

FACULTY EARLY CAREER DEVELOPMENT (CAREER) PROGRAM

Including the description of the NSF component of the

**Presidential Early Career Awards for Scientists
and Engineers (PECASE)**

Guidelines for Submission of Proposals

NSF 99-110

(Replaces NSF 98-103)

DEADLINE DATE: JULY 22, 1999



NATIONAL SCIENCE FOUNDATION



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SUMMARY OF PROGRAM REQUIREMENTS

GENERAL INFORMATION

Program Name: Faculty Early Career Development (CAREER) Program

Short Description/Synopsis of Program:

The Faculty Early Career Development (CAREER) Program is a Foundation-wide activity that supports junior faculty within the context of their overall career development. It combines in a single program the support of research and education of the highest quality and in the broadest sense. This premier program emphasizes the importance the Foundation places on the early development of academic careers dedicated to stimulating the discovery process in which the excitement of research is enhanced by inspired teaching and enthusiastic learning.

Each year NSF selects nominees for Presidential Early Career Awards for Scientists and Engineers (PECASE) from among the most meritorious first-year awardees supported by the CAREER Program. PECASE awards recognize outstanding scientists and engineers who, early in their careers, show exceptional potential for leadership at the frontiers of knowledge. This Presidential Award is the highest honor bestowed by the United States Government on scientists and engineers beginning their independent careers.

Cognizant Program Officer(s): A contact person for each NSF Division is listed on the CAREER Web page at <http://www.nsf.gov/home/crssprgm/career/contacts.htm>.

Applicable Catalog of Federal Domestic Assistance (CFDA) No.: 47.041, Engineering; 47.049, Mathematical and Physical Sciences; 47.050, Geosciences; 47.070, Computer and Information Science and Engineering; 47.074, Biological Sciences; 47.075, Social, Behavioral and Economic Sciences; 47.076, Education and Human Resources; 47.078, Polar Programs.

ELIGIBILITY

- ◆ Limitation on the categories of organizations that are eligible to submit proposals:

Proposals may be submitted by academic institutions in support of individual junior-faculty members. Other nonprofit organizations may be eligible; see the eligibility guidelines in this document.

- ◆ PI eligibility limitations: **Are described in this document in Section II.**

- ◆ Limitation on the number of proposals that may be submitted by an organization:

There is no limit on the number of proposals that may be submitted by an organization. However, only one CAREER proposal may be submitted by a Principal Investigator for this deadline.

AWARD INFORMATION

- ◆ Type of award anticipated: **Standard or Continuing Grant**
- ◆ Number of awards anticipated in FY 2000: **Approximately 350 awards**
- ◆ Amount of funds available: **Approximately \$80 million will be available for the CAREER Program in FY 2000, distributed across all Directorates of NSF.**
- ◆ Anticipated date of award: **January to September 2000**

PROPOSAL PREPARATION & SUBMISSION INSTRUCTIONS

◆ Proposal Preparation Instructions

- Letter of Intent requirements: **None**
- Preproposal requirements: **None**
- Proposal preparation instructions: **Standard NSF Grant Proposal Guide instructions**
- Supplemental proposal preparation instructions: **CAREER Frequently-Asked Questions (available on the CAREER Web page) and FastLane Instructions (available on the FastLane Web page).**
- Deviations from standard (GPG) proposal preparation instructions: **The Project Description may be up to 16 pages in length, the last page of which must be an endorsement and certifications by the PI's department head.**

◆ Budgetary Information

- Cost sharing/matching requirements: **None**
- Indirect cost (F&A) limitations: **None**
- Other budgetary limitations: **Awards range from \$200,000 to \$500,000 in total for 4 or 5 years.**

◆ FastLane Requirements

- FastLane proposal preparation requirements: **Full FastLane proposal submission required.**
- FastLane point of contact: **703-306-1142; fastlane@nsf.gov**

◆ Deadline/Target Dates

- Full Proposal Deadline: **FastLane submission: 5:00 p.m. local time, July 22, 1999; signed originals: 5:00 p.m. Eastern Time, July 29, 1999.**

PROPOSAL REVIEW INFORMATION

- ◆ Merit Review Criteria: **Standard National Science Board approved criteria**

AWARD ADMINISTRATION INFORMATION

- ◆ Grant Award Conditions: **GC-1 or FDP III**
- ◆ Special grant conditions anticipated: **None anticipated**
- ◆ Special reporting requirements anticipated: **Department head must approve annual reports**

NATIONAL SCIENCE FOUNDATION

Guidelines for Submission:

Faculty Early Career Development (CAREER) Program and the NSF Component of the Presidential Early Career Awards for Scientists and Engineers (PECASE)

The main sections of this document can be accessed directly by selecting the appropriate heading below:

- I. PURPOSE**
- II. ELIGIBILITY**
- III. CAREER PROGRAM CHARACTERISTICS**
- IV. SUPPLEMENTS TO CAREER AWARDS**
- V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS**
- VI. PROPOSAL REVIEW INFORMATION**
- VII. AWARD ADMINISTRATION INFORMATION**
- VIII. CAREER GRANT CONDITIONS**
- IX. CONTACTS FOR ADDITIONAL INFORMATION**
- X. OTHER PROGRAMS OF INTEREST**

I. PURPOSE

A. CAREER Program

To sustain and strengthen the Nation's science, mathematics, and engineering capabilities and to promote the use of those capabilities in service to society, the National Science Foundation (NSF) is dedicated to strengthening linkages among individuals and institutions committed to progress in research and education and to fostering the natural connections between the processes of learning and discovery. NSF aims to encourage integrated environments for research and education, in which education is infused with the joy of discovery and research is informed by the needs of the learning process.

Because of the critical roles played by faculty members in integrating research and education, NSF has established the Faculty Early Career Development (CAREER) program. This premier program emphasizes the importance the Foundation places on the early development of academic careers dedicated to stimulating the discovery process, in which the excitement of research is enhanced by inspired teaching and enthusiastic learning. It combines in a single program the support of **research and education of the highest quality and in the broadest sense**. Participation in this program by those traditionally underrepresented in science and engineering is especially encouraged.

B. PECASE Program

The Presidential Early Career Award for Scientists and Engineers (PECASE) is the highest honor bestowed by the United States government on scientists and engineers beginning their independent careers. PECASE awards recognize outstanding scientists and engineers who, early in their careers, show exceptional potential for leadership at the frontiers of knowledge. Consistent with its mission to support research in academic environments, each year NSF will select its PECASE nominees from among new faculty who have received CAREER awards based on their potential for integrated contributions to education and research. Up to twenty PECASE nominees will be selected from among the most meritorious PECASE-eligible CAREER awardees who applied to the July 22, 1999, CAREER program. These PECASE recipients will be honored in late 2000. (A brochure giving a government-wide description of PECASE is available from the CAREER page on the World-Wide Web. From the NSF home page <www.nsf.gov>, select "Crosscutting Programs," then "CAREER.")

II. ELIGIBILITY

A. CAREER Program

Outstanding new faculty who intend to develop academic careers involving both research and education, and who are eligible, are encouraged to apply for support toward that goal under the CAREER program. CAREER awards are not intended for senior or highly experienced investigators who already have established independent research careers. To be eligible for a CAREER award, applicants **MUST MEET ALL** of the following requirements:

- be employed at an institution in the U.S., its territories or possessions, or the Commonwealth of Puerto Rico, that awards a baccalaureate or advanced degree in a field supported by NSF;
- be in their first or second full-time tenure-track academic appointment and have begun the first tenure-track or tenure-track-equivalent appointment (at any institution) on or after July 1, 1995, and before July 22, 1999 (see below for an explanation of “tenure-track-equivalent” appointments);
- not be tenured or have held tenure on or before July 22, 1999; and
- not be a current or former recipient of an NSF PECASE, Presidential or NSF Young Investigator, Presidential Faculty Fellow, or NSF CAREER award. Prior or concurrent Federal support for other types of awards or for non-duplicative research does not preclude eligibility.

The following are exceptions to the eligibility criteria listed above. Individuals in the following categories **may** also be eligible to apply. **Prior to** proposal submission, such individuals should communicate with the appropriate CAREER contact person (listed on the CAREER Web page) about receiving an exemption to the above requirements. If careful documentation leads to an exemption being granted, written approval from NSF must be submitted with the signed cover sheet (see item 6 under “PROPOSAL PREPARATION” in this document). Eligibility exemptions **will not** be granted for the third or later tenure-track appointment, nor to individuals who are tenured or who have held tenure at any time.

- Individuals in “tenure-track-equivalent” positions whose appointments are continuing faculty appointments having substantial educational responsibilities at institutions or departments that do not offer tenure;
- Individuals who are engaged in significant education **and** research activities at two-year colleges or non-profit or non-academic institutions such as museums, observatories, and research laboratories;
- Non-tenured faculty whose initial full-time tenure-track appointment preceded July 1, 1995, and who have interrupted their careers for substantive reasons such as family leave or serious health problems.

Research projects may include partnerships, but only single-investigator proposals are appropriate. Proposals submitted with co-investigators will be returned without review.

NSF will not simultaneously consider a CAREER proposal and a traditional proposal for the same research. An applicant may have only one CAREER proposal under consideration by NSF at any time and may receive only one CAREER award. NSF will not support through a CAREER award research activities that are concurrently supported from other sources.

B. PECASE Program

In addition to meeting the eligibility requirements of the CAREER program listed above, PECASE nominees must be U.S. citizens, nationals, or permanent residents who hold such status on or before July 22, 1999. To be considered for the PECASE award, the PECASE Information Form (NSF Form 1317A), which is available from the CAREER Web page,

must be submitted with the signed cover sheet by the deadline date. This form, which attests to the applicant's eligibility for the PECASE program, must be signed and dated on or before July 22, 1999. Individuals can receive only one PECASE award in their careers.

The CAREER awards of those NSF nominees who are selected to receive a PECASE award will be adjusted to provide a total of \$500,000 and to a 5-year duration.

III. CAREER PROGRAM CHARACTERISTICS

The CAREER program is a Foundation-wide activity encompassing all areas of research and education in science and engineering normally supported by NSF. Proposals from women, underrepresented minorities, and persons with disabilities are especially encouraged. A guiding principle of the program is that a CAREER proposal competes with other proposals from CAREER-eligible faculty in the same discipline. Each year, NSF expects to make approximately 350 new CAREER awards.

A. Preparation for Proposal Submission

You **must** submit your CAREER proposal electronically using FastLane. Since NSF receives nearly 2,000 proposals in the CAREER program each year, you are encouraged to start your FastLane proposal submission well before the CAREER deadline. To submit your proposal using FastLane, you have to be known to NSF as a Principal Investigator (PI) and your institution must be registered to use FastLane.

If you have never submitted a proposal to NSF as a PI, contact your Sponsored Research Office (SRO) to get a Personal Identification Number (PIN) and so that your SRO can add you to the NSF PI database. This should be done as soon as you decide to submit a proposal and at least one week before the CAREER deadline (July 22, 1999). Instructions for registering a PI can be found on the FastLane Web page at <http://www.fastlane.nsf.gov/a1/newstan.htm> under the heading "Requirements for Accessing FastLane Proposal Preparation."

If your institution is not a FastLane registered institution, your SRO needs to submit the registration form located at <http://www.fastlane.nsf.gov/a0/about/registration.htm>. **This should be done as soon as possible and at least ten days before the CAREER deadline.** A list of FastLane registered institutions is located at http://www.fastlane.nsf.gov/a0/fastlane_insts.htm.

Complete instructions for FastLane proposal submission can be found on the FastLane Web page at <http://www.fastlane.nsf.gov>. A "frequently asked questions" document on FastLane proposal preparation can be found at <http://www.fastlane.nsf.gov/a0/about/a1faq.htm>.

In order to determine the match between the proposed research and education plans and NSF programs, applicants should refer to NSF's *Guide to Programs* (NSF 99-4). Applicants with questions about intellectual areas of support, discipline eligibility, or individual eligibility should contact the appropriate NSF program listed in Appendix A of the *Grant Proposal Guide (GPG)* (NSF 99-2). Proposals that NSF determines to span more than one NSF program will be co-reviewed by the relevant programs.

Before preparing a CAREER proposal, applicants are **strongly** encouraged to refer to the **CAREER "Frequently Asked Questions (FAQ)" document (CAREER-FAQ), available on the CAREER Web page.** This document gives important information about disciplinary award ranges or standard award sizes for CAREER awards, as well as about CAREER supplement opportunities and requirements.

Applicants from states involved in the Experimental Program to Stimulate Competitive Research (EPSCoR) should refer to the *EPSCoR Program Solicitation* (NSF 98-12) and the instructions found on the EPSCoR Program Web page at <http://www.ehr.nsf.gov/EHR/EPSCOR/report/cofund.htm>. For a list of EPSCoR states, see the *EPSCoR Program Solicitation*, the *NSF Guide to Programs*, or the CAREER-FAQ.

Applicants to Polar Programs should refer to the *Antarctic Research Program Announcement* (NSF 99-93) or the *Arctic*

Research Program Announcement (NSF 98-72). Both of these documents are available from the Office of Polar Programs Web page. (From the NSF home page <www.nsf.gov>, select “Polar Research,” then “Office of Polar Programs.”)

Proposals submitted to the Division of Research, Evaluation and Communication (REC) in the Directorate for Education and Human Resources (EHR) must describe activities in education research and education. Refer to the CAREER award lists, available from the CAREER Web page, for information on CAREER awards funded by the REC Division. Additional information on appropriate research areas in science, mathematics, technology and engineering education can be found on the REC Division's Web page. (From the NSF home page <www.nsf.gov>, select "Education," then "REC.")

B. Collaborative Activities

Establishing collaborations with partners from other sectors, e.g., industry, national laboratories, or schools and school districts, is strongly encouraged (see item V.A.16 of these Guidelines, “Special Information and Supplementary Documentation”).

Plans for international collaborations are also encouraged. Access to unique research equipment and facilities, and the opportunity to collaborate with outstanding foreign researchers and educators, may provide substantial benefits to the research and education proposed. For additional information on the types of activities that are eligible for support in various countries, contact the Division of International Programs and refer to the document *International Opportunities for Scientists and Engineers* (NSF 96-14) available from the NSF Division of International Programs Web page. (From the NSF home page <www.nsf.gov>, select “Social, Behavioral Sciences,” “Division of International Programs,” then “Program Announcement.”)

C. Award Level and Duration

CAREER awards, including indirect costs, will range from a minimum of \$200,000 to a maximum of \$500,000 over a 4- to 5-year period. Proposal budgets should be prepared according to disciplinary practices and the scope of the project. Some NSF directorates, divisions or programs may have an award funding range or a standard award size and/or duration. Applicants are **strongly** encouraged to refer to the CAREER-FAQ document section on “Budgets and Administration of Awards” for specific information regarding award sizes. The intent of CAREER awards is to provide stable support at a sufficient level and duration to enable awardees to achieve the education and research career-development objectives of the program.

IV. SUPPLEMENTS TO CAREER AWARDS

CAREER awards are eligible for supplemental funding, as described in the *GPG*, Section VI.B.4. Cost-sharing is not required for consideration of these supplement requests.

In addition, to encourage development of partnerships, up to \$25,000 per year may be made available to match support obtained from eligible sources, such as industry, state, county or local governments, or appropriate non-profit institutions. Requests for matching support **must** include documentation to show a *genuine intellectual* involvement between the awardee and the collaborator in one of these sectors for a project that extends the integrated research and education goals of the original award. Only contributions received *after* the CAREER proposal is officially submitted are eligible for matching support. New FY-2000 CAREER awardees will have until October 1, 2000, to request their first year's matching support. The annual deadline for submission of supplement requests for each subsequent year is October 1 of that year.

The matching support may consist of cash, new permanent research equipment, educational equipment or software essential to the CAREER awardee's activities, or donations of materials for support of research and education. Contributions of services or staff support, donations of used equipment, or access to equipment or software owned by an organization are encouraged but are **not eligible** for matching. Donations where there is no collaborative effort, such as from individual philanthropists, foundations, the principal investigator's home institution, and educational and professional associations, are **not eligible** for matching.

V. PROPOSAL PREPARATION & SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

Proposals submitted in response to this program announcement should be prepared and submitted in accordance with the general guidelines contained in the *Grant Proposal Guide* (GPG), NSF 99-2. The complete text of the GPG (including electronic forms) is available electronically on the NSF Web site at: <<http://www.nsf.gov/>>. Paper copies of the GPG may be obtained from the NSF Publications Clearinghouse, telephone (301) 947-2722 or by e-mail from pubs@nsf.gov.

In addition to the GPG, CAREER proposals must be prepared in accordance with the instructions in these guidelines and those found on the FastLane Web page at: <http://www.fastlane.nsf.gov>. With the exception of the EPSCoR Certification Form and the PECASE Information Form, all of the forms referenced in these Guidelines are available electronically through FastLane. The PECASE Information Form (NSF Form 1317A), is available from the CAREER Web page (from the NSF home page <www.nsf.gov>, select "Crosscutting Programs," then "CAREER") and a working copy of the EPSCoR Certification Form (NSF Form 1404) is available from the EPSCoR Web page at <http://www.ehr.nsf.gov/EHR/EPSCOR/report/cofund.htm>. **Do not** include such additional documentation as a biographical sketch or NSF forms for any collaborator. The proposal format should follow the sequence below:

1. Information about Principal Investigator (NSF Form 1225) (**submitted via FastLane**).
2. List of suggested reviewers or reviewers not to include (**may be submitted via FastLane or with the signed cover sheet**) (see *GPG*, Section II.B.2).
3. PECASE Information Form (NSF Form 1317A) (**signed and dated, submitted with the signed cover sheet**). This form, if applicable, must be signed and dated on or before July 22, 1999, and submitted by the CAREER deadline to be eligible for consideration for PECASE. This form is available from the CAREER Web page (from the NSF home page <www.nsf.gov>, select "Crosscutting Programs," then "CAREER"). Do not scan this form into your FastLane proposal as only the original should be submitted since this form is not sent to reviewers.
4. EPSCoR Certification Form (NSF Form 1404) (if applicable, **signed, submitted with the signed cover sheet**). **The final copy must be completed and signed by the EPSCoR State Project Director** and submitted **with** the signed cover sheet. A working copy of this form is on the EPSCoR Program Web page at <http://www.ehr.nsf.gov/EHR/EPSCOR/report/cofund.htm>. Do not scan this form into your FastLane proposal as only the original should be submitted since this form is not sent to reviewers.
5. Deviation Authorization (if applicable, **may be submitted via FastLane or with the signed cover sheet**). (Refer to the *GPG*, Chapter II.A, for instructions on deviations).
6. NSF approval for exemption from CAREER eligibility requirements (if applicable, **submitted with the signed cover sheet**). (See the section on "ELIGIBILITY" in these Guidelines.) Do not scan this exemption into your FastLane proposal as only the original should be submitted since exemptions are not sent to reviewers.
7. Cover Sheet (NSF Form 1207). (**submitted via FastLane and as a signed original**). To complete the FastLane cover-sheet block "For Consideration by NSF Organizational Unit(s)," click on the "Add Org. Unit" button and select the NSF division that should consider the proposal. Then click on the "Add Org. Unit" button to select the NSF program that, in your opinion, best fits your research activities (see *GPG*, Appendix A). It is important to identify an NSF division (and if possible a disciplinary program) in this block since this information will be used to expedite the initial distribution of your proposal. NSF will make the final assignment of your proposal to a disciplinary program

Proposers are reminded to identify the program announcement number (NSF 99-110) in the program announcement/solicitation block on the NSF Form 1207, "Coversheet for Proposal to the National Science Foundation." Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.

In the field "Closing Date," enter "07/22/99." The title should begin with "CAREER:" followed by the descriptive title of the planned activities. No co-investigator can be listed. For EPSCoR-certified proposals only, write "EPSCoR" on the top-right corner of the signed original only.

8. Project Summary. (Refer to instructions in Chapter II.D.2 of the *GPG*). Include both education and research aspects of the proposal and their integration. **Do not exceed one page in length.**
9. Table of Contents (NSF Form 1359).
10. Project Description and Results from Prior NSF Support. (See *GPG*, Section II.D.4.) This section consists of (a) a description of results from prior NSF support, if applicable; (b) a Career Development Plan; and (c) departmental endorsement and certifications (required). Parts a and b must not exceed 15 pages total, including any graphical and tabular materials. Part c must be the last page and cannot exceed one page. **The entire Project Description (parts a, b, and c) must not exceed 16 single-spaced pages.**
 - a. **Results from Prior NSF Support.** (See *GPG*, Section II.D.4.)
 - b. **Career Development Plan.** This section should be a clear statement of the nature and implementation of the integrated research and education activities proposed. Plans in **both** areas should be specific and directly related to the applicant's career goals, job responsibilities, and the goals of the institution. This plan should be developed in consultation with the department head or equivalent institutional official.

Applicants are encouraged to describe a range of planned activities that include research, assigned instructional activities, and education activities that move beyond routine education and service responsibilities. Education activities can include designing new educational materials and practices, and/or adapting and implementing effective educational materials and practices developed elsewhere. A discussion of the relationship between the research and education aspects should be included as evidence of an integrated career-development plan.

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**; in fact, 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 4- or 5-year period that will build a firm foundation for a lifetime of integrated contributions to research and education.

This section should follow the standard NSF proposal format and should present:

- objectives and significance of the proposed integrated research and education activities;
- the relation of the research to the current state of knowledge in the field, and of the education activities to the current state of knowledge on effective teaching and learning in one's discipline;
- an outline of the plan of work, describing the methods and procedures to be used, including evaluation of the education activities;
- a summary of prior research and education accomplishments.

EXAMPLES OF AREAS OF EDUCATION ACTIVITIES

Proposed education activities may be in a broad range of areas. They may address curriculum, pedagogy, outreach, or mentoring at any level, including graduate and undergraduate students, majors and non-majors, teacher preparation or enhancement, K-12 students, or the general public.

Examples include, but are not limited to:

- Course or curriculum development;
- Pre-college teacher preparation and enhancement;
- Outreach and mentoring activities to enhance scientific literacy or involve students from groups that have been traditionally underrepresented in science;
- Research on pedagogy or students' learning and conceptual development in the discipline;
- Incorporating research activities into undergraduate courses;
- Linking education activities to industrial, international, or cross-disciplinary work;
- Innovative methods for evaluation and assessment of the proposed education activities.

c. **Departmental Endorsement and Certifications.** The last page of the Project Description **must** include the following three endorsement and verification statements. **To ensure that your Departmental Endorsement and Certification page is reviewed along with your proposal, you should scan it into your FastLane proposal as the back section of the project-description Portable Document Format (PDF) file.** The signed and dated original must then be submitted with your signed cover sheet by the CAREER deadline given below. **(Do not exceed one page total.)**

- A statement that describes the department's partnership and the institutional commitment to support the research and education career-development plan, **including a description of how the faculty member's Career Development Plan is supported by and is integrated into the educational goals of the department and the institution.** The support could include, but is not limited to, cost-sharing, commitments for mentoring, provision of academic-year or summer salary, released time for curriculum development or other education activities, instrumentation, laboratory facilities, research support, or graduate-student stipends;
- A statement verifying the following CAREER eligibility information: (a) that the applicant is in his/her first **or** second tenure-track appointment; (b) the official effective date of the applicant's **first** tenure-track appointment (month/day/year), and (c) the institution where the applicant's **first** tenure-track appointment began;
- A statement, "I have read and I endorse this Career Development Plan."

The applicant's department head (or equivalent institutional official) **must sign** the bottom of this page, thereby attesting to the departmental endorsement of the Career Development Plan, the Department's partnership in the applicant's career development, and the applicant's eligibility. **Below the signature, type the official's name, title, and date.**

Proposals that do not include **all** of these statements will be returned without review.

11. References Cited for **both** research and education activities of the proposal. (See *GPG*, Section II.D.5.)
12. Biographical Sketch of Principal Investigator. (See *GPG*, Section II.D.6.) Include **both** research and education activities and accomplishments. **(Limited to two pages.)**
13. Budget (NSF Form 1030) (cumulative and annual budgets, including subcontract budgets, if any, and up to 3 pages of Budget Justification). Budget requests should be submitted for NSF support totaling \$200,000 to \$500,000 and for an award duration of at least 4 but not more than 5 years. **Before preparing a budget request**, refer to the CAREER-FAQ document, under the section "Budgets and Administration of Awards," for specific information

about disciplinary award ranges or standard award sizes. No funds may be budgeted for the principal investigator's academic-year salary unless justified by a plan for a limited period of field work or other extraordinary career-development activity in research or education. No co-investigators are allowed. No salary support for other senior personnel is allowed. NSF will reimburse indirect costs at your institution's official, negotiated rate. See *GPG*, Section II.D.7.a(i), for policies regarding summer salary.

14. Current and Pending Support of Principal Investigator (NSF Form 1239).
15. Facilities, Equipment, and Other Resources (NSF Form 1363).
16. Special Information and Supplementary Documentation. Special information as specified in *GPG*, Section II.D.10, should be included, as appropriate. This includes letters of commitment to support proposed collaborations. Only letters that describe the planned collaborative effort(s) will be accepted; letters of reference or recommendation are *not* appropriate and *will not* be sent to reviewers. **To ensure that letters from your collaborators are reviewed with your proposal, you should scan them into your FastLane proposal as the back section of your project-description Portable Document Format (PDF) file.** The signed originals must then be submitted with your signed cover sheet by the CAREER deadline given below.
17. Appendices may not be included unless a deviation has been authorized, according to the procedures described in *GPG*, Section II.A.

B. Budgetary Information

Cost-Sharing Requirements:

NSF encourages organizations responding to this announcement to contribute to the costs of the project supported by NSF. While cost-sharing (beyond the statutory minimum) is not required for this program, any cost-sharing specified in the proposal will be referenced and included as a condition of any award resulting from this announcement. The proposed cost-sharing must be shown on line M on the proposal budget (NSF Form 1030.)

The amount of cost-sharing must be shown in the proposal in enough detail to allow NSF to determine its impact on the proposed project. Documentation of availability of cost-sharing must be included in the proposal.

Only items which would be allowable under the applicable cost principles, if charged to the project, may be included as the grantee's contribution to cost sharing. Contributions may be made from any non-Federal source, including non-Federal grants or contracts, and may be cash or in-kind (see OMB Circular A-110, Section 23). It should be noted that contributions counted as cost-sharing toward projects of another Federal agency may not be counted towards cost-sharing on an NSF grant.

All cost-sharing amounts are subject to audit. Failure to provide the level of cost-sharing reflected in the approved grant budget may result in termination of the NSF grant, disallowance of grant costs and/or refund of grant funds to NSF.

C. Proposal Due Dates

The full proposal must be submitted using FastLane by 5:00 p.m., submitter's local time, July 22, 1999. The signed cover sheet and original documents (as identified below) must be received by the NSF FastLane office by 5:00 p.m. Eastern Time on July 29, 1999 (within one week of the CAREER proposal-submission deadline) at the following address:

National Science Foundation
DIS—FastLane Cover Sheet
CAREER: NSF 99-110
4201 Wilson Boulevard
Arlington, VA 22230

After you have submitted your electronic (FastLane) proposal, the **original only** of the following paper documents and forms **must be received** by 5:00 p.m. Eastern Time on **July 29, 1999**: the original signed cover sheet (pages 1 and 2) **and** any single-copy or signed additional forms and documents (if applicable), such as the Departmental Endorsement and Certifications; the PECASE Information Form (NSF Form 1317A); the EPSCoR Certification Form (NSF Form 1404); any deviation authorization (if it was not submitted through FastLane); an NSF approval for exemption from CAREER eligibility requirements; a list of suggested reviewers to include or not to include (if it was not submitted in FastLane); and any original letters describing collaborative efforts. **Do not** send these documents to the NSF PPU. As directed above, they should be sent to the FastLane office.

A proposal may not be processed until the complete proposal (including the signed Cover Sheet) has been received by NSF. Any CAREER proposal received after the deadline will be returned without review.

D. FastLane Requirements

The NSF FastLane system is available for electronic preparation and submission of a proposal through the Web at the FastLane Web site at <<http://www.fastlane.nsf.gov>>. The Sponsored Research Office (SRO or equivalent) must provide a FastLane Personal Identification Number (PIN) to each Principal Investigator (PI) to gain access to the FastLane "Proposal Preparation" application. PIs that have not submitted a proposal to NSF in the past must contact their SRO to be added to the NSF PI database. This should be done as soon as the decision to prepare a proposal is made.

In order to use NSF FastLane to prepare and submit a proposal, the following are required:

Browser (must support multiple buttons and file upload)

- Netscape 3.0 or greater
- Microsoft Internet Explorer 4.01 or greater

PDF Reader (needed to view/print forms)

- Adobe Reader 3.0 or greater

PDF Generator (needed to create project description)

- Adobe Acrobat 3.X
- Aladdin Ghostscript 5.10 or greater

A list of registered institutions and the FastLane registration form are located on the FastLane Web page.

VI. PROPOSAL REVIEW INFORMATION

A. Merit Review Criteria

Reviews of proposals submitted to NSF are solicited from peers with expertise in the substantive area of the proposed research or education project. These reviewers are selected by Program officers charged with the oversight of the review process. NSF invites the proposer to suggest, at the time of submission, the names of appropriate or inappropriate reviewers. Care is taken to ensure that reviewers have no conflicts with the proposer. Special efforts are made to recruit reviewers from non-academic institutions, minority serving institutions, adjacent disciplines to that principally addressed in the proposal, etc.

Proposals will be reviewed against the following general merit review criteria established by the National Science Board. Following each criterion are potential considerations that the reviewer may employ in the evaluation. These are suggestions and not all will apply to any given proposal. Each reviewer will be asked to address only those that are relevant to the proposal and for which he/she is qualified to make judgments.

What is the intellectual merit of the proposed activity?

How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields? How well qualified is the proposer (individual or team) to conduct the project? (If appropriate, the reviewer will comment on the quality of prior work.) To what extent does the proposed activity suggest and explore creative and original concepts? How well conceived and organized is the proposed activity? Is there sufficient access to resources?

What are the broader impacts of the proposed activity?

How well does the activity advance discovery and understanding while promoting teaching, training, and learning? How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)? To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships? Will the results be disseminated broadly to enhance scientific and technological understanding? What may be the benefits of the proposed activity to society?

Integration of Research and Education

One of the principal strategies in support of NSF's goals is to foster integration of research and education through the programs, projects and activities it supports at academic and research institutions. These institutions provide abundant opportunities where individuals may concurrently assume responsibilities as researchers, educators, and students and where all can engage in joint efforts that infuse education with the excitement of discovery and enrich research through the diversity of learner perspectives. PIs should address this issue in their proposal to provide reviewers with the information necessary to respond fully to both NSF merit review criteria. NSF staff will give it careful consideration in making funding decisions.

Integrating Diversity into NSF Programs, Projects, and Activities

Broadening opportunities and enabling the participation of all citizens -- women and men, underrepresented minorities, and persons with disabilities -- are essential to the health and vitality of science and engineering. NSF is committed to this principle of diversity and deems it central to the programs, projects, and activities it considers and supports. PIs should address this issue in their proposal to provide reviewers with the information necessary to respond fully to both NSF merit review criteria. NSF staff will give it careful consideration in making funding decisions.

Because of the CAREER Program's focus on balanced academic career development, the second merit-review criterion, "*What are the broader impacts of the proposed activity?*" will receive significant attention.

B. Merit Review Process

Most of the proposals submitted to NSF are reviewed by mail review, panel review, or some combination of mail and panel review. Merit evaluation of CAREER proposals will be carried out in the research directorates and divisions through mail review, panel review, or a combination of the two. A CAREER proposal will compete with other proposals from CAREER-eligible faculty in the same discipline.

All proposals are carefully reviewed by at least three other persons outside NSF who are experts in the particular field represented by the proposal. Reviewers will be asked to formulate a recommendation to either support or decline each proposal. A program officer assigned to manage the proposal's review will consider the advice of reviewers and will formulate a recommendation. In most cases, proposers will be contacted by the program officer after his or her recommendation to award or decline funding has been approved by his or her supervisor, the division director. This informal notification is not a guarantee of an eventual award. NSF will be able to tell applicants whether their proposals have been declined or recommended for funding within six months for 95 percent of proposals in this category. The time interval begins on the proposal deadline or target date or from the date of receipt, if deadlines or target dates are not used by the program. The interval ends when the division director accepts the program officer's recommendation.

Since CAREER proposals are reviewed by different panels and/or mail reviews held at different times across NSF, award and declination letters will be issued at different times. You can check the status of your CAREER proposal by accessing FastLane. If you have not received notification of a decision on your CAREER proposal by the beginning of February 2000, and your proposal status is shown as "pending" in FastLane, you can contact the program or division to which your proposal was assigned to inquire about the status. Your proposal's NSF program assignment can be found through FastLane or on the acknowledgment card that will be sent to you when your proposal is received by the NSF program.

In all cases, after final programmatic approval has been obtained, award recommendations are then forwarded to the Division of Grants and Agreements for review of business, financial and policy implications and the processing and issuance of a grant or other agreement. Proposers are cautioned that only a Grants Officer may make commitments, obligations or awards on behalf of NSF or authorize the expenditure of funds. No commitment on the part of NSF should be inferred from technical or budgetary discussions with an NSF program officer. A Principal Investigator or organization that makes financial or personnel commitments in the absence of a grant or cooperative agreement signed by the NSF Grants Officer does so at its own risk.

VII. AWARD ADMINISTRATION INFORMATION

A. Notification of the Award

Notification of the award is made *to the submitting organization* by a Grants Officer in the Division of Grants and Agreements (DGA). Organizations whose proposals are declined will be advised as promptly as possible by the cognizant NSF Program Division administering the program. Verbatim copies of reviews, not including the identity of the reviewer, will be provided automatically to the Principal Investigator.

B. Grant Award Conditions

An NSF grant consists of: (1) the award letter, which includes any special provisions applicable to the grant and any numbered amendments thereto; (2) the budget, which indicates the amounts, by categories of expense, on which NSF has based its support (or otherwise communicates any specific approvals or disapprovals of proposed expenditures); (3) the proposal referenced in the award letter; (4) the applicable grant conditions, such as Grant General Conditions (NSF GC-1)* or Federal Demonstration Partnership Phase III (FDP) Terms and Conditions* and (5) any NSF brochure, program guide, announcement or other NSF issuance that may be incorporated by reference in the award letter. Electronic mail notification is the preferred way to transmit NSF grants to organizations that have electronic mail capabilities and have requested such notification from the Division of Grants and Agreements.

* These documents may be accessed electronically on NSF's Web site at: <<http://www.nsf.gov/>>. Paper copies may be obtained from the NSF Publications Clearinghouse, telephone (301) 947-2722 or by e-mail from pubs@nsf.gov.

More comprehensive information on NSF Award Conditions is contained in the NSF *Grant Policy Manual* (GPM) Chapter II, (NSF 95-26) available electronically on the NSF Web site. The GPM also is available in paper copy by subscription from the Superintendent of Documents, Government Printing Office, Washington, DC 20402. The GPM may be ordered through the GPO Web site at: <<http://www.gpo.gov/>>.

C. Reporting Requirements

For all multi-year grants (including both standard and continuing grants), the PI must submit an annual project report to the cognizant Program Officer at least 90 days before the end of the current budget period.

Within 90 days after expiration of a grant, the PI also is required to submit a final project report. Approximately 30 days before expiration, NSF will send a notice to remind the PI of the requirement to file the final project report. Failure to provide final technical reports delays NSF review and processing of pending proposals for that PI. PIs should examine the formats of the required reports in advance to assure availability of required data.

NSF has implemented a new electronic project reporting system, available through FastLane, which permits electronic submission and updating of project reports, including information on: project participants (individual and organizational); activities and findings; publications; and, other specific products and contributions. Reports will continue to be required annually and after the expiration of the grant, but PIs will not need to re-enter information previously provided, either with the proposal or in earlier updates using the electronic system.

Effective October 1, 1998, PIs are required to use the new reporting format for annual and final project reports. PIs are strongly encouraged to submit reports electronically via FastLane. For those PIs who cannot access FastLane, paper copies of the new report formats may be obtained from the NSF Clearinghouse as specified above. NSF expects to require electronic submission of all annual and final project reports via FastLane beginning in October, 1999. Specific instructions for CAREER project report submission can be found at <http://www.nsf.gov/home/crssprgm/career/guide.htm>.

Questions about annual reports should be directed to the assigned disciplinary program director. Annual progress reports should summarize progress in **both** research and education development and, where appropriate, collaborative activities. The report should also include an update of other support. **The report must be approved by the awardee's department head or equivalent, thereby reaffirming the department's endorsement of the work plan and continuing partnership in the individual's career development.** In addition to providing information for NSF staff review and monitoring of the career-development progress of individual awardees, this information will be used in program evaluation and assessment. Supplementary information for this purpose may be requested from time to time.

D. New Awardee Information

If the submitting organization has never received an NSF award, it is recommended that the organization's appropriate administrative officials become familiar with the policies and procedures in the NSF *Grant Policy Manual* which are applicable to most NSF awards. The "Prospective New Awardee Guide" (NSF 97-100) includes information on: Administration and Management Information; Accounting System Requirements and Auditing Information; and Payments to Organizations with Awards. This information will assist an organization in preparing documents that NSF requires to conduct administrative and financial reviews of an organization. The guide also serves as a means of highlighting the accountability requirements associated with Federal awards. This document is available electronically on NSF's Web site at: <<http://www.nsf.gov/cgi-bin/getpub?nsf97100>>.

VIII. CAREER GRANT CONDITIONS

CAREER awardees must resign their CAREER awards if they transfer at any time prior to or during the tenure of that award to positions that are not tenured, tenure-track or equivalent *or* to institutions that are not CAREER-eligible. Before transferring a CAREER award, NSF may request documentation from the PI's new institution and department head in support of the career goals and departmental partnership as proposed in the original Career Development Plan. CAREER awardees from EPSCoR jurisdictions should consult the *EPSCoR Program Solicitation* (NSF 98-12) about non-transferability of EPSCoR co-funding.

IX. CONTACTS FOR ADDITIONAL INFORMATION

General questions about the CAREER or PECASE program may be directed to directorate or division contacts listed on the CAREER Web page. Specific questions about proposal development, appropriate disciplinary funding levels, and supplement opportunities and requirements should be directed to the appropriate disciplinary program. See *GPG*, Appendix A, for a list of programs, and use that list in completing the proposal cover sheet. Information about directorates, divisions, and programs is available from NSF's *Guide to Programs* (NSF 99-4).

After you receive an acknowledgment of receipt of your proposal, if you wish to discuss the program assignment, please contact the assigned disciplinary program director indicated on the acknowledgment card. If you do not receive an acknowledgment card by September 15, 1999, notify the CAREER contact listed on the CAREER Web page. Once your proposal is assigned to an NSF program, all communications about your proposal should be directed to the assigned disciplinary program director, with reference to the proposal number.

X. OTHER PROGRAMS OF INTEREST

The NSF *Guide to Programs* is a compilation of funding opportunities for research and education in science, mathematics, and engineering. General descriptions of NSF programs, research areas, and eligibility information for proposal submission are provided in each chapter. Beginning in fiscal year 1999, the NSF *Guide to Programs* will be available only electronically, at <<http://www.nsf.gov/cgi-bin/getpub?gp>>. Many NSF programs offer announcements concerning specific proposal requirements. To obtain additional information about these requirements, contact the appropriate NSF program offices listed in Appendix A of the GPG.

Any changes in NSF's fiscal year programs occurring after press time for the Guide to Programs will be announced in the NSF E-Bulletin, available electronically on the NSF Web site at: <<http://www.nsf.gov/home/ebulletin/>>. The direct URL for recent issues of the Bulletin is <<http://www.nsf.gov/home/ebulletin/past.htm>>. Subscribers can also sign up for NSF's Custom News Service to find out what funding opportunities are available.

ABOUT THE NATIONAL SCIENCE FOUNDATION

The National Science Foundation (NSF) funds research and education in most fields of science and engineering. Grantees are wholly responsible for conducting their project activities and preparing the results for publication. Thus, the Foundation does not assume responsibility for such findings or their interpretation.

NSF welcomes proposals from all qualified scientists, engineers and educators. The Foundation strongly encourages women, minorities, and persons with disabilities to compete fully in its programs. In accordance with federal statutes, regulations, and NSF policies, no person on grounds of race, color, age, sex, national origin, or disability shall be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving financial assistance from NSF (unless otherwise specified in the eligibility requirements for a particular program).

Facilitation Awards for Scientists and Engineers with Disabilities (FASSED) provide funding for special assistance or equipment to enable persons with disabilities (investigators and other staff, including student research assistants) to work on NSF projects. See the program announcement or contact the program coordinator at (703) 306-1636.

The National Science Foundation has Telephonic Device for the Deaf (TDD) and Federal Information Relay Service (FIRS) capabilities that enable individuals with hearing impairments to communicate with the Foundation regarding NSF programs, employment, or general information. To access NSF TDD, dial (703) 306-0090; for FIRS, 1-800-877-8339.

Privacy Act and Public Burden Statements

The information requested on proposal forms and project reports is solicited under the authority of the National Science Foundation Act of 1950, as amended. The information on proposal forms will be used in connection with the selection of qualified proposals; project reports submitted by awardees will be used for program evaluation and reporting within the Executive Branch and to Congress. The information requested may be disclosed to qualified reviewers and staff assistants as part of the review process; to applicant institutions/grantees to provide or obtain data regarding the proposal review process, award decisions, or the administration of awards; to government contractors, experts, volunteers and researchers and educators as necessary to complete assigned work; to other government agencies needing information as part of the review process or in order to coordinate programs; and to another Federal agency, court or party in a court or Federal administrative proceeding if the government is a party. Information about Principal Investigators may be added to the Reviewer file and used to select potential candidates to serve as peer reviewers or advisory committee members. See Systems of Records, NSF-50, "Principal Investigator/Proposal File and Associated Records," 63 Federal Register 267 (January 5, 1998), and NSF-51, "Reviewer/Proposal File and Associated Records," 63 Federal Register 268 (January 5, 1998). Submission of the information is voluntary. Failure to provide full and complete information, however, may reduce the possibility of receiving an award.

Public reporting burden for this collection of information is estimated to average 120 hours per response, including the time for reviewing instructions. Send comments regarding this burden estimate and any other aspect of this collection of information, including suggestions for reducing this burden, to: Reports Clearance Officer; Information Dissemination Branch, Division of Administrative Services; National Science Foundation; Arlington, VA 22230.

Year 2000 Reminder

In accordance with Important Notice No. 120 dated June 27, 1997, Subject: Year 2000 Computer Problem, NSF awardees are reminded of their responsibility to take appropriate actions to ensure that the NSF activity being supported is not adversely affected by the Year 2000 problem. Potentially affected items include: computer systems, databases, and equipment. The National Science Foundation should be notified if an awardee concludes that the Year 2000 will have a significant impact on its ability to carry out an NSF funded activity. Information concerning Year 2000 activities can be found on the NSF web site at <http://www.nsf.gov/oirm/y2k/start.htm> .

The National Science Foundation is committed to making all of the information we publish easy to understand. If you have a suggestion about how to improve the clarity of this document or other NSF-published materials, please contact us at plainlanguage@nsf.gov.

Activities described in this publication are in the Catalog of Federal Domestic Assistance Number 47.041, Engineering; 47.049, Mathematical and Physical Sciences; 47.050, Geosciences; 47.070, Computer and Information Science and Engineering; 47.074, Biological Sciences; 47.075, Social, Behavioral and Economic Sciences; 47.076, Education and Human Resources; 47.078, Polar Programs.

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Electronic Dissemination Only