SBE Doctoral Dissertation Research Improvement Grants (SBE DDRIG)

PROGRAM SOLICITATION
NSF 11-547

REPLACES DOCUMENT(S):
NSF 06-605

National Science Foundation
Directorate for Social, Behavioral & Economic Sciences
Division of Behavioral and Cognitive Sciences
Division of Social and Economic Sciences
National Center for Science and Engineering Statistics
SBE Office of Multidisciplinary Activities

Full Proposal Deadline(s) (due by 5 p.m. proposer's local time):
August 16, 2011
August 16, Annually Thereafter
Physical Anthropology
September 15, 2011
September 15, Annually Thereafter
Documenting Endangered Languages
September 16, 2011
September 16, Annually Thereafter
Political Science
October 15, 2011
October 15, Annually Thereafter
Geography and Spatial Sciences
January 15, 2012
January 15, Annually Thereafter
Political Science
January 30, 2012
Methodology, Measurement, and Statistics
February 01, 2012
February 1, Annually Thereafter
Science, Technology, and Society
February 09, 2012
February 9, Annually Thereafter
Biological Anthropology
February 15, 2012
February 15, Annually Thereafter
Geography and Spatial Sciences
August 01, 2012
August 1, Annually Thereafter
Science, Technology, and Society
August 16, 2012
Biological Anthropology
October 11, 2012
Second Thursday in October, Annually Thereafter
  Geography and Spatial Sciences
February 14, 2013
Second Thursday in February, Annually Thereafter
  Geography and Spatial Sciences
April 05, 2013
  Biological Anthropology
November 15, 2013
  Biological Anthropology
July 15, 2014
  Biological Anthropology
March 16, 2015
  Biological Anthropology

**Full Proposal Target Date(s):**
August 15, 2011
  Law and Social Sciences
August 15, 2011
August 15, Annually Thereafter
  Cultural Anthropology
August 16, 2011
  Linguistics
August 16, 2011
August 16, Annually Thereafter
  Methodology, Measurement, and Statistics
August 18, 2011
August 18, Annually Thereafter
  Economics
August 18, 2011
August 18, Annually Thereafter
  Decision, Risk and Management Sciences
September 09, 2011
September 9, Annually Thereafter
  Science of Science and Innovation Policy
October 15, 2011
October 15, Annually Thereafter
  Sociology
January 15, 2012
January 15, Annually Thereafter
  Research on Science and Technology Surveys and Statistics
January 15, 2012
January 15, Annually Thereafter
  Cultural Anthropology
January 15, 2012
January 15, Annually Thereafter
  Law and Social Sciences
January 15, 2012
IMPORTANT INFORMATION AND REVISION NOTES

A revised version of the NSF Proposal & Award Policies & Procedures Guide (PAPPG), NSF 13-1, was issued on October 4, 2012 and is effective for proposals submitted, or due, on or after January 14, 2013. Please be advised that the guidelines contained in NSF 13-1 apply to proposals submitted in response to this funding opportunity.

Please be aware that significant changes have been made to the PAPPG to implement revised merit review criteria based on the National Science Board (NSB) report, National Science Foundation’s Merit Review Criteria: Review and Revisions. While the two merit review criteria remain unchanged (Intellectual Merit and Broader Impacts), guidance has been provided to clarify and improve the function of the criteria. Changes will affect the project summary and project description sections of proposals. Annual and final reports also will be affected.

A by-chapter summary of this and other significant changes is provided at the beginning of both the Grant Proposal Guide and the Award & Administration Guide.

Please note that this program solicitation may contain supplemental proposal preparation guidance and/or guidance that deviates from the guidelines established in the Grant Proposal Guide.

Political Science Proposal Due Date Modification: Because of uncertainty about the NSF budget for fiscal year 2014, the Political Science program will not have target dates in September, 2013 (for Doctoral Dissertation Research Improvement Grants), but will maintain its January, 2014 target date. Proposals will still be accepted at any time. Reviews of proposals received by the January, 2014 target date will be completed during the spring of 2014.

Indirect Costs: Please note an important change to the treatment of indirect costs that was incorporated into the SBE Doctoral Dissertation Research Improvement Grants (SBE DDRIG) program solicitation (NSF 11-547). NSF’s long-standing policy regarding the reimbursement of administrative costs is full reimbursement of indirect costs, based on the awardee’s current Federally negotiated indirect cost rate agreement. To ensure consistency with Foundation and Federal-wide policies, proposals submitted in response to this program solicitation are subject to the awardee’s current Federally negotiated indirect cost rate.

Summary of General Revisions: This solicitation was revised to include the Documenting Endangered Languages (DEL) Program as a participant of the SBE DDRIG program and to change the organization name, Division of Science Resources Statistics (SRS), to its new name of National Center for Science and Engineering Statistics (NCSES).

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:
Synopsis of Program:

The National Science Foundation's Division of Behavioral and Cognitive Sciences (BCS), Division of Social and Economic Sciences (SES), National Center for Science and Engineering Statistics (NCSES), and the SBE Office of Multidisciplinary Activities (SMA) award grants to doctoral students to improve the quality of dissertation research. These grants provide funds for items not normally available through the student's university. Additionally, these grants allow doctoral students to undertake significant data-gathering projects and to conduct field research in settings away from their campus that would not otherwise be possible. Proposals are judged on the basis of their scientific merit, including the theoretical importance of the research question and the appropriateness of the proposed data and methodology to be used in addressing the question.

In an effort to improve the quality of dissertation research, many programs in both BCS and SES, the Research on Science and Technology Surveys and Statistics program within NCSES, and the Science of Science and Innovation Policy program in SMA accept doctoral dissertation improvement grant proposals. Requirements vary across programs, so proposers are advised to consult the relevant program's webpage for specific information and contact the program director if necessary.

The following Programs support dissertation research:

**Division of Behavioral and Cognitive Sciences (BCS)**
- Archaeology
- Cultural Anthropology
- Documenting Endangered Languages
- Geography and Spatial Sciences
- Linguistics
- Biological Anthropology

**Division of Social and Economic Sciences (SES)**
- Decision, Risk and Management Sciences
- Economics
- Law and Social Science
- Methodology, Measurement, and Statistics
- Political Science
- Science, Technology, and Society
- Sociology

**National Center for Science and Engineering Statistics (NCSES)**
- Research on Science and Technology Surveys and Statistics program within NCSES, and the Science of Science and Innovation Policy program

For a list of cognizant program officers for the programs listed above, please visit the SBE Doctoral Dissertation Contact List.

**Applicable Catalog of Federal Domestic Assistance (CFDA) Number(s):**

- 47.075 --- Social Behavioral and Economic Sciences

**Award Information**

**Anticipated Type of Award:** Standard Grant

**Estimated Number of Awards:** 200 to 300 annually for the entire SBE Directorate

**Anticipated Funding Amount:** $2,500,000 annually across all programs, contingent upon the availability of funds

**Eligibility Information**

**Organization Limit:**

Proposals may only be submitted by the following:

- The student must be enrolled at a U.S. academic institution, but need not be a U.S. citizen. Proposals from women, minorities, and persons with disabilities are strongly encouraged.

**PI Limit:**

The proposal must be submitted by the dissertation advisor(s) on behalf of the graduate student who is at the
Proposal Preparation and Submission Instructions

A. Proposal Preparation Instructions

- **Letters of Intent**: Not Applicable
- **Preliminary Proposal Submission**: Not Applicable
- **Full Proposals**:  

B. Budgetary Information

- **Cost Sharing Requirements**: Inclusion of voluntary committed cost sharing is prohibited.
- **Indirect Cost (F&A) Limitations**: Not Applicable
- **Other Budgetary Limitations**: Other budgetary limitations apply. Please see the full text of this solicitation for further information.

C. Due Dates

- **Full Proposal Deadline(s) (due by 5 p.m. proposer's local time)**:
  - August 16, 2011
  - August 16, Annually Thereafter
  - Physical Anthropology
  - September 15, 2011
  - September 15, Annually Thereafter
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October 15, 2011
October 15, Annually Thereafter
Sociology
January 15, 2012
January 15, Annually Thereafter
Full Proposal Deadline(s) (due by 5 p.m. proposer's local time):

Proposals Accepted Anytime  
Archeology

Proposal Review Information Criteria

Merit Review Criteria: National Science Board approved criteria. Additional merit review considerations apply. Please see the full text of this solicitation for further information.

Award Administration Information

Award Conditions: Standard NSF award conditions apply.
Reporting Requirements: Standard NSF reporting requirements apply.

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   A. Proposal Preparation Instructions
I. INTRODUCTION

The National Science Foundation’s Division of Behavioral and Cognitive Sciences (BCS), Division of Social and Economic Sciences (SES), the SBE Office of Multidisciplinary Activities (SMA) and the National Center for Science and Engineering Statistics (NCSES) award grants to doctoral students to improve the quality of dissertation research. These grants provide funds for items not normally available through the student's university. Additionally, these grants allow doctoral students to undertake significant data-gathering projects and to conduct field and archival research in settings away from their campus that would not otherwise be possible. Funds may be used for valid research expenses which include, but are not limited to, conducting field research in settings away from campus that would not otherwise be possible, data collection and sample survey costs, payments to subjects or informants, specialized research equipment, analysis and services not otherwise available, supplies, travel to archives, travel to specialized collections and facilities or field research locations, and partial living expenses for conducting necessary research away from the student's U.S. academic institution.

II. PROGRAM DESCRIPTION

SBE Doctoral Dissertation Research Improvement Grants provide supplemental funds for items not usually available from the student's U.S. academic institution. The awards are not intended to provide the full costs of a student's doctoral dissertation research. Funds may be used for valid research expenses which include, but are not limited to, conducting field research in settings away from campus that would not otherwise be possible, data collection and sample survey costs, payments to subjects or informants, specialized research equipment, analysis and services not otherwise available, supplies, travel to archives, travel to specialized collections and facilities or field research locations, and partial living expenses for conducting necessary research away from the student's U.S. academic institution.

While the Foundation provides support for doctoral dissertation research, the student (Co-PI) is solely responsible for the conduct of such research and preparation of results for publication. The Foundation, therefore, does not assume responsibility for such findings and their interpretation. This program does not support research with disease-related goals, including research on the etiology, diagnosis, or treatment of physical or mental disease, abnormality, or malfunction of human beings, animals or plants.

III. AWARD INFORMATION

Estimated program budget, number of awards and average award size/duration are subject to the availability of funds.

Due to the variation in research techniques and needs across the social, behavioral, and economic sciences, individual programs vary widely in award sizes; please consult the program’s webpage or program director for specific information. Proposer may concurrently submit a doctoral dissertation proposal to other funding organizations; please indicate this in the "Current and Pending Support" section of the NSF proposal, so that NSF may coordinate funding with the other organizations.

IV. ELIGIBILITY INFORMATION

**Organizations Limit:**

Proposals may only be submitted by the following:

- The student must be enrolled at a U.S. academic institution, but need not be a U.S. citizen. Proposals from women, minorities, and persons with disabilities are strongly encouraged.

**PI Limit:**

The proposal must be submitted by the dissertation advisor(s) on behalf of the graduate student who is at the point of initiating or already conducting dissertation research.

**Limit on Number of Proposals per Organization:**

None Specified
V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

Full Proposal Preparation Instructions: Proposers may opt to submit proposals in response to this Program Solicitation via Grants.gov or via the NSF FastLane system.

- Full proposals submitted via FastLane: Proposals submitted in response to this program solicitation should be prepared and submitted in accordance with the general guidelines contained in the NSF Grant Proposal Guide (GPG). The complete text of the GPG is available electronically on the NSF website at: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg. Paper copies of the GPG may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from nsfpubs@nsf.gov. Proposers are reminded to identify this program solicitation number in the program solicitation block on the NSF Cover Sheet 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.

- Full proposals submitted via Grants.gov: Proposals submitted in response to this program solicitation via Grants.gov should be prepared and submitted in accordance with the NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov. The complete text of the NSF Grants.gov Application Guide is available on the Grants.gov website and on the NSF website at: (http://www.nsf.gov/publications/pub_summ.jsp?ods_key=grantsgovguide). To obtain copies of the Application Guide and Application Forms Package, click on the Apply tab on the Grants.gov site, then click on the Apply Step 1: Download a Grant Application Package and Application Instructions link and enter the funding opportunity number, (the program solicitation number without the NSF prefix) and press the Download Package button. Paper copies of the Grants.gov Application Guide also may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from nsfpubs@nsf.gov.

Important Proposal Preparation Information: FastLane will check for required sections of the proposal, in accordance with Grant Proposal Guide (GPG) instructions described in Chapter II.C.2. The GPG requires submission of: Project Summary; Project Description; References Cited; Biographical Sketch(es); Budget; Budget Justification; Current and Pending Support; Facilities, Equipment & Other Resources; Data Management Plan; and Postdoctoral Mentoring Plan, if applicable. If a required section is missing, FastLane will not accept the proposal.

Please note that the proposal preparation instructions provided in this program solicitation may deviate from the GPG instructions. If the solicitation instructions do not require a GPG-required section to be included in the proposal, insert text or upload a document in that section of the proposal that states, "Not Applicable for this Program Solicitation." Doing so will enable FastLane to accept your proposal.

In addition to the GPG guidelines, specific instructions for SBE Doctoral Dissertation Improvement Grants are:

1. Cover Page
   - The Project Title should begin with "Doctoral Dissertation Research:"
   - List the primary dissertation advisor as the "PI/PD" and the student as the "CO-PI/PD."
   - Mark human subjects as pending, approved, or exempted.

2. Project Summary
   - This section 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.

3. Project Description
   - This section should describe the scientific significance of the work, including its relationship to other current research, and the design of the project in sufficient detail to permit evaluation. It should also present and interpret progress to date if the research is already underway.
   - A Research Schedule should be included and should indicate the date that funds are required. The "Results from Prior NSF Support" section is not required.
   - Some programs limit dissertation research proposals to 10 pages, others limit them to 15 pages. For questions regarding page-length and supplemental materials such as surveys, please consult the relevant program's website and contact the NSF program assistant or program director if necessary.

*Please note that per guidance in the GPG, the Project Description must contain, as a separate section within the narrative, a discussion of the broader impacts of the proposed activities. You can decide where to include this section within the Project Description.*

4. References Cited
   - Only references cited should be included.

5. Biographical Sketches
   - Should be submitted for both the student and the dissertation advisor and should not exceed 2 pages each. Some programs require a statement of the student's current academic status and degree progress.
   - Do not submit transcripts or letters of reference.

6. Budget
   - Total of relevant travel expenses should be included in Domestic Travel (including Canada, Mexico, and U.S. possessions) and/or Foreign Travel.
All other expenses should be included in "Other Direct Costs," unless otherwise specified by the program.
- There are no salaries or stipends for the graduate student or the advisor; please check relevant program for maximum allowed costs for dissertation expenses.

7. Current and pending support forms should be submitted for both the PI (advisor) and Co-PI (student).

8. Facilities, Equipment & Other Resources - follow guidance in the GPG.

9. Supplementary Documentation

The following should be uploaded as "Supplementary Documents":
- A statement from the department chair or the advisor certifying the student's progress towards the degree (completion of course work, advancement to candidacy, etc.) may be required. Please consult the relevant program.
- If the doctoral student will use the award for travel expenses to work with a specialist, then a letter from the specialist agreeing to work with the student should be included. The proposal should provide justification for this choice.
- A Data Management Plan (DMP) is now required for all research proposals and proposals that do not include one will not be able to be submitted. See the "Important Information and Revision Notes" section of this solicitation for additional information concerning DMPs.

B. Budgetary Information

Cost Sharing: inclusion of voluntary committed cost sharing is prohibited

Other Budgetary Limitations:
- In general, grants are awarded for up to 24 months.
- Funds are to be used exclusively for necessary expenses incurred in the actual conduct of the dissertation research.
- These funds may not be used as a stipend for the student, for tuition, textbooks, notebooks, journals, or for the typing, reproduction, or publication costs of the student's dissertation.
- Although stipends are not permitted, an allowance for expenses during time away from the student's U.S. academic institution may be allowed.
- Funds may be requested for research assistants only in special circumstances, which should be carefully justified. Many of the limitations are program specific.
- Please consult the relevant program's website and contact the program assistant or program director if necessary.

C. Due Dates

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  January 15, 2012
D. FastLane/Grants.gov Requirements

- **For Proposals Submitted Via FastLane:**

  Detailed technical instructions regarding the technical aspects of preparation and submission via FastLane are available at: [https://www.fastlane.nsf.gov/a1/newstan.htm](https://www.fastlane.nsf.gov/a1/newstan.htm). For FastLane user support, call the FastLane Help Desk at 1-800-673-6188 or e-mail fastlane@nsf.gov. The FastLane Help Desk answers general technical questions related to the use of the FastLane system. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this funding opportunity.

  **Submission of Electronically Signed Cover Sheets.** The Authorized Organizational Representative (AOR) must electronically sign the proposal Cover Sheet to submit the required proposal certifications (see Chapter II, Section C of the Grant Proposal Guide for a listing of the certifications). The AOR must provide the required electronic certifications within five working days following the electronic submission of the proposal. Further instructions regarding this process are available on the FastLane Website at: [https://www.fastlane.nsf.gov/fastlane.jsp](https://www.fastlane.nsf.gov/fastlane.jsp).

- **For Proposals Submitted Via Grants.gov:**

  Before using Grants.gov for the first time, each organization must register to create an institutional profile. Once registered, the applicant's organization can then apply for any federal grant on the Grants.gov website. Comprehensive information about using Grants.gov is available on the Grants.gov Applicant Resources webpage: [http://www07.grants.gov/applicants/app_help_reso.jsp](http://www07.grants.gov/applicants/app_help_reso.jsp). In addition, the NSF Grants.gov Application Guide provides additional technical guidance regarding preparation of proposals via Grants.gov. For Grants.gov user support, contact the Grants.gov Contact Center at 1-800-518-4726 or by email: support@grants.gov. The Grants.gov Contact Center answers general technical questions related to the use of Grants.gov. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this solicitation.

  **Submitting the Proposal:** Once all documents have been completed, the Authorized Organizational Representative (AOR) must submit the application to Grants.gov and verify the desired funding opportunity and agency to which the application is submitted. The AOR must then sign and submit the application to Grants.gov. The completed application will be transferred
VI. NSF PROPOSAL PROCESSING AND REVIEW PROCEDURES

Proposals received by NSF are assigned to the appropriate NSF program for acknowledgement and, if they meet NSF requirements, for review. All proposals are carefully reviewed by a scientist, engineer, or educator serving as an NSF Program Officer, and usually by three to ten other persons outside NSF either as ad hoc reviewers, panelists, or both, who are experts in the particular fields represented by the proposal. These reviewers are selected by Program Officers charged with oversight of the review process. Proposers are invited to suggest names of persons they believe are especially well qualified to review the proposal and/or persons they would prefer not review the proposal. These suggestions may serve as one source in the reviewer selection process at the Program Officer’s discretion. Submission of such names, however, is optional. Care is taken to ensure that reviewers have no conflicts of interest with the proposal. In addition, Program Officers may obtain comments from site visits before recommending final action on proposals. Senior NSF staff further review recommendations for awards. A flowchart that depicts the entire NSF proposal and award process (and associated timeline) is included in the GPG as Exhibit III-1.

A comprehensive description of the Foundation’s merit review process is available on the NSF website at: http://nsf.gov/bfa/dias/policy/merit_review/.

Proposers should also be aware of core strategies that are essential to the fulfillment of NSF’s mission, as articulated in Empowering the Nation Through Discovery and Innovation: NSF Strategic Plan for Fiscal Years (FY) 2011-2016. These strategies are integrated in the program planning and implementation process, of which proposal review is one part. NSF’s mission is particularly well-implemented through the integration of research and education and broadening participation in NSF programs, projects, and activities.

One of the core strategies in support of NSF’s mission 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 variety of learning perspectives.

Another core strategy in support of NSF’s mission is broadening opportunities and expanding participation of groups, institutions, and geographic regions that are underrepresented in STEM disciplines, which is 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.

A. Merit Review Principles and Criteria

The National Science Foundation strives to invest in a robust and diverse portfolio of projects that creates new knowledge and enables breakthroughs in understanding across all areas of science and engineering research and education. To identify which projects to support, NSF relies on a merit review process that incorporates consideration of both the technical aspects of a proposed project and its potential to contribute more broadly to advancing NSF’s mission “to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense; and for other purposes.” NSF makes every effort to conduct a fair, competitive, transparent merit review process for the selection of projects.

1. Merit Review Principles

These principles are to be given due diligence by PIs and organizations when preparing proposals and managing projects, by reviewers when reading and evaluating proposals, and by NSF program staff when determining whether or not to recommend proposals for funding and while overseeing awards. Given that NSF is the primary federal agency charged with nurturing and supporting excellence in basic research and education, the following three principles apply:

- All NSF projects should be of the highest quality and have the potential to advance, if not transform, the frontiers of knowledge.
- NSF projects, in the aggregate, should contribute more broadly to achieving societal goals. These “Broader Impacts” may be accomplished through the research itself, through activities that are directly related to specific research projects, or through activities that are supported by, but are complementary to, the project. The project activities may be based on previously established and/or innovative methods and approaches, but in either case must be well justified.
- Meaningful assessment and evaluation of NSF funded projects should be based on appropriate metrics, keeping in mind the likely correlation between the effect of broader impacts and the resources provided to implement projects. If the size of the activity is limited, evaluation of that activity in isolation is not likely to be meaningful. Thus, assessing the effectiveness of these activities may best be done at a higher, more aggregated, level than the individual project.

With respect to the third principle, even if assessment of Broader Impacts outcomes for particular projects is done at an aggregated level, PIs are expected to be accountable for carrying out the activities described in the funded project. Thus, individual projects should include clearly stated goals, specific descriptions of the activities that the PI intends to do, and a plan in place to document the outputs of those activities.

These three merit review principles provide the basis for the merit review criteria, as well as a context within which the users of the criteria can better understand their intent.

2. Merit Review Criteria

All NSF proposals are evaluated through use of the two National Science Board approved merit review criteria. In some instances, however, NSF will employ additional criteria as required to highlight the specific objectives of certain programs and activities.

The two merit review criteria are listed below. Both criteria are to be given full consideration during the review and decision-making processes; each criterion is necessary but neither, by itself, is sufficient. Therefore, proposers must fully address both criteria. (GPG Chapter II.C.2.d.i. contains additional information for use by proposers in development of the Project Description section of the proposal.) Reviewers are strongly encouraged to review the criteria, including GPG Chapter II.C.2.d.i., prior to the review of a proposal.
When evaluating NSF proposals, reviewers will be asked to consider what the proposers want to do, why they want to do it, how they plan to do it, how they will know if they succeed, and what benefits could accrue if the project is successful. These issues apply both to the technical aspects of the proposal and the way in which the project may make broader contributions. To that end, reviewers will be asked to evaluate all proposals against two criteria:

- **Intellectual Merit**: The Intellectual Merit criterion encompasses the potential to advance knowledge; and
- **Broader Impacts**: The Broader Impacts criterion encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes.

The following elements should be considered in the review for both criteria:

1. What is the potential for the proposed activity to
   a. Advance knowledge and understanding within its own field or across different fields (Intellectual Merit); and
   b. Benefit society or advance desired societal outcomes (Broader Impacts)?
2. To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?
3. Is the plan for carrying out the proposed activities well-reasoned, well-organized, and based on a sound rationale? Does the plan incorporate a mechanism to assess success?
4. How well qualified is the individual, team, or organization to conduct the proposed activities?
5. Are there adequate resources available to the PI (either at the home organization or through collaborations) to carry out the proposed activities?

Broader impacts may be accomplished through the research itself, through the activities that are directly related to specific research projects, or through activities that are supported by, but are complementary to, the project. NSF values the advancement of scientific knowledge and activities that contribute to achievement of societally relevant outcomes. Such outcomes include, but are not limited to: full participation of women, persons with disabilities, and underrepresented minorities in science, technology, engineering, and mathematics (STEM); improved STEM education and educator development at any level; increased public scientific literacy and public engagement with science and technology; improved well-being of individuals in society; development of a diverse, globally competitive STEM workforce; increased partnerships between academia, industry, and others; improved national security; increased economic competitiveness of the United States; and enhanced infrastructure for research and education.

Proposers are reminded that reviewers will also be asked to review the Data Management Plan and the Postdoctoral Researcher Mentoring Plan, as appropriate.

**Additional Review Information:**

Dissertation proposals are reviewed by a panel or a panel in combination with ad hoc peer reviewers. Please note that only the programs that evaluate proposals by ad hoc peer reviewers ask for the names of appropriate or inappropriate reviewers. The applicant should check with the cognizant program officer on review procedures specific to that program.

**B. Review and Selection Process**

Proposals submitted in response to this program solicitation will be reviewed by Ad hoc Review and/or Panel Review.

Reviewers will be asked to formulate a recommendation to either support or decline each proposal. The Program Officer assigned to manage the proposal's review will consider the advice of reviewers and will formulate a recommendation.

After scientific, technical and programmatic review and consideration of appropriate factors, the NSF Program Officer recommends to the cognizant Division Director whether the proposal should be declined or recommended for award. NSF is striving to be able to tell applicants whether their proposals have been declined or recommended for funding within six months. The time interval begins on the deadline or target date, or receipt date, whichever is later. The interval ends when the Division Director accepts the Program Officer's recommendation.

A summary rating and accompanying narrative will be completed and submitted by each reviewer. In all cases, reviews are treated as confidential documents. Verbatim copies of reviews, excluding the names of the reviewers, are sent to the Principal Investigator/Project Director by the Program Officer. In addition, the proposer will receive an explanation of the decision to award or decline funding.

In all cases, after programmatic approval has been obtained, the proposals recommended for funding will be 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 and Agreements 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 a 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 and Agreements Officer does so at their 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. Organizations whose proposals are declined will be advised as promptly as possible by the cognizant NSF Program administering the program. Verbatim copies of reviews, not including the identity of the reviewer, will be provided automatically to the Principal Investigator. (See Section VI.B. for additional information on the review process.)

**B. Award Conditions**

An NSF award consists of: (1) the award letter, which includes any special provisions applicable to the award 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 award conditions, such as Grant General Conditions (GC-1); * or Research Terms and Conditions * and (5) any announcement or other NSF issuance that may be incorporated by reference in the award letter. Cooperative agreements also are administered in accordance with NSF Cooperative Agreement Financial and Administrative Terms and Conditions (CA-FATC) and the applicable Programmatic Terms and Conditions. NSF awards are electronically signed by an NSF Grants and Agreements Officer and transmitted electronically to the organization via e-mail.

*These documents may be accessed electronically on NSF's Website at http://www.nsf.gov/awards/managing/award_conditions.jsp?org=NSF. Paper copies may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from nspubs@nsf.gov.


C. Reporting Requirements

For all multi-year grants (including both standard and continuing grants), the Principal Investigator must submit an annual project report to the cognizant Program Officer at least 90 days prior to the end of the current budget period. (Some programs or awards require submission of more frequent project reports). Within 90 days following expiration of a grant, the PI also is required to submit a final project report, and a project outcomes report for the general public.

Failure to provide the required annual or final project reports, or the project outcomes report, will delay NSF review and processing of any future funding increments as well as any pending proposals for all identified PIs and co-PIs on a given award. PIs should examine the formats of the required reports in advance to assure availability of required data.

PIs are required to use NSF's electronic project-reporting system, available through Research.gov, for preparation and submission of annual and final project reports. Such reports provide information on accomplishments, project participants (individual and organizational), publications, and other specific products and impacts of the project. Submission of the report via Research.gov constitutes certification by the PI that the contents of the report are accurate and complete. The project outcomes report also must be prepared and submitted using Research.gov. This report serves as a brief summary, prepared specifically for the public, of the nature and outcomes of the project. This report will be posted on the NSF website exactly as it is submitted by the PI.


VIII. AGENCY CONTACTS

For questions related to the use of FastLane, contact:

- FastLane Help Desk, telephone: 1-800-673-6188; e-mail: fastlane@nsf.gov.
- Robbie W. Brown - Program Specialist, 995 N, telephone: (703) 292-7264, email: rbrown@nsf.gov
- Judith Simmons - Program Assistant, 995 N, telephone: (703) 292-4347, email: jsimmons@nsf.gov

For questions relating to Grants.gov contact:

- Grants.gov Contact Center: If the Authorized Organizational Representatives (AOR) has not received a confirmation message from Grants.gov within 48 hours of submission of application, please contact via telephone: 1-800-515-4726; e-mail: support@grants.gov.

For a list of cognizant program officers, please visit the SBE Doctoral Dissertation Contact List

IX. OTHER INFORMATION

The NSF website provides the most comprehensive source of information on NSF Directorates (including contact information), programs and funding opportunities. Use of this website by potential proposers is strongly encouraged. In addition, "My NSF" is an information-delivery system designed to keep potential proposers and other interested parties apprised of new NSF funding opportunities and publications, important changes in proposal and award policies and procedures, and upcoming NSF Grants Conferences. Subscribers are informed through e-mail or the user's Web browser each time new publications are issued that match their identified interests. "My NSF" also is available on NSF's website at http://www.nsf.gov/aag.

Grants.gov provides an additional electronic capability to search for Federal government-wide grant opportunities. NSF funding opportunities may be accessed via this new mechanism. Further information on Grants.gov may be obtained at http://www.grants.gov.

ABOUT THE NATIONAL SCIENCE FOUNDATION

The National Science Foundation (NSF) is an independent Federal agency created by the National Science Foundation Act of 1950, as amended (42 USC 1861-75). The Act states the purpose of the NSF is "to promote the progress of science; [and] to advance the national health, prosperity, and welfare by supporting research and education in all fields of science and engineering."
NSF funds research and education in most fields of science and engineering. It does this through grants and cooperative agreements to more than 2,000 colleges, universities, K-12 school systems, businesses, informal science organizations and other research organizations throughout the US. The Foundation accounts for about one-fourth of Federal support to academic institutions for basic research.

NSF receives approximately 55,000 proposals each year for research, education and training projects, of which approximately 11,000 are funded. In addition, the Foundation receives several thousand applications for graduate and postdoctoral fellowships. The agency operates no laboratories itself but does support National Research Centers, user facilities, certain oceanographic vessels and Arctic and Antarctic research stations. The Foundation also supports cooperative research between universities and industry, US participation in international scientific and engineering efforts, and educational activities at every academic level.

Facilitation Awards for Scientists and Engineers with Disabilities provide funding for special assistance or equipment to enable persons with disabilities to work on NSF-supported projects. See Grant Proposal Guide Chapter II, Section D.2 for instructions regarding preparation of these types of proposals.

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 about NSF programs, employment or general information. TDD may be accessed at (703) 292-5090 and (800) 281-8749, FIRS at (800) 877-8339.

The National Science Foundation Information Center may be reached at (703) 292-5111.

The National Science Foundation promotes and advances scientific progress in the United States by competitively awarding grants and cooperative agreements for research and education in the sciences, mathematics, and engineering.

To get the latest information about program deadlines, to download copies of NSF publications, and to access abstracts of awards, visit the NSF Website at http://www.nsf.gov

- **Location:** 4201 Wilson Blvd. Arlington, VA 22230
- **For General Information**
  - (NSF Information Center):
    - (703) 292-5111
- **TDD (for the hearing-impaired):**
  - (703) 292-5090
- **To Order Publications or Forms:**
  - Send an e-mail to: nsfpubs@nsf.gov
  - or telephone: (703) 292-7827
- **To Locate NSF Employees:**
  - (703) 292-5111

**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; and 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 proposal review process; to proposer 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 or other entities needing information regarding applicants or nominees as part of a joint application review process, or in order to coordinate programs or policy; 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,” 69 Federal Register 26410 (May 12, 2004), and NSF-51, “Reviewer/Proposal File and Associated Records,” 69 Federal Register 26410 (May 12, 2004). Submission of the information is voluntary. Failure to provide full and complete information, however, may reduce the possibility of receiving an award.

An agency may not conduct or sponsor, and a person is not required to respond to, an information collection unless it displays a valid Office of Management and Budget (OMB) control number. The OMB control number for this collection is 3145-0058. 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 the burden estimate and any other aspect of this collection of information, including suggestions for reducing this burden, to:

Suzanne H. Plimpton
Reports Clearance Officer
Office of the General Counsel
National Science Foundation
Arlington, VA 22230