

Louis Stokes Alliances for Minority Participation (LSAMP)

Funding Opportunities for: LSAMP Alliances, Bridge to the Doctorate (BD) Activity, Pilot Regional LSAMP Centers of Excellence in Broadening Participation, Broadening Participation Research in STEM Education (BPR)

PROGRAM SOLICITATION

NSF 11-543

REPLACES DOCUMENT(S):
NSF 10-522



National Science Foundation

Directorate for Education & Human Resources
Division of Human Resource Development

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

July 28, 2011

LSAMP Bridge to the Doctorate

October 07, 2011

LSAMP Alliance Proposals

October 07, 2011

Broadening Participation Research in STEM Education Proposals

October 07, 2011

Pilot Regional LSAMP Centers of Excellence in Broadening Participation Proposals

IMPORTANT INFORMATION AND REVISION NOTES

A revised version of the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG), [NSF 11-1](#), was issued on October 1, 2010 and is effective for proposals submitted, or due, on or after January 18, 2011. Please be advised that the guidelines contained in [NSF 11-1](#) apply to proposals submitted in response to this funding opportunity.

Cost Sharing: The PAPPG has been revised to implement the National Science Board's recommendations regarding cost sharing. Inclusion of voluntary committed cost sharing is prohibited. In order to assess the scope of the project, all organizational resources necessary for the project must be described in the Facilities, Equipment and Other Resources section of the proposal. The description should be narrative in nature and must not include any quantifiable financial information. Mandatory cost sharing will only be required when explicitly authorized by the NSF Director. See the PAPP Guide Part I: *Grant Proposal Guide (GPG) Chapter II.C.2.g(xi)* for further information about the implementation of these recommendations.

Data Management Plan: The PAPPG contains a clarification of NSF's long standing data policy. All proposals must describe plans for data management and sharing of the products of research, or assert the absence of the need for such plans. FastLane will not permit submission of a proposal that is missing a Data Management Plan. The Data Management Plan will be reviewed as part of the intellectual merit or broader impacts of the proposal, or both, as appropriate. Links to data management requirements and plans relevant to specific Directorates, Offices, Divisions, Programs, or other NSF units are available on the NSF website at <http://www.nsf.gov/bfa/dias/policy/dmp.jsp>. See [Chapter II.C.2.j](#) of the GPG for further information about the implementation of this requirement.

Postdoctoral Researcher Mentoring Plan: As a reminder, each proposal that requests funding to support postdoctoral researchers must include, as a supplementary document, a description of the mentoring activities that will be provided for such individuals. Please be advised that if required, FastLane will not permit submission of a proposal that is missing a Postdoctoral Researcher Mentoring Plan. See [Chapter II.C.2.j](#) of the GPG for further information about the implementation of this requirement.

Revision Summary

The Alliances for Broadening Participation in STEM (ABP) solicitation is no longer available. This solicitation covers science, technology, engineering and technology (STEM) recruitment and retention funding opportunities (undergraduate and postbaccalaureate) through the NSF Louis Stokes Alliances for Minority Participation (LSAMP) program only.

New alliances are encouraged to include community colleges in the partnership, where feasible. LSAMP support for community colleges must be used to facilitate student preparation for transfer to 4-year institutions and ultimately to STEM B. S. degree attainment.

Beginning in FY2011, the NSF LSAMP Bridge to the Doctorate (BD) activity will cover annual student stipends of \$30,000 and annual cost of education allowance of \$10,500 for a cohort of 12 LSAMP students. The maximum support for this activity is \$987,000 for 24 months.

A new funding opportunity is available for piloting regional **Louis Stokes Centers of Excellence in Broadening Participation**. Louis Stokes Centers of Excellence in Broadening Participation are research, dissemination and outreach-focused with opportunities

to partner with non-LSAMP participating institutions and other STEM organizations. An intended result from the research activities is to help inform the public, LSAMP community and NSF on broadening participation in science, technology, engineering and mathematics (STEM) education. Wide latitude is provided to proposers to design innovative strategies and activities, including cyber-enabled activities, that will result in measurable outcomes from the initial investment. Centers are not intended as a primary source of student support or to supplement current LSAMP awards. Up to 5% of annual budgets may be devoted to student support.

Centers will be required to construct partnerships with at least one research organization, S&T center, national laboratory, industry, private foundation or professional STEM organization that can contribute to evidence-based results in STEM education and have the capability to provide high quality research experiences for undergraduate students and faculty. The partnership may consist of majority and minority-serving institutions, including community colleges. Collaborative (linked) proposals of up to three organizations may be submitted for support.

LSAMP-funded community colleges with demonstrated success in student transfer to four-year institutions in STEM disciplines are encouraged to submit consortia proposals for Center funding. In accordance with eligibility guidelines, at least one non-academic organization must be included in the partnership.

Lead participants must be NSF LSAMP-funded institutions with demonstrated experience in attracting and retaining significant numbers of students from underrepresented minority populations in STEM disciplines at pre-college, undergraduate and graduate levels and into the STEM workforce.

In FY2012, up to two awards of \$2.5 million total will be made for 5 years. A blue-ribbon team of site visitors will conduct a mid-term review to assess progress for continued funding.

The LSAMP Education Research Projects track has been renamed the Broadening Participation Research in STEM Education (BPR) track. The LSAMP BPR track provides support to research projects that seek to enhance understanding of the participation of underrepresented groups in STEM education, inform education practices and interventions, and assess impact of efforts to increase successful retention, degree completion, and transition to graduate school or the workforce among underrepresented minority students.

Proposals for the Directorate for Education and Human Resources (EHR) Innovation through Institutional Integration (I³) Activity are not being accepted for the 2011 competition and information about this track has been deleted. Please refer to [NSF 11-042](#) for further information on the EHR I² Activity.

A new focus of the LSAMP program is the recruitment and retention of Veterans in STEM fields as a means to diversify and increase the STEM workforce. Implementation strategies that recruit a cohort of veterans and suggest strategies to retain them are strongly encouraged.

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

Louis Stokes Alliances for Minority Participation

Synopsis of Program:

The Louis Stokes Alliances for Minority Participation (LSAMP) program provides funding for new, mid-level and senior-level alliances, the Bridge to the Doctorate (LSAMP-BD) Activity, and knowledge generation activities in broadening participation, e.g., research on topics in STEM education related to retention and persistence of students from populations underrepresented in STEM majors and careers. In FY2012, the program plans to support up to two pilot regional Louis Stokes Centers of Excellence in Broadening Participation which will further scholarly research in broadening participation in STEM disciplines and mentor institutions regionally that have interest in increasing STEM B. S. degrees to underrepresented minorities but are not currently participating in one of the 41 existing alliances.

The LSAMP program assists universities and colleges in diversifying the STEM workforce through their efforts at significantly increasing the numbers of students successfully completing high quality degree programs in science, technology, engineering and mathematics (STEM) disciplines. Particular emphasis is placed on transforming STEM education through innovative recruitment and retention strategies and experiences in support of groups that historically have been underrepresented in STEM disciplines: African-Americans, Alaskan Natives, Native Americans, Hispanic Americans, and Native Pacific Islanders. The knowledge generation portfolio contributes to the body of literature on successful practices in student recruitment, retention, persistence, and attainment of STEM undergraduate and graduate degrees, especially for the previously mentioned populations underrepresented in STEM disciplines.

Managed synergistically, the LSAMP program enables seamless transitions from pre-college to the STEM baccalaureate to attainment of the doctorate and entry to the STEM professoriate. Support begins at the baccalaureate level with emphasis on development of broad-based regional and national alliances of academic institutions, school districts, state and local governments, and the private sector to increase the diversity and quality of the STEM workforce. Eligible LSAMP undergraduate students may receive continued support for up to two additional years of STEM post baccalaureate study through the Bridge to the Doctorate (BD) Activity. BD participants are expected to transition to STEM Ph.D. programs and the professoriate and/or STEM workforce.

Linkages with NSF projects and other graduate programs in the nation furthers the graduate education experience of underrepresented STEM students through the doctorate level, preparing them for fulfilling opportunities and productive careers as STEM faculty and research professionals.

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 or Cooperative Agreement

Estimated Number of Awards: 21 to 29 In FY2011, this includes 10 to 12 BD grants of \$987,000 each for 24 months. In FY2012, this includes 8-10 new LSAMP cooperative agreements of up to \$1,000,000 per year for 60 months; 1-3 Broadening Participation Research in STEM Education awards of up to \$250,000 for 24 months; and, up to 2 pilot center awards of up to \$2,500,000 over 60 months.

Anticipated Funding Amount: \$19,000,000 to \$26,000,000 Subject to the availability of funds.

Eligibility Information

Organization Limit:

Proposals may only be submitted by the following:

- Universities and Colleges - Universities and two- and four-year colleges (including community colleges) accredited in, and having a campus located in the US, acting on behalf of their faculty members. Such organizations also are referred to as academic institutions.

PI Limit:

LSAMP, LSAMP-BD, LSAMP Centers of Excellence: To promote institutional commitments to increase the quality and quantity of underrepresented minorities in STEM disciplines at the undergraduate level, the President or Provost of the lead institution should serve as the Principal Investigator. A full explanation should be provided for a PI designation in variance with this requirement. Co-principal investigators from partner institutions may be designated, as appropriate, for the project.

Broadening Participation Research in STEM Education: Eligible PI/co-PI(s) for proposals applying for educational research or evaluation support should be the cognizant faculty member(s) conducting or responsible for the research or evaluation project. Only LSAMP-funded institutions are eligible to submit proposals for this funding opportunity.

Limit on Number of Proposals per Organization:

LSAMP and LSAMP-BD: Only one proposal per alliance.

LSAMP Centers of Excellence: Only one proposal per LSAMP institution, including participation in a collaborative proposal.

Broadening Participation Research in STEM Education: Only one educational research proposal will be accepted per alliance. Partner institutions must coordinate submissions of educational research proposals with their lead institution.

Limit on Number of Proposals per PI:

LSAMP, LSAMP-BD, LSAMP Centers of Excellence, and Broadening Participation Research in STEM Education Proposals: An individual may participate in only one proposal whether as a PI or co-PI.

Proposal Preparation and Submission Instructions

A. Proposal Preparation Instructions

- **Letters of Intent:** Not Applicable
- **Preliminary Proposal Submission:** Not Applicable
- **Full Proposals:**
 - Full Proposals submitted via FastLane: NSF Proposal and Award Policies and Procedures Guide, Part I: 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/publications/pub_summ.jsp?ods_key=grantsgovguide)

B. Budgetary Information

- **Cost Sharing Requirements:** Inclusion of voluntary committed cost sharing is prohibited.
- **Indirect Cost (F&A) Limitations:** Not Applicable
- **Other Budgetary Limitations:** Not Applicable

C. Due Dates

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

July 28, 2011

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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: Additional award conditions apply. Please see the full text of this solicitation for further information.

Reporting Requirements: Additional reporting requirements apply. Please see the full text of this solicitation for further information.

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I. INTRODUCTION

The Louis Stokes Alliances for Minority Participation (LSAMP) is a program in the Division of Human Resource Development (HRD), which is part of the Directorate for Education and Human Resources (EHR) of the National Science Foundation.

The National Science Foundation (NSF) supports research at the frontiers of knowledge, across all fields of science, technology, engineering, and mathematics (STEM) and all levels of STEM education. The NSF enables innovation and discovery in science, technology, engineering, and mathematics by educating and preparing a diverse and able STEM workforce who are motivated and prepared to participate at the frontiers of science. NSF is committed to reaching across society to ensure that the rich diversity of the nation's cultures is well represented in the STEM workforce and that individuals engaged in STEM fields are trained to participate fully in the global research enterprise.

The Directorate for Education and Human Resources (EHR)

The mission of EHR is to achieve excellence in U. S. STEM education at all levels and in all settings (both formal and informal) in order to support the development of a diverse and well-prepared workforce of scientists, technicians, engineers, mathematicians and educators and a well-informed citizenry that has access to the ideas and tools of science and engineering. Specific EHR goals are:

1. Prepare the next generation of STEM professionals and attract and retain more Americans to STEM careers.
2. Develop a robust research community that can conduct rigorous research and evaluation that will support excellence in STEM education and that integrates research and education.
3. Increase the technological, scientific and quantitative literacy of all Americans so that they can exercise responsible citizenship and live productive lives in an increasingly technological society.
4. Broaden participation (individuals, geographic regions, types of institutions, STEM disciplines) and close achievement gaps in all STEM fields.

The Division of Human Resource Development

The Division of Human Resource Development (HRD) serves as a focal point for NSF's agency-wide commitment to enhancing the quality and excellence of STEM education and research through broadening participation by historically underrepresented groups - minorities, women, and persons with disabilities. Priority is placed on investments that promise innovation and transformative strategies and that focus on creating and testing models that ensure the full participation of and provide opportunities for the educators, researchers, and institutions dedicated to serving these populations. Programs within HRD have a strong focus on partnerships and collaborations in order to maximize the preparation of a well-trained scientific and instructional workforce for the new millennium.

HRD Theory of Change

HRD's fundamental mission of broadening participation in STEM is embedded in the greater EHR and NSF goals. A basic premise of all HRD programs is that increasing the successful participation of individuals from historically underrepresented groups in STEM will result in quality research; the implementation and testing of evidence-based practices; critical review of program results to assess impact; data-driven continuous improvement; and broad dissemination of program findings for wide uptake of effective strategies. HRD, through these activities, ties directly to the development and expansion of a diverse, highly capable STEM workforce that can lead innovation and sustain U. S. competitiveness in the science and engineering enterprise.

HRD has an overall goal to increase the successful participation of underrepresented minorities, women and girls, and persons with disabilities in STEM. Each HRD program with specific goals and objectives related to the larger goal of broadening participation, carries out its work based on similar operating principles: (1) Establish priorities and develop solicitations that reflect their goals, priorities, and the state of the field; (2) Fund research to build the knowledge base in the field, especially in the area of broadening participation in STEM; (3) Fund the implementation of evidence-based educational practices or strategies, such as Alliances, STEM capacity-building, and transition to the workforce activities; (4) Monitor funded projects and require rigorous project evaluation to determine impact of NSF projects and inform project development; (5) Use findings from monitoring and evaluation activities to improve or adjust program parameters; and (6) Require and support dissemination of findings from projects to assure broader impact of funded projects.

To meet the challenges presented by the nation's increasing needs in STEM, the Louis Stokes Alliances for Minority Participation (LSAMP) is committed to the development of highly competitive STEM students from historically underrepresented minority populations - African-Americans, Hispanics, Native Americans, and Pacific Islanders - from pre-college through postbaccalaureate levels at our nation's colleges and universities.

II. PROGRAM DESCRIPTION

LOUIS STOKES ALLIANCES FOR MINORITY PARTICIPATION (LSAMP)

Since its establishment by Congressional mandate in 1991, the LSAMP program supports increasing the participation and advancement of underrepresented minorities and minority-serving institutions in line with HRD's mission.

The 2006 evaluation report entitled "Revitalizing the Nation's Talent Pool in STEM" (<http://www.urban.org/url.cfm?ID=311299>) references the research and theoretical basis of the LSAMP program. This evaluation report also serves as recent evidence of the program's success in implementing the model nationwide to address student persistence and retention in STEM disciplines at the undergraduate level.^[1]

The LSAMP program supports sustained and comprehensive approaches to broadening participation at the baccalaureate level. These approaches facilitate the production of students who are well prepared in STEM and motivated to pursue graduate education. Projects place emphasis on aggregate baccalaureate production; attention to individual student retention and progression to baccalaureate degrees; and aggregation of student progression to graduate school entry. In addition, expectations are placed on institutionalizing, disseminating and promoting the replication of strategies and collaborative approaches that have shown success in the transition of undergraduate STEM students to graduate STEM programs

Alliance Structure, Requirements, and Proposed Budget Guidelines

LSAMP alliances must be structured to address two interrelated requirements:

- First, the design of the alliance must be based on evidence of sound programmatic approaches. The organization of the alliance must prove to be successful in meeting well-defined needs, cost effective, and involve undergraduates in faculty research.
- Second, the proposed plan must be comprehensive and longitudinal, since fragmented or isolated efforts provide insufficient responses to the acknowledged scope and scale of the problem being addressed by the LSAMP program.

LSAMP implementation activities must produce demonstrable "near-term" increases in the numbers of STEM graduates with the promise of long-term change in the production of new Ph.D.s and their entrance into productive faculty or research careers. The strategy for implementing these projects must be clear, focused and based on evidence or "promising practices."

The program provides wide latitude to proposers in designing projects to achieve the stated LSAMP goals. The structure and content of proposed projects should be governed by differences in the institutional and organizational capabilities of alliance members, strategies for the formation of the alliance, and characteristics of specific localities. Project specifics may encompass a wide variety of activities. The project activities must form a feasible, logical, and comprehensive effort focused upon improving the undergraduate educational experience. While the primary focus of LSAMP is at the undergraduate level, projects must include activities that affect student advancement through one or more of the critical junctures during STEM education: from high school to college, between 2- and 4-year college, from undergraduate study to the workplace or from undergraduate to graduate school, and from graduate school

to faculty. These activities allow the LSAMP program to build linkages between the various sectors of the STEM community.

Successful programmatic approaches include, but are not limited to: (1) devoting careful attention to management and administrative collaboration among participating organizations to ensure long-term continuation of LSAMP or similar activities beyond the term of NSF financial support; and (2) developing specific evaluation plans and procedures for assessing qualitative and quantitative changes including the definition of a baseline of pre-LSAMP data which will be used to compare post-LSAMP retention, progression, and graduation rates in STEM fields.

Comprehensive and longitudinal plans are reflected in: (1) the establishment of alliances with members drawn from among community colleges, 4-year institutions, school systems, Federal/state/local government agencies, major national laboratories and centers, industry, private foundations, and professional STEM organizations, as necessary to achieve the proposed LSAMP objectives; (2) incorporation of academic, curricular, and co-curricular enrichment activities designed to improve instructional performance as well as increase the motivation, performance, and progression of talented students within STEM undergraduate degree programs in preparation for graduate degree programs; and (3) as necessary, direct student support for academic year and summer enrichment activities.

Alliances at each level are expected to develop **innovative** recruitment and retention strategies that are sustained and institutionalized. Successful proposals must demonstrate past successes as well as **added value**, e.g., efforts at transforming the academic and/or research environment, in producing highly competitive underrepresented minority students matriculating in STEM disciplines.

The following are specific requirements for support at each alliance level under the LSAMP program. Proposals will be evaluated on their potential to increase historically underrepresented minority participation in STEM disciplines. Thus, NSF requires potential awardees to rigorously evaluate recruitment and retention programs and activities.

NEW ALLIANCES

Alliances are considered new if they have not received previous LSAMP funds and meet the criteria for an LSAMP partnership alliance described under "eligible organizations." The president, provost or designee of the lead institution of a prospective new alliance **must** contact the NSF LSAMP program for guidance prior to submitting a proposal for funding.

First time applicants **must** focus on baccalaureate production of historically underrepresented minorities in STEM and must define their current baseline production of these minority baccalaureate recipients in STEM fields. All applicants must commit to a significant increase in baccalaureate production in STEM fields within a five-year award period and justify the level of increase they define as significant. Subsequent support will be contingent on evidence of success in areas of individual student recruitment, retention and progression to baccalaureate degrees. **Note:** *Once an award is made, the original baseline goals may not be adjusted through additions and/or reductions in alliance membership. A clear plan of action to significantly increase B. S. STEM degrees at individual 4-year institutions is essential for a successful proposal.*

New alliances are required to focus on innovative recruitment and retention interventions at the undergraduate level with particular emphasis on pre-college, freshman and sophomore persistence in STEM disciplines.

MID-LEVEL ALLIANCES

Alliances are considered at mid-level if they have received a minimum of 5 years of continuous LSAMP support and (1) focus on the recruitment and retention of freshman and sophomore students in STEM disciplines and (2) support early interventions for the retention of upper level students with an emphasis on graduate matriculation.

Proposals from previously funded alliances must include initial plans to achieve institutionalization of effective pathways to STEM graduate study and careers for baccalaureate recipients at participating institutions. Mid-level alliances seeking further support opportunities for graduate level academic and research activities should contact program officials in the "Alliances for Graduate Education and the Professoriate" program and the Division of Graduate Education within the NSF Directorate for Education and Human Resources.

SENIOR-LEVEL ALLIANCES

Alliances are considered senior-level if they have received 10 years or more of LSAMP support and have institutionalized successful practices resulting in measurable impact in the STEM enterprise for students from underrepresented populations. Senior alliances should have conducted a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis and/or other analyses of their STEM recruitment and retention strategies. Continued funding requests should address new and/or improved strategies from the findings that contribute to higher retention and graduation rates as well as increased competitiveness for graduate study in STEM disciplines.

Highly competitive senior-level proposals must provide evidence of impact and institutionalization of existing successful practices as well as evidence of innovative and transformative practices in STEM retention strategies.

Both international research and community college components must be included in proposals from senior-level alliances.

International Research Component: Researchers Bowman and Sage (2002) cite the need for students of science to participate actively in scientific research to gain first-person knowledge of the conventions of science. Immersion in undergraduate research, including international research, serves as a means to prepare students for graduate programs in the sciences.[2]

Preparing a diverse, globally-engaged scientific and technological workforce necessitates strengthening international research opportunities for students underrepresented in STEM fields. Senior-level alliances, having had the experience to build and institutionalize successful practices in STEM education, are required to incorporate a plan to engage STEM students in international research opportunities, specifically laboratory experiences. The budget must clearly identify student support for international activities. (**Note:** International activities must reach beyond conference attendance and cultural experiences to be considered a competitive international research experience.)

Community College Component: Community colleges are a rich pool for recruitment to STEM programs at four-year institutions. The National Center for Education Statistics reports that approximately 11.2% of Associate-level degrees awarded at community colleges were in STEM disciplines, specifically computer and information sciences, engineering and engineering technology.[3]

Improving retention and transfer rates to four-year STEM degree-granting institutions for students matriculating in STEM programs at community colleges is a priority. Strengthening learning communities and peer-led team learning at these institutions, providing support and opportunities for student research experiences (research methods, hands-on experimentation, conference attendance and presentation), social integration, and institutional collaboration among two- and four year institutions are suggested interventions to prepare community college students for transfer into STEM programs at baccalaureate degree-granting institutions.

Proposals from senior-level alliances must incorporate a strategic plan to establish meaningful community college interventions and connections for students and faculty with 4-year institutions. Highly competitive proposals must provide strong evidence of linkages. Senior alliances requesting renewal funding must show impact, e.g., increases in transfer rates, improved articulation agreements, etc., from prior LSAMP support for community colleges.

GUIDELINES FOR BUDGET DEVELOPMENT

Guidelines for requesting funds for **new** alliances are indicated as follows:

- \$700,000 to \$1,000,000 per year for alliances that award more than 500 STEM baccalaureate degrees to underrepresented minorities annually;
- Approximately \$500,000 to \$700,000 per year for alliances that award between 300-500 STEM baccalaureate degrees to underrepresented minorities annually; and,
- \$500,000 or less per year for alliances that award fewer than 300 STEM baccalaureate degrees to underrepresented minorities annually.

Funding guidelines for **mid-level** alliances are stipulated as follows:

- \$700,000 per year for alliances that award 700 or more STEM baccalaureate degrees to underrepresented minorities annually;
- Approximately \$500,000 to \$700,000 per year for alliances that award between 500-700 STEM baccalaureate degrees to underrepresented minorities annually; and,
- \$500,000 or less per year for alliances that award fewer than 500 STEM baccalaureate degrees to underrepresented minorities annually.

Funding guidelines for **senior-level** alliances are provided as follows:

- \$800,000 per year for projects that award 1,000 or more STEM baccalaureate degrees to underrepresented minorities annually;
- Approximately \$600,000 to \$700,000 per year for projects that currently award between 700-1,000 STEM baccalaureate degrees to underrepresented minorities annually; and,
- \$500,000 or less per year for projects that award fewer than 700 STEM baccalaureate degrees to underrepresented minorities annually.

LSAMP awards will not exceed \$1.0 million per year. The awards will be managed through Cooperative Agreements for up to 5 years. Progress will be assessed annually prior to continued NSF support. LSAMP projects nearing the completion of the five-year funding period may submit a competitive renewal proposal for an additional five years of support.

Requested financial support should be clearly justified with established recruitment and selection eligibility as well as accountability criteria.

Allowable student financial support is limited to the following activities: employing team building principles (e.g., mentoring, collaborative learning experiences, small group clustering in academic sections, structured work-study groups); individual skill development (e.g., participation in special seminars and colloquia); involvement in U. S. or international research activities (e.g., stipends or salary for academic-year or summer research programs); and, related personal career support, which includes counseling and mentoring, preparation for graduate school and other activities designed to enhance student academic experiences.

All students receiving stipends must be citizens or permanent residents of the United States or its possessions.

REGIONAL LOUIS STOKES CENTERS OF EXCELLENCE IN BROADENING PARTICIPATION (PILOT)

In fiscal 2012, the LSAMP program plans to support up to two (2) Louis Stokes Centers of Excellence in Broadening Participation. The mission of the Centers is to serve as exemplar sites in innovative STEM learning, research collaboration, interface and leveraging of resources to advance STEM education and broadening participation, particularly for students underrepresented and underserved in these disciplines. Activities may also be concentrated in areas of dissemination and outreach, including regional and state-wide activities involving mentoring and outreach to non-LSAMP institutions in broadening participation in STEM disciplines. An intended result from the research activities is to help inform the public, LSAMP community and NSF about effective broadening participation in science, technology, engineering and mathematics (STEM) education. Center proposals are not intended to serve as a resource for additional student support for existing LSAMP projects. Proposals may request up to 5% of the annual budget for student support.

In developing components of the Center, proposers should consider the following broadening participation activities:

- providing opportunities for the exchange of practical, theory-based information and ideas through the convening of conferences, teleconferences, institutes, and workshops;
- publishing monographs, contributing to peer-reviewed journals, developing electronic newsletters, guides, books;
- generating and supporting research and scholarship;
- hosting visiting scholars; and,
- developing resource centers and/or administrating a website and listserves on broadening participation topics.

Particular emphasis for the Centers is on comprehensive recruitment and retention practices at the pre-college and undergraduate critical education junctures for STEM majors, especially in disciplines where recruitment efforts are lacking or not readily introduced to underrepresented minority students.

Centers are required to construct partnerships with at least one research organization, S&T center, national laboratory, industry, private foundation, or professional STEM organization that can contribute to evidence-based results in STEM education and have the capability to provide high quality research experiences for undergraduate students and faculty. The partnership should consist of majority and minority-serving institutions, including community colleges.

Collaborative proposals of up to three (3) partnering institutions will be accepted to accomplish the mission of the centers. Minority-serving institutions, (Historically Black Colleges and Universities, Hispanic-serving Colleges and Universities, Tribal Colleges and Universities) are encouraged to submit as lead participants.

Community college eligibility for Center funding: In addition to participating as partner institutions for Center support, consortia of LSAMP-funded community colleges with demonstrated evidence of successful transfer of students to 4-year STEM degree programs are encouraged to apply for Center funding. Non-academic organizations must also be included in the collaboration under Center eligibility criteria.

Only one of the partner institutions may be a non-academic organization such as a professional society, laboratory, or other informal science organization. Only educational institutions may submit as the lead institution in a non-collaborative proposal submission.

LSAMP-funded **institutions** within 15 or more years of NSF LSAMP funding with demonstrated experience in and evidence of increasing STEM B. S. retention and graduation rates are eligible to submit a Center proposal. Proposers will be provided wide latitude in designing the activities of the regional Louis Stokes Centers of Excellence. Proposed budgets should include support for rigorous evaluation and travel to annual NSF grantee meetings in the Washington, DC metropolitan area over the duration of the award.

Institutions submitting proposals for this funding opportunity should begin the title of the proposal with the following: **PILOT REGIONAL LOUIS STOKES CENTER:**

BRIDGE TO THE DOCTORATE (BD) ACTIVITY

Senior-level LSAMP alliances are eligible for Bridge to the Doctorate support. BD funding provides eligible students with financial support for two years of graduate study.

Programmatic activities for BD support must describe effective recruitment and retention strategies in STEM graduate education and must be based on current research for attracting, retaining, educating and graduating the participants. Proposers must provide documentation of past performance at the designated graduate institutional site of retaining, graduating, and placing significant numbers of LSAMP graduates into STEM doctoral-degree programs. A plan for formally connecting a significant number of newly matriculated LSAMP students, including master's degree graduates, to doctoral degree programs is expected.

Successful projects must demonstrate substantive and formal connection to other NSF-funded programs, such as Centers of Research Excellence in Science and Technology (CREST), NSF research centers, Integrative Graduate Education and Research Traineeship Program (IGERT), Graduate Teaching Fellows in K-12 Education Program (GK-12), or Alliances for Graduate Education and the Professoriate (AGEP). Successful BD projects must ensure that a substantive number of first year BD participants apply to NSF's Graduate Research Fellowship Program (GRFP). Similarly, BD applicants must present an action plan describing dollar support and sources for continuing students in years three and beyond towards doctorate degrees. Action plans identifying strategies for connecting the transfer of third-year BD recipients interested and eligible for admission to STEM doctoral programs are required. Recruitment of students is expected from all STEM disciplines. A concentration of students in one discipline within a cohort is strongly discouraged.

Tracking of project participants that enter doctoral degree programs and the workforce, including the professoriate, is also expected. Other highly valued activities include regular BD meetings, mentoring of students, resources to support annual student participation at professional meetings, seminars on productive academic efforts, demystifying degree programs, and available career options. A critical mass of twelve (12) LSAMP STEM graduate students is required under this activity.

The NSF contribution to graduate student stipends is \$60,000 over two years for each of twelve students. NSF will provide a cost-of-education allowance to the institution for tuition, health insurance, and other normal fees up to \$10,500 per year for up to two years for each of twelve students. Additional funds up to \$15,000 may be requested for activities in other cost categories (e.g., salaries, wages and fringe benefits, travel, materials and supplies, and applicable indirect costs) that contribute to the effectiveness of the BD program; any such costs must be listed under the appropriate NSF budget categories and must be explained in the Budget Justification. Costs for project evaluation are allowable. Salary support for administrative personnel is not allowable under this funding opportunity. Organizations should propose in accordance with their current disclosed accounting practices.

BD proposals must include student tracking and evaluation plans. Award notifications will include language requiring recipients of BD funding to provide essential data for NSF-sponsored program evaluations.

The maximum request per alliance for BD support is \$987,000. All BD student support costs should be listed on Line F, "Participant Support," on the proposal budget. **All students receiving stipends must be citizens or permanent residents of the United States or its possessions.**

IMPORTANT NOTE: Requests for BD support must be submitted as a new proposal in FastLane or Grants.gov. Supplemental requests will be returned without review. BD proposals must be submitted by the lead institution of the LSAMP alliance. Successful proposals will be awarded as two-year standard grants. **Residual funds from BD grants may not be reallocated to other cohorts.** Annual and final reporting requirements are applicable for BD awards.

PROJECT EVALUATION

Each LSAMP and BD proposal submission is expected to include plans for rigorous project evaluation. Proposals should provide clear goals, objectives, benchmarks, and indicators of progress that will inform reviewers of the proposers' understanding of essential recruitment and retention factors for judging accountability, both quantitative (underrepresented minority enrollment and baccalaureate degree production) and qualitative (the process of change in organizational culture, impact and progress in developing highly competitive, well-prepared STEM students).

The evaluation plan must correspond to the overall stated goals and objectives of the project and address measurable outcomes from the investment to be reported to NSF. **Alliance and Center Proposals Only:** Formative and summative evaluations should include holistic assessments of the collaboration/partnership in addition to evaluation of the interventions. Submission of external evaluation reports and outcomes must accompany year 4 annual project reporting. Reporting of subsequent evaluation activities and project outcomes should be included in the final project report.

BROADENING PARTICIPATION RESEARCH IN SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS (STEM) EDUCATION

The Broadening Participation Research in STEM Education (BPR) track (formerly Education Research Projects) provides support to research projects that seek to create and study new models and innovations in STEM teaching and learning, enhance understanding of the participation of diverse groups in STEM education, and inform STEM education practices and interventions. BPR projects add new research-based strategies and models to broadening participation in STEM and increase the capacity of scholars to conduct this type of research. Proposed research may investigate behavioral, cognitive, affective, learning and social differences as well as organizational, institutional or systemic processes that may impact participation in STEM education. BPR projects are likely to use methods from sociology, psychology, anthropology, economics, statistics, and other social and behavioral science and education disciplines. Successful proposals will be grounded in appropriate theory and incorporate recent innovations and advances in research methodologies, conceptual frameworks and/or data gathering and analytic techniques.

The goal of this track is to enhance our understanding of the underlying issues affecting the differential participation rates of students from underrepresented groups in STEM. The BPR track will catalyze acquisition of knowledge on what types of interventions have what types of impact on learning, persistence, and success in STEM for which groups under what conditions and in what contexts. The Broadening Participation Research in STEM Education track exists across programs in the Division of Human Resource Development (HRD) and may be found in the following solicitations: Louis Stokes Alliances for Minority Participation (LSAMP); Historically Black Colleges and Universities Undergraduate Program (HBCU-UP); Research in Disabilities Education (RDE); Research on Gender in Science and Engineering (GSE); and Tribal Colleges and Universities Program (TCUP). Priorities and restrictions on study populations and awardee institutions may apply depending on the HRD program to which the proposal is submitted. Proposals submitted to the LSAMP program for the BPR track are intended to be small-scale research or evaluation

projects with the potential for scale-up.

LSAMP Educational Research Projects on STEM Learning

LSAMP alliance member institutions are eligible to submit proposals for educational research projects focused on baccalaureate attainment in STEM by African-Americans, Alaskan Natives, Hispanic Americans, Native Americans, and Native Pacific Islanders. In addition, educational research proposals which address other emerging topics in STEM education and learning at the undergraduate and graduate levels are acceptable submissions.

Proposals for LSAMP educational research projects should be based on a research design that incorporates appropriate and proven methodologies and strategies to (1) identify the research questions, (2) implement the collection and analysis of data, and (3) interpret the resulting measures and findings generated by the study. The results should lead to enhanced understanding of issues such as (but not limited to):

- factors that facilitate (or inhibit) increased minority undergraduate access to STEM careers as well as increased access of traditionally underrepresented groups to STEM graduate study at department and/or institutional levels;
- factors, including curriculum development, that impact success in STEM learning and achievement;
- studies of what motivates choice of, or retention in, STEM careers for underrepresented minority populations.

The proposal must address the usefulness of the anticipated outcomes to the body of knowledge in transforming student learning, transforming recruitment and retention strategies and practices in STEM education at critical educational junctures as well as the STEM workforce, for example.

LSAMP educational research studies should reflect explicit cognizance of the broad variety of institutions of higher education involved and should address the unique challenges and opportunities posed by that variety. Outcomes of the proposed research should be developed with the intent to provide a framework to inform the education community, including faculty and teachers, administrators, policymakers, parents and the public. It is anticipated that these cooperative efforts will also guide the future development of learning experiences as well as foster the retention and academic success of diverse students in STEM.

Education research projects will be supported at the level of up to \$250,000 for up to 24 months. Eligible institutions may submit no more than one proposal per competition. Proposal submission may be made through the partner institution or through the lead alliance institution. Partner institutions must coordinate submissions with their lead institution.

Requests for support for research projects must be submitted as new proposals in the FastLane or Grants.gov systems. This LSAMP solicitation number should be referenced. **Proposal titles should begin with the words "LSAMP Broadening Participation Research:".**

Additional funding opportunities for broader educational research topics in student learning, recruitment, retention, persistence to degree, and other STEM educational research for underrepresented minority populations are available throughout the Foundation. Please refer to the NSF Website for additional information, especially funding opportunities in the program on Research and Evaluation on Education in Science and Engineering (REESE).

[1]Clewell, B. C., de Cohen, C. C., Tsui, L., & Deterdening N. (2006). *Revitalizing the Nation's Talent Pool in STEM: Science, Technology, Engineering, and Mathematics*. Washington, DC: Urban Institute.

[2] Bowman, M. H., Stage, F. K. (2002). Personalizing the goals of undergraduate research. *Journal of College Science Teaching*, 32(2), 120-25.

[3]United States. Institute of Education Statistics, National Center for Education Statistics. *Stats in Brief: Changes in Postsecondary Awards Below the Bachelor's Degree: 1997 to 2007* Online. November 2009. Available: <http://nces.ed.gov/pubs2010/2010167.pdf> accessed November 2009.

SUPPLEMENTAL FUNDING FOR UNDERGRADUATE RESEARCH THROUGH THE LOUIS STOKES ALLIANCES FOR MINORITY PARTICIPATION PROGRAM

NSF-DoE Cooperative Activity

Supplemental funding through the NSF LSAMP program may be requested for student and faculty support for summer undergraduate research experiences at the Department of Energy laboratories (subject to the availability of funds). Only alliances with active LSAMP awards are eligible to submit requests for supplemental funding. The next deadline to submit requests for funding is March 5, 2012.

Please refer to NSF Dear Colleague Letter, [NSF 10-019](#), for additional information on undergraduate research opportunities available through DoE laboratories as well as the DoE website.

III. AWARD INFORMATION

ESTIMATED PROGRAM BUDGET AND NUMBER OF AWARDS IS SUBJECT TO THE AVAILABILITY OF FUNDS:

LSAMP Alliance awards: Will not exceed \$1,000,000 per year. The awards will be managed through cooperative agreements and grants for up to 5 years. Progress will be assessed annually prior to continued NSF support.

Bridge to the Doctorate awards: The maximum award for BD support is \$987,000 over 24 months. The NSF contribution to graduate student stipends is \$60,000 for each of twelve students for two years. NSF will provide a cost-of-education allowance to the institution for tuition, health insurance, and other normal fees up to \$10,500 per year for up to two years for each of twelve students. Additional funds up to \$15,000 may be requested for activities in other cost categories (e.g., salaries, wages and fringe benefits, travel, materials and supplies, and applicable indirect costs) that contribute to the effectiveness of the BD program; any such costs must be listed under the appropriate NSF budget categories and must be explained in the Budget Justification. Costs for project evaluation are allowable. Salary support for administrative personnel is not allowable under this funding opportunity. Organizations should propose in accordance with their current disclosed accounting practices.

Broadening Participation Research in STEM Education awards: The maximum award amount is up to \$250,000 for up to 24 months. Louis Stokes Centers of Excellence in Broadening Participation awards: The maximum award amount is \$2,500,000 over 60 months. Supplemental funding will not be provided for any of the above projects.

IV. ELIGIBILITY INFORMATION

Organization Limit:

Proposals may only be submitted by the following:

- Universities and Colleges - Universities and two- and four-year colleges (including community colleges) accredited in, and having a campus located in the US, acting on behalf of their faculty members. Such organizations also are referred to as academic institutions.

PI Limit:

LSAMP, LSAMP-BD, LSAMP Centers of Excellence: To promote institutional commitments to increase the quality and quantity of underrepresented minorities in STEM disciplines at the undergraduate level, the President or Provost of the lead institution should serve as the Principal Investigator. A full explanation should be provided for a PI designation in variance with this requirement. Co-principal investigators from partner institutions may be designated, as appropriate, for the project.

Broadening Participation Research in STEM Education: Eligible PI/co-PI(s) for proposals applying for educational research or evaluation support should be the cognizant faculty member(s) conducting or responsible for the research or evaluation project. Only LSAMP-funded institutions are eligible to submit proposals for this funding opportunity.

Limit on Number of Proposals per Organization:

LSAMP and LSAMP-BD: Only one proposal per alliance.

LSAMP Centers of Excellence: Only one proposal per LSAMP institution, including participation in a collaborative proposal.

Broadening Participation Research in STEM Education: Only one educational research proposal will be accepted per alliance. Partner institutions must coordinate submissions of educational research proposals with their lead institution.

Limit on Number of Proposals per PI:

LSAMP, LSAMP-BD, LSAMP Centers of Excellence, and Broadening Participation Research in STEM Education Proposals: An individual may participate in only one proposal whether as a PI or co-PI.

Additional Eligibility Info:

LSAMP: An alliance may hold only one active award at a time. The alliance must consist of one or more graduate degree granting institution(s) as well as 2-4 year degree-granting institutions, including community colleges. **An institution may be a member in only one alliance.**

LSAMP Centers of Excellence: Only NSF LSAMP-funded institutions may submit as lead institutions. Eligibility as lead participants is limited to LSAMP institutions, including community colleges, with 15 years or more of successful LSAMP support with demonstrated experience in producing STEM undergraduates or community college transfer students matriculating in STEM disciplines, from underrepresented populations. Non-profit academic organizations, independent museums, observatories, research laboratories, professional societies or similar organizations in the U. S. associated with educational or research activities may participate as partners but may not be the lead institution for a Center proposal.

Non-LSAMP institutions/organizations may participate as a Center partner only. **COLLABORATIVE (LINKED) PROPOSALS ARE LIMITED TO THREE ORGANIZATIONS.**

LSAMP-BD: Only LSAMP alliances at the senior level may apply for BD funding. Proposals for BD funding must be submitted by the LSAMP alliance lead institution only. BD sites at alliance institutions other than the lead alliance institution will be funded through subaward agreements.

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.

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.4 of the Grant Proposal Guide provides additional information on collaborative proposals.

After selecting the LSAMP program solicitation number on the COVER SHEET, enter the program name - the "NSF Unit Consideration" must be specified - select Alliances for Minority Participation (AMP) for LSAMP. The activity LSAMP Bridge to the Doctorate, LSAMP Educational Research Project or LSAMP Center of Excellence Project must be included in the title of the proposal. (Grants.gov users: The program solicitation number will be pre-populated by Grants.gov on the NSF Grant Application Cover Page. Refer to Section VI.1.2 of the NSF Grants.gov Application Guide for specific instructions on how to designate the NSF Unit of Consideration.)

Refer to Section II, Program Description, for specific proposal preparation information and instructions. Proposals failing to clearly identify the appropriate program/activity may be returned without review at the discretion of NSF program staff.

B. Budgetary Information

Cost Sharing: Inclusion of voluntary committed cost sharing is prohibited

C. Due Dates

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

July 28, 2011

LSAMP Bridge to the Doctorate

October 07, 2011

LSAMP Alliance Proposals

October 07, 2011

Broadening Participation Research in STEM Education Proposals

October 07, 2011

Pilot Regional LSAMP Centers of Excellence in Broadening Participation Proposals

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. Comprehensive information about using Grants.gov is available on the Grants.gov Applicant Resources webpage:

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 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 where they will be reviewed if they meet NSF proposal preparation requirements. 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 of interest with the proposal.

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, original, or potentially transformative 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?

Examples illustrating activities likely to demonstrate broader impacts are available electronically on the NSF website at: <http://www.nsf.gov/pubs/gpg/broaderimpacts.pdf>.

Mentoring activities provided to postdoctoral researchers supported on the project, as described in a one-page supplementary document, will be evaluated under the Broader Impacts criterion.

NSF staff also 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:

For proposals to the LSAMP Program, additional review criteria will apply.

SPECIAL REVIEW CRITERIA FOR PROPOSALS SUBMITTED TO THE LSAMP PROGRAM

All proposals, including the pilot Regional Louis Stokes Centers of Excellence in Broadening Participation, will be reviewed for strategic fidelity, relevance and usefulness of the proposed interventions and anticipated outcomes, evidence of institutionalization and sustainability, and contribution to the body of knowledge in recruitment and retention of underrepresented minorities in science, technology, engineering, and mathematics disciplines and into the workforce as well as the potential to transform STEM education and student learning.

In addition to the standard NSF review criteria of demonstrating intellectual merit and broader impacts of the project, reviewers will be asked to evaluate proposals in terms of linkages to other NSF programs and plans for rigorously evaluating the projects or programs over the duration of the grant period.

Reviewers will be asked to evaluate LSAMP proposals using the following program specific review criteria:

Linkages: Proposals should clearly demonstrate linkages to other NSF-funded programs, where possible, and the benefits to alliance students and faculty. For projects with BD funding, reviewers will be instructed to evaluate evidence of formal connections and involvement with AGEP institutions or other graduate education programs and organizations as well as the continuation of these connections through the STEM doctoral degree. Reviewers will be instructed to critically evaluate the evidence of meaning partnerships and the potential for broad, measurable and sustainable impact from new or continued investment in the activities.

Evaluation: Proposals will be evaluated on the rigor of the evaluation plan. In addition, the adequacy of resources and expertise to implement a rigorous evaluation over the duration of the award period will be assessed.

For LSAMP BPR proposals, reviewers will be tasked to assess the proposal in terms of topic (Is this an emerging STEM educational research topic?), research design and methodology, and the potential for the findings and/or recommendations to provide educators with practical and successful strategies for broader integration within educational systems (departments, institutions, alliances).

Innovativeness and Value-Added: All proposals will be evaluated on transformational program development in the academic and social environment (including the departmental, institutional and alliance levels) leading to the production of highly competitive students in STEM disciplines from underrepresented minority populations. Examples of transformational program development activities include, but are not limited, to: (1) cyber-enabled learning of STEM disciplines, (2) utilization

of STEM educators within the partnerships to enhance skills and knowledge content of the academic community, (3) professional development activities for the academic community and (4) increasing the understanding of science beyond the classroom.

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 nsfpubs@nsf.gov.

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

Special Award Conditions: In addition to general terms and conditions, special award conditions may be included in the cooperative agreements. For Bridge to the Doctorate awards, residual funds from standard grants may not be reallocated to other cohorts. No participant support funding will be approved for reallocation to support administration of the BD program nor for BD evaluation activities.

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, 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 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. The project outcomes report 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.

For LSAMP Alliances Only: All alliances are required to report enrollment, degree data and other data annually via the WebAMP reporting system.

VIII. AGENCY CONTACTS

General inquiries regarding this program should be made to:

- A. James Hicks, Program Director, 815 N, telephone: (703) 292-8640, fax: (703) 292-9018, email: ahicks@nsf.gov
- Martha James, Assistant Program Director, 815, telephone: (703) 292-7772, fax: (703) 292-9018, email: mjames@nsf.gov
- Maurice Dues, Program Specialist, 815, telephone: (703) 292-8632, fax: (703) 292-9018, email: mdues@nsf.gov

For questions related to the use of FastLane, contact:

- FastLane Help Desk, telephone: 1-800-673-6188; e-mail: fastlane@nsf.gov.
- Maurice Dues, Program Specialist, 815, telephone: (703) 292-8632, fax: (703) 292-9018, email: mdues@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: 1-800-518-4726; e-mail: support@grants.gov.

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, National Science Foundation Update is a free e-mail subscription service 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 when new publications are issued that match their identified interests. Users can subscribe to this service by clicking the "Get NSF Updates by Email" link on the [NSF web site](#).

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.

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