

Robert Noyce Scholarship Program

Program Solicitation

NSF 07-529

Replaces Document(s):

NSF 06-528



National Science Foundation

Directorate for Education & Human Resources
Division of Undergraduate Education

Letter of Intent Due Date(s) (optional):

February 28, 2007

Full Proposal Deadline(s) (due by 5 p.m. proposer's local time):

March 29, 2007

REVISION NOTES

In furtherance of the President's Management Agenda, NSF has identified programs that will offer proposers the option to utilize Grants.gov to prepare and submit proposals, or will require that proposers utilize Grants.gov to prepare and submit proposals. Grants.gov provides a single Government-wide portal for finding and applying for Federal grants online.

In response to this program solicitation, proposers may opt to submit proposals via Grants.gov or via the [NSF FastLane](#) system. In determining which method to utilize in the electronic preparation and submission of the proposal, please note the following:

Collaborative Proposals. All collaborative proposals submitted as separate submissions from multiple organizations must be submitted via the [NSF FastLane](#) system. Chapter II, Section D.3 of the Grant Proposal Guide provides additional information on collaborative proposals.

1. Maximum total award size is increased to \$750,000 for Phase I proposals.
2. Minimum size of scholarship is \$10,000 per year, still limited by cost of attendance.
3. One-year stipend for post-baccalaureate support may now exceed \$10,000.

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

Robert Noyce Scholarship Program

Synopsis of Program:

The Robert Noyce Scholarship program seeks to encourage talented science, technology, engineering, and mathematics majors and professionals to become K-12 mathematics and science teachers. The program provides funds to institutions of higher education to support scholarships, stipends, and programs for students who commit to teaching in high-need K-12 school districts.

Cognizant Program Officer(s):

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

- 47.076 --- Education and Human Resources

Award Information

Anticipated Type of Award: Standard Grant or Continuing Grant

Estimated Number of Awards: 13 to 18 Pending the availability of funding, it is anticipated that there will be 10 -12 Phase I awards and 3 - 6 Phase II awards.

Anticipated Funding Amount: \$9,000,000 pending availability of funds

Eligibility Information

Organization Limit:

Proposals may only be submitted by the following:

- U.S. Universities and two- or four-year colleges (including community colleges), or consortia of such institutions, or nonprofit entities that have established consortia among such institutions of higher education may submit proposals.

PI Limit:

None Specified

Limit on Number of Proposals per Organization: 1

An institution, on its own or as a member of a consortium, may submit no more than one proposal per competition.

Limit on Number of Proposals per PI:

None Specified

Proposal Preparation and Submission Instructions

A. Proposal Preparation Instructions

- **Letters of Intent:** Submission of Letters of Intent is optional. Please see the full text of this solicitation for further information.
- **Full Proposals:**
 - Full Proposals submitted via FastLane: Grant Proposal Guide (GPG) Guidelines apply. 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.
 - Full Proposals submitted via Grants.gov: NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov Guidelines apply (Note: The NSF Grants.gov Application Guide is available on the Grants.gov website and on the NSF website at: <http://www.nsf.gov/bfa/dias/policy/docs/grantsgovguide.pdf>)

B. Budgetary Information

- **Cost Sharing Requirements:** Cost Sharing is not required by NSF.
- **Indirect Cost (F&A) Limitations:**

No indirect costs are allowed for Phase I and Phase II Scholarship and Stipend projects. Indirect costs are allowed for Phase II Monitoring and Evaluation projects.

- **Other Budgetary Limitations:** Other budgetary limitations apply. Please see the full text of this solicitation for further information.

C. Due Dates

- **Letter of Intent Due Date(s) (optional):**

February 28, 2007

- **Full Proposal Deadline(s)** (due by 5 p.m. proposer's local time):

March 29, 2007

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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I. INTRODUCTION

Two-thirds of the Nation's K12 teachers are expected to retire or leave the profession over the coming decade, so it is estimated that the Nation's schools will need to hire more than 2 million teachers during that period, including over 200,000 middle and high school mathematics and science teachers (National Commission on Mathematics and Science Teaching for the 21st Century, 2000; Committee on Prospering in the Global Economy of the 21st Century, 2006). Furthermore, the demand for certified teachers has increased as student course-taking in high school science and mathematics has increased and as states implement the teacher quality requirements of No Child Left Behind with respect to teacher content knowledge in the assigned field of teaching (Council of Chief State School Officers, 2005).

Teachers' content knowledge, particularly in science and mathematics, is an important factor in determining student achievement (Goldhaber and Brewer, 1996, National Research Council, 2001). Yet our highest performing students are going into fields other than teaching (National Science Board, 2006). The need to recruit science, mathematics, and engineering majors into teaching is reflected in the goal of the *American Competitiveness Initiative* to have 100,000 highly qualified teachers by 2015 (Office of Science and Technology Policy, 2006) and the recommendations of the National Academies' report, *Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future* (Committee on Prospering in the Global Economy of the 21st Century, 2006). Data from the National Center for Educational Statistics (2004) show that students in high-poverty schools are more likely to be taught science and mathematics by teachers who lack a major or minor in the subject being taught (U.S. Department of Education, 2004). Approximately one-third of all new math and science teachers leave teaching within the first 3 years (Committee on Prospering in the Global Economy of the 21st Century, 2006).

The Robert Noyce Scholarship Program, authorized under the National Science Foundation Authorization Act of 2002 (P.L. 107-368), responds to the critical need for K-12 teachers of science, technology, engineering, and mathematics by encouraging talented science, technology, engineering, and mathematics (STEM) students and STEM professionals to pursue teaching careers in elementary and secondary schools. The program provides funding to institutions of higher education to provide scholarships, stipends, and programmatic support for STEM majors and STEM professionals to enter and complete teacher credentialing programs. Scholarship and stipend recipients are required to complete two years of teaching in a high-need school district for each year of support. The program seeks to increase the number of K-12 teachers with strong STEM content knowledge who teach in high-need school districts.

II. PROGRAM DESCRIPTION

The NSF Robert Noyce Scholarship program awards grants to institutions of higher education (as defined in section 101(a) of the Higher Education Act of 1965) in the United States, or consortia of such institutions, or nonprofit entities that have established consortia among such institutions of higher education to provide scholarships for juniors and seniors who are majoring in science, technology, engineering, or mathematics (STEM) and stipends for STEM professionals seeking to become teachers. A goal of the program is to recruit individuals with strong STEM backgrounds who might otherwise not have considered a career in K-12 teaching. Proposals may address either the scholarship or the stipend program or both programs. Scholarship and stipend recipients should be selected on the basis of academic merit, with consideration given to financial need and the diversity of participants in the program. Institutions are expected to provide the programs and support to enable scholarship and stipend recipients to obtain teacher certification or licensing and to become successful elementary or secondary teachers. This support should be based on effective, evidence-based strategies and should be available to recipients during their participation in the program and continue after their completion of the program to ease the transition into teaching and aid retention during and beyond the obligatory service period. Program activities for scholarship and stipend recipients may include serving as resources for science and mathematics instruction in K-12 classrooms. The project leadership team is expected to include STEM discipline faculty and education faculty.

Scholarships for STEM Majors

Scholarship amounts must be at least \$10,000 per year; however, no individual may receive a scholarship for any year that exceeds the yearly cost of attendance (as defined in section 472 of the Higher Education Act of 1965 (20 U.S.C. 1087II)). Scholarship recipients must be U.S. citizens or nationals, or permanent resident aliens, must be majoring in mathematics, engineering, or a science discipline, and must be in the last 2 years of a baccalaureate degree program. It is expected that these students will graduate with a major in a STEM discipline (mathematics, science, or engineering) and will obtain teacher certification or licensing. Students enrolled in institutions requiring a fifth year or post-baccalaureate program for teacher certification may apply the scholarship to the post-baccalaureate program. A recipient may receive up to two years of scholarship support. Recipients of scholarships must commit to completion of two years of service as a mathematics or science teacher for each year the scholarship is received. Service must be performed within 6 years after graduation from the program for which the scholarship was awarded and must be performed in a high-need local educational agency that meets one or more of the following criteria:

- A. It has at least one school in which 50 percent or more of the enrolled students are eligible for participation in the free and reduced price lunch program established by the Richard B. Russell National School Lunch Act (42 U.S.C.1751 et seq.).
- B. It has at least one school in which: (i) more than 34 percent of the academic classroom teachers at the secondary level (across all academic subjects) do not have an undergraduate degree with a major or minor in, or a graduate degree in, the academic field in which they teach the largest percentage of their classes; or (ii) more than 34 percent of the teachers in two of the academic departments do not have an undergraduate degree with a major or minor in, or a graduate degree in, the academic field in which they teach the largest percentage of their classes.
- C. It has at least one school whose teacher attrition rate has been 15 percent or more over the last three school years.

Stipends for STEM Professionals

Stipends of at least \$10,000 are available for a maximum of one year for science, technology, engineering, or mathematics (STEM) professionals who hold a baccalaureate, masters, or doctoral degree in science, mathematics, or engineering and enroll in a teacher certification program. Stipend recipients must be U.S. citizens or nationals, or permanent resident aliens. Recipients of stipends must commit to serving two years as a mathematics or science teacher in a high-need local educational agency, as defined above, within 6 years after graduation or completion of the program for which the stipend was awarded. Current K-12 teachers seeking new certification or re-certification are not eligible to receive Noyce scholarships or stipends.

Categories of Proposals

The Robert Noyce Scholarship Program provides funding for two categories of proposals:

- Phase I proposals are invited from institutions that have not previously been funded under the Robert Noyce Scholarship Program or are requesting funding to support Noyce Scholars from a department or academic unit that has not participated in a previous Noyce award. For example, a current or previous awardee that administered a scholarship program exclusively for mathematics majors under the Robert Noyce Scholarship Program may submit a new proposal focusing on science majors.
- Phase II proposals are invited from institutions that have previously been funded under the Robert Noyce Scholarship program and whose award expiration date occurs on or before December 31, 2007.

Phase I proposals provide scholarships for juniors and seniors who are majoring in a science discipline, technology, engineering, or mathematics (STEM) and stipends for STEM professionals seeking to become teachers. Proposals may address the scholarship component or the stipend component or both. Up to 15% of the proposed budget may be allocated for administrative and program costs associated with recruiting and preparing the teachers, marketing the program, developing academic components of the program, providing support for the teachers as they begin teaching, and conducting monitoring and evaluation activities.

Within Phase II, two options are available: Scholarship and Stipend (S&S) Projects and Monitoring and Evaluation (M&E) projects. Phase II S&S Awards provide funds for prior awardees to expand and extend the evaluation efforts initiated under the original award and to support additional cohorts of scholarship and stipend recipients. Phase II M&E Awards support monitoring and expanded evaluation, but do not include funding for additional cohorts of scholarship or stipend recipients. All Phase II proposals are expected to show evidence of the success of the previous award that warrants additional funding. These proposals must include plans for conducting longitudinal evaluation studies of students supported under the previous Noyce award as well as monitoring and evaluation of new cohorts of students. Proposals must include plans for evaluating the impact of the program on recruitment of teachers, the impact on the institution, and the effectiveness of the Noyce recipients as K-12 teachers. Up to 20% of the budget may be allocated for administrative and program costs and for evaluation and research activities associated with the Phase II S&S project.

The maximum total budget for Phase I proposals is \$750,000 with a project duration of up to 4 years. The maximum total budget for Phase II S&S proposals is \$500,000 with a project duration of up to 4 years.

Phase II M&E Awards provide funding to measure project outcomes through longitudinal evaluation studies and the continued monitoring of Noyce recipients to ensure they have completed their teaching requirement. Since M & E awards do not include funds for awarding additional scholarships and stipends, indirect costs may be included in the proposal budget. The maximum total budget for proposals in this category is \$150,000 with a project duration of up to 3 years.

Specific requirements for Phase I and Phase II proposals are described in Section V. Proposal Preparation and Submission Instructions.

Institutional Responsibilities

The institution shall require that each recipient of the scholarship or stipend accepts the terms of the scholarship or stipend and agrees to provide the institution with annual certification of employment and up-to-date contact information and to participate in surveys provided by the institution of higher education as part of an evaluation program. Monitoring the compliance of scholarship and stipend recipients with respect to their service requirements will be the responsibility of the institution of higher education receiving the award. It is expected that failure to satisfy the academic requirements of the program or to complete the service requirement will result in forfeiture of the scholarship or stipend award with repayments pro-rated accordingly to reflect partial service completed. The institution is responsible for collecting the repayment amounts, including interest, in accordance with P.L. 107-368, SEC. 10 (g). All forfeited scholarship or stipend funds, less grantee administrative costs associated with collection of the repayment not to exceed 5% of the forfeited amount, will be returned to the United States Treasury. The institution is expected to establish procedures that ensure compliance with the service requirement with allowances for extreme hardship or other circumstances for which it is not in the best interests of the school district or not feasible for the scholarship/stipend recipient to fulfill the service obligation. The institution may establish procedures for waiving or suspending repayment of scholarships or stipends in cases of extreme hardship or other circumstances that would preclude the fulfillment of the service obligation.

Eligible institutions must provide evidence of exemplary teacher preparation efforts to ensure that scholarship and stipend recipients become successful science and mathematics teachers in elementary or secondary schools. Successful proposals also will provide evidence of functioning partnerships between institutions of higher education and school districts and an infrastructure that is supportive of new teachers. All projects are expected to include an evaluation plan for measuring the impact of the project and effectiveness of proposed strategies in attracting, preparing, and retaining STEM individuals in teaching careers as well as the effectiveness of the Noyce scholarship/stipend recipients as teachers. The evaluation plan should include a mechanism for tracking the scholarship/stipend recipients as they fulfill their teaching obligation and a method for collecting demographic data on these individuals. In addition to the project-specific evaluation, all projects will be expected to cooperate with an NSF third party monitoring and evaluation of program impact that will require annual data collection. It is expected that individual project evaluation, as well as the overall program evaluation, will contribute to the knowledge base of effective strategies for attracting and retaining effective teachers with strong STEM content knowledge.

Information about current awards funded under the Robert Noyce Scholarship Program resources can be found at the Division of Undergraduate Education website: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5733&org=DUE&from=home

References

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III. AWARD INFORMATION

Estimated program budget, number of awards and average award size/duration are subject to the availability of funds. The anticipated funding amount in FY 2007 is \$9 million.

Phase I Awards

Depending on the quality of submissions and the availability of funds, NSF expects to fund approximately 10 -12 Phase II awards of up to \$750,000 for a total award amount and duration of up to 4 years. Up to 15% of the proposed budget may be allocated for administrative and program costs, including monitoring and evaluation as detailed in Section II "Program Description" above.

Phase II Awards

Depending on the quality of submissions and the availability of funds, NSF expects to fund approximately 3 - 6 Phase II awards. Phase II S&S proposals may request up to \$500,000 for a total award amount and duration of up to 4 years. Up to 20% of the proposed budget may be allocated for administrative and program costs, including monitoring and evaluation as detailed in Section II "Program Description" above. Phase II M&E Proposals may request up to \$150,000 in total budget for a duration of up to 3 years. Indirect costs may be charged in Phase II M&E proposals.

IV. ELIGIBILITY INFORMATION

Organization Limit:

Proposals may only be submitted by the following:

- U.S. Universities and two- or four-year colleges (including community colleges), or consortia of such institutions, or nonprofit entities that have established consortia among such institutions of higher education may submit proposals.

PI Limit:

None Specified

Limit on Number of Proposals per Organization: 1

An institution, on its own or as a member of a consortium, may submit no more than one proposal per competition.

Limit on Number of Proposals per PI:

None Specified

Additional Eligibility Info:

V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

Letters of Intent (optional):

Letters of Intent:

A Letter of Intent is optional, but encouraged, before submitting a full proposal. The Letter of Intent is not a preliminary proposal. It is intended to enhance the efficiency of the review process. Letters of Intent should be electronically submitted through FastLane by February 28, 2007. The Letter of Intent should indicate the category of proposal (Phase I, Phase II S&S, or Phase II M&E). It should include a brief synopsis of the project, indicating the grade level (elementary, middle, or high school) and discipline focus of the project. Additional institutions and school districts should be listed in the Participating Organizations section of the FastLane Letter of Intent.

Letter of Intent Preparation Instructions:

When submitting a Letter of Intent through FastLane in response to this Program Solicitation please note the conditions outlined below:

- SPO Submission is Not Required when submitting Letters of Intent
- A Minimum of 0 and Maximum of 4 Other Senior Project Personnel are allowed
- Category of Proposal is Required when submitting Letters of Intent
- Submission of multiple Letters of Intent are Not allowed

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 pubs@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/bfa/dias/policy/docs/grantsgovguide.pdf>). 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 pubs@nsf.gov.

In determining which method to utilize in the electronic preparation and submission of the proposal, please note the following:

Collaborative Proposals. All collaborative proposals submitted as separate submissions from multiple organizations must be submitted via the NSF FastLane system. Chapter II, Section D.3 of the Grant Proposal Guide provides additional information on collaborative proposals.

The following instructions supplement the guidelines in the GPG and NSF Grants.gov Application Guide.

Cover Sheet

While filling out the cover sheet in FastLane, it is important to choose the program solicitation number indicated on the cover of this document "Robert Noyce Scholarship Program" from the list of programs in the "NSF Unit Consideration" section. This choice must be specified in order to have access to the DUE Project Data Form, which is required for Noyce proposals. If using Grants.gov, the program solicitation number will be prepopulated by Grants.gov on the NSF Grant Application Cover Page.

Human Subjects:

- Mark HUMAN SUBJECTS box as pending, approved, or exempted (with exemption subsection indicated). ***This box should not be left blank.***
- HUMAN SUBJECTS box should be marked as pending if an IRB is either (1) reviewing the project plan and has not yet determined a ruling of "approved" or "exempt", or (2) the project plan has not yet been submitted to an IRB for review.

Projects involving research with human subjects, or the reporting of information gathered from human subjects, must ensure that subjects are protected in conformance with the relevant federal policy known as the Common Rule (*Federal Policy for the Protection of Human Subjects*, 45 CFR 690). All projects involving human subjects must either (1) have approval from the organization's Institutional Review Board (IRB) before issuance of an NSF award or, (2) must affirm that the IRB or an appropriate knowledgeable authority previously designated by the organization (not the Principal Investigator) has declared the research exempt from IRB review, in accordance with the applicable subsection, as established in section 101(b) of the Common Rule. If the box for "Human Subjects" is checked on the Cover Sheet along with either (1) the IRB approval date, or (2) the exemption subsection from the Common Rule identified, then no additional certification is required. In the event the proposal is recommended for funding and IRB review is pending, certification of IRB approval or exemption should be submitted to NSF in electronic form as soon as it is available. Delays in obtaining IRB certification may result in NSF being unable to make an award. For more information regarding the protection of human subjects, consult: <http://www.nsf.gov/bfa/dias/policy/human.jsp>

Project Summary

The one-page Project Summary should indicate the specific category of proposal (Phase I, Phase II S&S, or Phase II M&E) and name all institutions, including school districts, that are involved in the proposal. Proposers are reminded that the Project Summary must explicitly address, in separately labeled statements, both NSB-approved merit review criteria: Intellectual Merit and Broader Impacts. Proposals failing to explicitly address Intellectual Merit and Broader Impacts in the Project Summary will be returned without review.

Project Description

Phase I Proposals must include and clearly identify the following elements in the Project Description section:

- Results from Prior NSF Support: Address prior support relevant to the proposed project.

- A description of the proposed scholarship or stipend program, including the number and size of scholarships and stipends, the rationale for the number and size of scholarships and/or stipends, and projected cumulative number of new teachers to be produced over the duration of the program, including a comparison to number of teachers currently produced by the proposing institution(s);
- A description of the teacher preparation program in which the Noyce scholarship or stipend recipients will be enrolled, including a description of the academic requirements and other components of the program. The proposal must include evidence of exemplary teacher preparation efforts to ensure that scholarship and stipend recipients become successful science and mathematics teachers in elementary and secondary schools;
- A description of recruitment activities and specific marketing strategies designed to attract a large and diverse pool of applicants;
- A description of the selection process that will ensure the most qualified applicants are selected based on academic merit, with consideration given to financial need and increasing participation of minorities, persons with disabilities, and underrepresented genders relative to specific teaching areas;
- A description of the management and administrative structure and the capability for administering the scholarship or stipend program;
- Evidence of an infrastructure that is supportive of new teachers. Include a description of the activities and support mechanisms that will be available to recipients to ensure they are able and willing to fulfill their commitment to teaching;
- Evidence of collaboration between STEM faculty and education faculty;
- Evidence of functioning partnerships between institutions of higher education and school districts;
- A description of plans to monitor and enforce compliance with the required teaching commitment;
- Evidence that the institution is committed to making the program a central institutional focus; and
- An evaluation plan that will provide information on the effectiveness of the project in attracting, preparing, and retaining STEM individuals in teaching careers and should include methodologies for measuring the effectiveness of the Noyce scholarship/stipend recipients as teachers. The evaluation plan should include a mechanism for tracking the scholarship/stipend recipients during the period in which they are fulfilling their service obligation and a plan for collecting demographic data and statistics on scholarship and stipend recipients. The proposal should identify an evaluator with expertise to conduct an objective evaluation.

Phase II Scholarship and Stipend (S&S) Proposals should include the following:

- Results from Prior NSF Support: Describe the outcomes of prior support under the previous Robert Noyce Scholarship grant to include the number of students supported through scholarships and/or stipends with major field of study and level of teaching, and the number who have begun teaching in a high-need school district. The success of the project in increasing the number of STEM majors or STEM professionals who enter the teaching workforce should be a particular focus of this discussion. The proposal should explain how the results of the prior work and evaluation findings have informed the proposed work.
- A description of the proposed scholarship or stipend program, including the number and size of scholarships and stipends, the rationale for the number and size of scholarships and/or stipends, and projected cumulative number of new teachers to be produced over the duration of the program, including a comparison to number of teachers currently produced by the proposing institution(s);
- A description of the teacher preparation program in which the Noyce scholarship or stipend recipients will be enrolled, including a description of the academic requirements and other components of the program.. The proposal must include evidence of exemplary teacher preparation efforts to ensure that scholarship and stipend recipients become successful science and mathematics teachers in elementary and secondary schools;
- A description of recruitment activities designed to attract a large and diverse pool of applicants;
- A description of the selection process that will ensure the most qualified applicants are selected based on academic merit, with consideration given to financial need and increasing participation of minorities, persons with disabilities, and underrepresented genders relative to specific teaching areas;
- A description of the management and administrative structure and capability for administering the scholarship or stipend program;
- Evidence of an infrastructure that is supportive of new teachers. Include a description of the activities and support mechanisms that will be available to recipients to ensure they are able and willing to fulfill their commitment to teaching;
- Evidence of collaboration between STEM faculty and education faculty;
- Evidence of functioning partnerships between institutions of higher education and school districts;
- A description of plans to monitor and enforce compliance with the required teaching commitment;
- Evidence that the institution is committed to making the program a central institutional focus;
- Discussion of how the proposed project builds on the prior support beyond simply continuing the work.
- Discussion of plans to sustain activities and impact of the project beyond Phase II support.
- Evidence that the institution has made the program a central institutional focus.
- Evidence of the impact of the Noyce Scholarship project on STEM departments.
- Details of a plan to expand and extend the evaluation activities initiated under the original award. Evaluation studies should include longitudinal studies to measure the impact of the project on students supported under the first award in terms of their performance as teachers, their completion of the teaching requirement, and their retention in the teaching profession. In addition, plans for monitoring and evaluating the impact of the project on new cohorts should be included. The evaluation plan should address recruitment, preparation, and retention of the Noyce Scholars and

should lead to results that will inform the community of what works and why. This study should go beyond the required tracking of recipients to include indicators of the effectiveness of the program in attracting STEM majors into teaching, the impact of the program on departments and the institution, and the effectiveness of the Noyce Scholars as measured by their performance in the classroom and their impact on student learning. The proposal should include plans to disseminate the findings of this study through peer reviewed publications and national conferences.

Phase II Monitoring and Evaluation (M&E) Proposals should include the following elements in the Project Description section:

- **Results from Prior NSF Support:** Describe the outcomes of prior support under the previous Robert Noyce Scholarship grant, including the number of students supported through scholarships and/or stipends with major field of study and level of teaching, and the number who have begun teaching in a high need school district. The success of the project in increasing the number of STEM majors or STEM professionals who enter the teaching workforce should be a particular focus of this discussion. The proposal should provide results of the evaluation activities.
- **Details of a plan to expand and extend the evaluation activities** initiated under the original award. Evaluation studies should include longitudinal studies to measure the impact of the project on students supported under the first award in terms of their performance as teachers, their completion of the teaching requirement, and their retention in the teaching profession. The evaluation plan should address recruitment, preparation, and retention of the Noyce Scholars and should lead to results that will inform the community of what works and why. This study should go beyond the required tracking of recipients to include indicators of the effectiveness of the program in attracting STEM majors into teaching, the impact of the program on departments and the institution, and the effectiveness of the Noyce Scholars as measured by their performance in the classroom and their impact on student learning. The proposal should include plans to disseminate the findings of this study through peer reviewed publications and national conferences.

Additional Requirements for Phase I and Phase II Proposals

The PI and Co-PI leadership must include at least one faculty member from a STEM discipline. Letters of support from the Dean of Arts & Sciences, Dean of Education, department chairs, and school district Superintendent(s) or comparable administrators should be submitted as evidence of institutional support for the proposal. Letters should be uploaded into the Supplementary Documentation section in FastLane. For Grants.gov users, supplementary documents should be attached in Field 11 of the R&R Other Project Information Form.

A Project Data Form must be submitted as part of all proposals. The information on this form is used to direct proposals to appropriate reviewers and to determine the characteristics of projects supported by the Division of Undergraduate Education. In FastLane, this form will show up in the list of forms for your proposal only after you have (1) selected the "Noyce" program solicitation number on the Cover Sheet and (2) saved the Cover Sheet. Grants.gov users should refer to Section VI.6. of the NSF Grants.gov Application Guide for specific instructions on how to submit the DUE Project Data Form.

B. Budgetary Information

Cost Sharing: Cost sharing is not required by NSF in proposals submitted to the National Science Foundation.

Indirect Cost (F&A) Limitations:

No indirect costs are allowed for Phase I and Phase II Scholarship and Stipend projects. Indirect costs are allowed for Phase II Monitoring and Evaluation projects.

Other Budgetary Limitations:

Phase I proposals: Up to 15% of the proposed budget may be allocated for administrative and program costs, including monitoring and evaluation, as detailed in Section II "Program Description" above.

Phase II S&S proposals: Up to 20% of the proposed budget may be allocated for administrative and program costs, including monitoring and evaluation, as detailed in Section II "Program Description" above.

Budget Preparation Instructions: Scholarships and stipends should be indicated in Section F.1 Participant Support - "Stipends" of the FastLane budget (or Section E.2. on the Grants.gov R&R Budget Form).

C. Due Dates

- **Letter of Intent Due Date(s) (optional):**

February 28, 2007

- **Full Proposal Deadline(s)** (due by 5 p.m. proposer's local time):

March 29, 2007

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>. 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>.

- **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. The Grants.gov's Grant Community User Guide is a comprehensive reference document that provides technical information about Grants.gov. Proposers can download the User Guide as a Microsoft Word document or as a PDF document. The Grants.gov User Guide is available at: <http://www.grants.gov/CustomerSupport>. 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 to the NSF FastLane system for further processing.

VI. NSF PROPOSAL PROCESSING AND REVIEW PROCEDURES

Proposals received by NSF are assigned to the appropriate NSF program and, if they meet NSF proposal preparation 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 who are experts in the particular fields represented by the proposal. These reviewers are selected by Program Officers charged with the 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 with the proposer.

A. NSF Merit Review Criteria

All NSF proposals are evaluated through use of the two National Science Board (NSB)-approved merit review criteria: intellectual merit and the broader impacts of the proposed effort. In some instances, however, NSF will employ additional criteria as required to highlight the specific objectives of certain programs and activities.

The two NSB-approved merit review criteria are listed below. The criteria include considerations that help define them. These considerations are suggestions and not all will apply to any given proposal. While proposers must address both merit review criteria, reviewers will be asked to address only those considerations that are relevant to the proposal being considered and for which the reviewer is qualified to make judgements.

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 the 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?

NSF staff will give careful consideration to the following in making funding decisions:

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 learning perspectives.

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 -- 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.

Additional Review Criteria:

In considering the above criteria, reviewers will be asked to comment on the following:

Phase I Proposals:

- Capacity and ability of the institution to effectively conduct the program
- Number and quality of students that will be served by the program
- Justification for number of students served and amount of stipend and scholarship support
- Ability of the program to recruit STEM majors who would not otherwise pursue a career in teaching
- Quality and feasibility of recruitment and marketing strategies
- Quality of the preservice educational program
- Quality of the preservice student-support and new teacher-support infrastructure
- Extent to which the proposed strategies reflect effective practices based on research
- Degree to which the proposed programming will enable scholarship or stipend recipients to become successful mathematics and science teachers
- Feasibility and completeness of an evaluation plan that will measure the effectiveness of the proposed strategies
- Institutional support for the program and the extent to which the institution is committed to making the program a central organizational focus

Phase II S&S Proposals:

- Evidence that the previously funded project was consistent with the criteria listed above
- Evidence of institution and school district support for continuing the project
- Evidence that the project has recruited STEM majors who would not otherwise pursue a career in teaching
- Evidence that a high quality new teacher support structure is in place
- Demonstrated success of the previously funded project in terms of recruitment of STEM majors and/or STEM professionals into K12 teaching and preparation to become effective teachers
- Plans for advancing the work beyond the original project
- Plans for conducting a longitudinal evaluation study of previous cohorts of Noyce Scholarship and/or stipend recipients as well as evaluation and monitoring of new cohorts to address teacher and student outcome
- Evaluation plans build on and strengthen the previous evaluation effort
- Plans for disseminating results of the evaluation studies
- Plans for sustainability

Phase II M&E Proposals:

- Evidence that the previously funded project was consistent with the criteria listed above for Phase I proposals
- Plans for conducting a longitudinal evaluation study of previous cohorts of Noyce Scholarship and/or stipend recipients focusing on their effectiveness as teachers, their completion of the teaching requirement, and their retention in the teaching profession.
- Evaluation plans build on and strengthen the previous evaluation effort
- Plans for disseminating results of the evaluation studies.

B. Review and Selection Process

Proposals submitted in response to this program solicitation will be reviewed by 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 date of receipt. 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 Federal Demonstration Partnership (FDP) 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/general_conditions.jsp?org=NSF. Paper copies may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from pubs@nsf.gov.

More comprehensive information on NSF Award Conditions and other important information on the administration of NSF awards is contained in the NSF *Grant Policy Manual* (GPM) Chapter II, available electronically on the NSF Website at http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpm.

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 before the end of the current budget period. (Some programs or awards require more frequent project reports). Within 90 days after expiration of a grant, the PI also is required to submit a final project report.

Failure to provide the required annual or final project reports will delay NSF review and processing of any future funding increments as well as any pending proposals for that PI. 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 FastLane, for preparation and submission of annual and final project reports. Such reports provide information on activities and findings, project participants (individual and organizational) publications; and, other specific products and contributions. PIs will not be required to re-enter information previously provided, either with a proposal or in earlier updates using the electronic system. Submission of the report via FastLane constitutes certification by the PI that the contents of the report are accurate and complete.

VIII. AGENCY CONTACTS

General inquiries regarding this program should be made to:

- Joan T. Prival, Lead Program Director, 835 N, telephone: (703) 292-4635, fax: (703) 292-9015, email: jprival@nsf.gov
- Diana Burley, telephone: (703) 292-4642, email: dburley@nsf.gov

For questions related to the use of FastLane, contact:

- FastLane Help Desk, telephone: 1-800-673-6188; e-mail: fastlane@nsf.gov.
- Antoinette Allen, Computer Specialist, Division of Undergraduate Education, telephone: (703) 292-4646, email: duefi@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: 1-800-518-

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, MyNSF (formerly the Custom News Service) 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 Regional 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. MyNSF also is available on NSF's Website at <http://www.nsf.gov/mynsf/>.

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>.

Related Programs:

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 40,000 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 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: pubs@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
Division of Administrative Services
National Science Foundation
Arlington, VA 22230

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