the relationship between the CAREER project, the PI's career goals and job responsibilities, and the goals of his/her department/organization, and b) the ways in which the department head (or equivalent) will ensure the appropriate mentoring of the PI, in the context of the PI's career development and his/her efforts to integrate research and education throughout the period of the award and beyond; and
- Verification that the PI is eligible for the CAREER program.

b) Letters of Collaboration. If applicable, the proposal should include short letters of commitment from collaborators. The letter(s) must be limited to describing the nature of the collaboration. The letter(s) should not include a recommendation of the person, but should be limited to the types of support that is offered. Letters of recommendation are not permitted, and will be removed from the proposal prior to review.
Do not include letters of collaboration if:
- They are not very collaborative
- Multiple letters are identical
- They are letters from previous proposals
- You don’t have them before the submission deadline
- They are letters of recommendation

c) Postdoctoral Researcher Mentoring Plan
Submission of this supplementary document is required ONLY if the funds are requested to support a postdoctoral researchers during the course of the project. Proposals that do not include a mentoring plan will be returned without review.

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, irrespective of whether they reside at the submitting organization, any sub-awardee organization, or at any organization participating in the project.

Mentoring activities may include:
- 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.

11) List of Suggested Reviewers
Optional

DO NOT INCLUDE APPENDICES without prior written approval from the appropriate NSF Assistant Director. Note that such approvals are rarely granted.