Innovations in Graduate Education (IGE) Program

PROGRAM SOLICITATION
NSF 20-595

REPLACES DOCUMENT(S):
NSF 17-585

National Science Foundation

Directorate for Education and Human Resources
Division of Graduate Education

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

November 04, 2020

IGE Project Proposals and IGE Innovation Acceleration Hub Proposals

March 25, 2022

March 25, Annually Thereafter

IGE Project Proposals

IMPORTANT INFORMATION AND REVISION NOTES

Important Information

Innovating and migrating proposal preparation and submission capabilities from FastLane to Research.gov is part of the ongoing NSF information technology modernization efforts, as described in Important Notice No. 147. In support of these efforts, research proposals submitted in response to this program solicitation must be prepared and submitted via Research.gov or via Grants.gov, and may not be prepared or submitted via FastLane.

Revision Notes

This solicitation revises an earlier program limitation to graduate students in research-based STEM master's and doctoral degree programs requiring theses or dissertations. The program now also expands that focus to include also graduate students in STEM master's and doctoral degree programs more broadly. This solicitation also includes a one-time award for an IGE Innovation Acceleration Hub.

Any proposal submitted in response to this solicitation should be submitted in accordance with the revised *NSF Proposal & Award Policies & Procedures Guide* (PAPPG) (NSF 22-1), which is effective for proposals submitted, or due, on or after October 4, 2021.

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

Innovations in Graduate Education (IGE) Program

Synopsis of Program:

The Innovations in Graduate Education (IGE) program is designed to encourage the development and implementation of bold, new, and potentially transformative approaches to STEM graduate education training. The program seeks proposals that explore ways for graduate students in research-based master's and doctoral degree programs to develop the skills, knowledge, and competencies needed to pursue a range of STEM careers.

IGE focuses on projects aimed at piloting, testing, and validating innovative and potentially transformative approaches to graduate education. IGE projects are intended to generate the knowledge required for their customization, implementation, and broader adoption. The program supports testing of novel models or activities with high potential to enrich and extend the knowledge base on effective graduate education approaches.

The program addresses both workforce development, emphasizing broad participation, and institutional capacity building needs in graduate

education. Strategic collaborations with the private sector, non-governmental organizations (NGOs), government agencies, national laboratories, field stations, teaching and learning centers, informal science centers, and academic partners are encouraged.

As a special emphasis under this solicitation, IGE seeks proposals that will result in a single cooperative agreement for the development and implementation of an IGE Innovation Acceleration Hub. The Hub will facilitate IGE awardee communications about research activities and outcomes and provide a platform for external stakeholder engagement. Only Hub proposals submitted to the November 2020 deadline will be considered for funding.

Cognizant Program Officer(s):

Please note that the following information is current at the time of publishing. See program website for any updates to the points of contact.

- Daniel Denecke, telephone: (703) 292-8072, email: ddenecke@nsf.gov
- Vinod K. Lohani, telephone: (703) 292-2330, email: vlohani@nsf.gov
- Karen McNeal, telephone: (703) 292-2138, email: kmcneal@nsf.gov
- Dorian Davis, telephone: (703) 292-7181, email: ddavis@nsf.gov

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

- 47.041 --- Engineering
- 47.049 --- Mathematical and Physical Sciences
- 47.050 --- Geosciences
- 47.070 --- Computer and Information Science and Engineering
- 47.074 --- Biological Sciences
- 47.075 --- Social Behavioral and Economic Sciences
- 47.076 --- Education and Human Resources
- 47.079 --- Office of International Science and Engineering
- 47.083 --- Office of Integrative Activities (OIA)

Award Information

Anticipated Type of Award: Standard Grant or Continuing Grant

Estimated Number of Awards: 6 to 10

IGE Awards (6 to 10 anticipated in FY 2021) are expected to be up to three (3) years in duration with a total budget between $300,000 and $500,000. The estimated number of awards and the anticipated funding amount listed above are for FY 2021. The number of awards and funding level in FY 2022 and FY 2023 are anticipated to be similar to FY 2021. Funding amounts depend on availability of funds.

Anticipated Funding Amount: $4,000,000

Anticipated Type of Award: Cooperative Agreement (IGE Innovation Acceleration Hub only)

Estimated Number of Awards: One award is anticipated.

Anticipated Funding Amount: $500,000 in year one; remaining funds disbursed in years 2-5. The maximum award amount is $1,000,000 for five years.

Eligibility Information

Who May Submit Proposals:

The categories of proposers eligible to submit proposals to the National Science Foundation are identified in the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG), Chapter I.E. Unaffiliated individuals are not eligible to submit proposals in response to this solicitation.

Who May Serve as PI:

There are no restrictions or limits.

Limit on Number of Proposals per Organization: 2

An eligible organization may participate in two Innovations in Graduate Education proposals per competition. **Participation includes serving as a lead organization on a non-collaborative proposal or as a lead organization, non-lead organization, or subawardee on a collaborative proposal.** Organizations participating solely as evaluators on projects are excluded from this limitation. Proposals that exceed the institutional eligibility limit (beyond the first two submissions based on timestamp) will be returned without review regardless of the institution's role (lead, non-lead, subawardee) in the returned proposal.

Limit on Number of Proposals per PI or co-PI: 1

An individual may serve as Lead Principal Investigator (PI) or Co-PI on only one proposal submitted to the IGE program per annual competition. Proposals that exceed the PI/Co-PI eligibility limit (beyond the first submission based on timestamp) will be returned without review regardless of the individual's role (PI or Co-PI) in the returned proposal.

Proposal Preparation and Submission Instructions

A. Proposal Preparation Instructions

- **Letters of Intent:** Not required
- **Preliminary Proposal Submission:** Not required
- **Full Proposals:**
  - Full Proposals submitted via Research.gov: *NSF Proposal and Award Policies and Procedures Guide* (PAPPG) guidelines apply. The complete text of the PAPPG is available electronically on the NSF website at: https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg.
  - 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: https://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. submitter's local time):

  November 04, 2020

  IGE Project Proposals and IGE Innovation Acceleration Hub Proposals

  March 25, 2022

  March 25, Annually Thereafter

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Proposal Review Information Criteria

Merit Review Criteria:

National Science Board approved criteria. Additional merit review criteria 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.

TABLE OF CONTENTS

I. INTRODUCTION

Science, technology, engineering, and mathematics (STEM) graduate education is poised to undergo a major transformation. There are multiple drivers for change including: (i) recent major national reports on the state of STEM graduate education [1], (ii) the accelerating pace of science and engineering discoveries and technological innovations, (iii) national STEM workforce trends, (iv) the growing globalization of science and engineering, (v) the potential to align graduate education practices and models with enhanced understanding of how people learn, and most recently (vi) the challenges faced by the graduate research and education enterprise associated with the COVID-19 pandemic in areas such as resilience, online and hybrid course delivery, and the accessibility, continuity, safety of lab and field research. In addition, there is increasing recognition that addressing the grand challenges in science and engineering requires interdisciplinary and broader professional training that is atypical for most graduate programs. There is also a growing body of evidence that diversity and inclusivity accelerate innovation across the STEM workforce. These realities and the increasing calls for new approaches to STEM graduate education represent an extraordinary opportunity to investigate the effectiveness of innovations. Accordingly, this solicitation encourages proposals in **Innovations in Graduate Education (IGE)** to test, develop, and implement innovative and effective STEM graduate education models and programming.

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[1] *Graduate Education for the 21st Century*, National Academies, 2018; *The Path Forward: The Future of Graduate Education*, Commission on the Future of Graduate Education in the United States, 2010; *Advancing Graduate Education in the Chemical Sciences*, American Chemical Society, 2012; Biomedical Research Workforce Working Group Report, National Institutes of Health, 2012; *Understanding PhD Career Pathways for Program Improvement*, Council of Graduate Schools, 2014; *Revisiting the STEM Workforce: A Companion to Science and Engineering Indicators 2014*, National Science Board, 2015; *Professional Development: Shaping Effective Programs for STEM Graduate Students*, Council of Graduate Schools, 2017.

II. PROGRAM DESCRIPTION

1. **IGE PROJECTS**

IGE projects are expected to generate potentially transformative models for improvements in graduate education and workforce development that prepare the next generation of scientists and engineers for the full range of possible STEM career paths to advance the nation's STEM enterprise. IGE is dedicated to (a) piloting, testing, and validating innovative approaches to graduate education, and (b) generating the knowledge required for the customization and implementation of the most successful, transformative ones.

The primary beneficiaries for IGE projects must be master's and/or doctoral students in STEM-designated degree programs. Eligible degree programs include research-based STEM master's and doctoral degree programs and Professional Science Master's programs but do not include programs that only award certificates or professional degrees (such as AuD, DDS, DED, DN, DNP, DO, DPM, DPT, DScPT, JD, MLA, MD, ND, OD, OTD, PharmD, PsyD, or SLPD).

The IGE program does not focus on comprehensive training of graduate students (support for which is available through other programs such as the NSF Research Traineeship program) or foundational research examining how graduate students learn (supported by the EHR Core Research program), but rather will promote targeted test-bed efforts that are informed by evidence, including findings from research on graduate education.

Activities proposed as part of the research project may include, but are not limited to, student professional skill development, career preparation and vocational counseling, faculty training, inventive partnerships, international experiences, internships, outreach, virtual networks, and mentoring. In addition, projects should utilize evidence-based strategies to broaden participation of students from diverse backgrounds.

Goals of the IGE Program are to:

- Generate the knowledge base needed to inform the development of models of bold, new, and potentially transformative approaches to graduate education as well as their implementation and adaptability.
- Catalyze rapid advances in STEM graduate education broadly as well as those responsive to the needs of particular disciplinary and interdisciplinary STEM fields.

The IGE Program calls for proposals to:

- Design, pilot, and test new, innovative and transformative approaches for inclusive STEM graduate education;
- Examine the potential to extend a successful approach developed in one discipline or context to other disciplines or contexts; and
- Develop projects that are informed by learning science and the existing body of knowledge about STEM graduate education.

Leadership teams (PI/Co-PIs) including professional expertise in the learning sciences and pedagogy, as well as in the principal science domain(s), are strongly encouraged. Project teams should also have expertise in evaluation to implement robust and appropriate data collection methods.

IGE welcomes proposals from early-career investigators and complements the Faculty Early Career Development (CAREER) Program's mission and focus. For information about the CAREER program, please refer to the Dear Colleague Letter: https://www.nsf.gov/publications/pub_summ.jsp?

ods_key=nsf20084. However, researchers at all stages of their careers including mid-career faculty and investigators from non-academic organizations are welcome to apply.

IGE especially welcomes proposals that will pair well with the efforts of NSF Inclusion across the Nation of Communities of Learners of Underrepresented Discoverers in Engineering and Science (NSF INCLUDES) to develop STEM talent from all sectors and groups in our society (https://www.nsf.gov/news/special_reports/nsfincludes/index.jsp). Collaborations are encouraged between IGE proposals and existing NSF INCLUDES projects, provided the collaboration strengthens both projects. Researchers at minority serving institutions are strongly encouraged to participate in this program particularly given their experience and expertise in broadening participation.

2. **IGE INNOVATION ACCELERATION HUB**

   As a special emphasis under this solicitation, IGE seeks proposals that will result in a one-time, single award for the development and implementation of an IGE Innovation Acceleration Hub. The primary goal of the Hub is to inform and support the IGE program's goal of accelerating innovation in graduate education. The Hub should provide a service-oriented resource through which IGE projects can communicate and collaborate with each other as well as inform STEM graduate education community and its stakeholders about IGE projects and project outcomes.

   Minimally, the IGE Innovation Acceleration Hub should (1) support access to knowledge and collaborations among researchers on innovation in STEM graduate education and (2) foster communities of practice that bridge IGE funded projects and the variety of stakeholders in the graduate education and STEM workforce communities. Preference will be given to Critical Hub activities that include:

   - Working with the IGE community to identify needs that would inform the design, architecture and functions of a dynamic, interactive electronic communications platform as well as to test usability.
   - Developing a collaborative infrastructure for current and prospective Principal Investigators seeking to conduct STEM education research that is aligned with the goals of the IGE program.
   - Organizing meetings to foster dialogue among IGE-funded teams about models, measurement practices, and evaluation criteria.
   - Facilitating frequent communication and information updates about NSF IGE funding opportunities and IGE project-related publications, products, events, and activities.
   - Facilitating outreach and engagement with multiple stakeholders including: communities of researchers and educators (including faculty, deans and department chairs, graduate students, and post-doctoral fellows), administrators, employers, and others engaged in research on innovation in graduate education that complements the goals of the IGE program.
   - Encouraging broader participation in the IGE program by researchers from groups and institutions typically underrepresented in the STEM education research communities.
   - Communicating discoveries and generating broader awareness of past and current IGE awards as well as related initiatives on innovation in STEM graduate education.
   - Providing opportunities for the research community to generate ideas that can potentially transform graduate education in STEM.
   - Attending annual IGE PI meetings during the timespan of the award.
   - Measuring usage and engagement of stakeholder groups and using these data to make improvements to the platform and communications strategy over the course of the award.
   - Implementing a communications plan to raise awareness of IGE projects, resources, and events.
   - Helping raise awareness and understanding of IGE projects and related NSF initiatives on innovation in graduate education among the graduate education community and fostering graduate education community engagement with IGE researchers.
   - Facilitating a community of practice around evidence-based innovation in STEM graduate education and the adoption of best practices.

Proposals to implement an IGE Innovation Acceleration Hub should aim to build knowledge and capacity across STEM fields and support acceleration of innovation in graduate education. The Hub would do this by: highlighting knowledge resulting from IGE projects on the effectiveness of models for preparing graduate students for broad STEM careers; facilitating communication about potential adoption and adaptation; and documenting instances of implementation and adaptability of those models.

To support capacity-building in STEM research on graduate education innovation, the IGE Innovation Acceleration Hub should serve both existing and prospective investigators to the IGE program. It should use network channels such as invitational meetings and communication outlets that encourage knowledge sharing. The Hub should assist IGE and other NSF programs in advancing the science of educational innovation by facilitating dialogue about methodologies, data collection, models, analysis, measurement practices and evaluation. In addition, the Hub is intended to be synergistic with existing activities of professional associations, resource hubs and centers, and other resources offered through organizations and institutions engaged in graduate education and STEM workforce readiness.

NSF expects to support the IGE Innovation Acceleration Hub for a period of five years.

III. AWARD INFORMATION

IGE Awards (6 to 10 anticipated in FY 2021) are expected to be up to three (3) years in duration with a total budget between $300,000 and $500,000, subject to the availability of funds.

The estimated number of awards and the anticipated funding amount listed above are for FY 2021. The number of awards and funding level in FY 2022 and FY 2023 are anticipated to be similar.

IGE Innovation Acceleration Hub: One award in the form of a cooperative agreement is anticipated. $500,000 in FY21; remaining funds disbursed in years FY 2022 – FY 2025. The maximum award amount is $1,000,000 for five years.

IV. ELIGIBILITY INFORMATION

Who May Submit Proposals:

The categories of proposers eligible to submit proposals to the National Science Foundation are identified in the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG), Chapter I.E. Unaffiliated individuals are not eligible to submit proposals in response to this solicitation.

Who May Serve as PI:

There are no restrictions or limits.

Limit on Number of Proposals per Organization: 2

An eligible organization may participate in two Innovations in Graduate Education proposals per competition. **Participation includes serving as a lead organization on a non-collaborative proposal or as a lead organization, non-lead organization, or subawardee on a collaborative proposal.** Organizations participating solely as evaluators on projects are excluded from this limitation. Proposals that exceed the institutional eligibility limit (beyond the first two submissions based on timestamp) will be returned without review regardless of the institution's role (lead, non-lead, subawardee) in the returned proposal.

Limit on Number of Proposals per PI or co-PI: 1

An individual may serve as Lead Principal Investigator (PI) or Co-PI on only one proposal submitted to the IGE program per annual competition. Proposals that exceed the PI/Co-PI eligibility limit (beyond the first submission based on timestamp) will be returned without review regardless of the individual's role (PI or Co-PI) in the returned proposal.

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 Research.gov or Grants.gov.

- Full Proposals submitted via Research.gov: Proposals submitted in response to this program solicitation should be prepared and submitted in accordance with the general guidelines contained in the *NSF Proposal and Award Policies and Procedures Guide* (PAPPG). The complete text of the PAPPG is available electronically on the NSF website at: https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg. Paper copies of the PAPPG may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-8134 or by e-mail from nsfpubs@nsf.gov. The Prepare New Proposal setup will prompt you for the program solicitation number.
- 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: (https://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) 292-8134 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 Research.gov. PAPPG Chapter II.D.3 provides additional information on collaborative proposals.

See PAPPG Chapter II.C.2 for guidance on the required sections of a full research proposal submitted to NSF. Please note that the proposal preparation instructions provided in this program solicitation may deviate from the PAPPG instructions.

FULL PROPOSAL CONTENT – IGE Project Proposals

1. **Cover Sheet:** If international activities are proposed, whether or not they will be funded via the IGE award, the international cooperative activities box should be checked and the individual countries listed. For planning purposes, use May 1 as the award start date for proposals submitted to the FY2021 (and an October 1 start date for FY2022 or FY2023) competitions.
2. **Project Summary:** (1-page limit): Summarize the graduate education model or approaches that will be piloted and tested, or the existing pilot that will be adopted or expanded, as part of the IGE project. Describe the disciplinary field(s) involved, the knowledge that will be generated to inform implementation and adaptability of transformative approaches to STEM graduate education, and how the project is responsive to a need and/or opportunity. Each NSF merit review criterion (Intellectual Merit and Broader Impacts) must be addressed in a separate statement (see Chapter II.C.2.b of the PAPPG for additional instructions). The summary should be written in a manner that will be informative to STEM professionals working in the same or related fields, and understandable to a scientifically literate lay reader.
3. **Project Description:** (15-page limit): The Project Description cannot exceed 15 pages, including tables and illustrations. **The Project Description must contain only Sections 3a through 3d described below with the suggested headings and in the order listed.**

   3a. Innovation(s) in Graduate Education: Describe the overarching goals of the proposed IGE project with a focus on piloting and testing potentially transformative improvements in graduate education. All innovations should be grounded in the appropriate literature. Specify the approaches or models to be piloted and tested as well as the targeted graduate student population and the justification for their inclusion. Identify the potential of the IGE project to provide appreciable and meaningful added value to the current degree programs at the institution(s) or in the discipline(s). Discuss the potential for extending the approaches and activities nationally and how they could advance the modernization of graduate education across STEM disciplines.

   The proposal should describe institutional plans that address facilitation of the pilot and, equally importantly, how successful approaches, practices, and models will be shared across the institution and nationally.

If a collaborative proposal is proposed, describe the role of the non-lead institution(s) and the participating personnel roles, and the mechanisms for project communication. A collaborative proposal should be submitted only if the partner institution(s) has (have) a significant role and will substantially enhance the education model or components tested.

3b. Broader Impacts: The Project Description must contain, as a separate section within the narrative, a discussion of the broader impacts of the education model and activities. This section must be clearly labeled "Broader Impacts." For further information see Chapter II.C.2.d of the PAPPG.

3c. Performance Assessment/Project Evaluation: Assessment and evaluation are high priorities for the IGE program. Projects should include plans to assess performance and evaluate the outcomes of the approach tested to provide transformative improvements in graduate education. Assessments should be both formative and summative, and the plan should describe how and when both formative and summative assessments would be shared with the project participants and institutional administration. Proposals should include plans for communicating assessment results to other stakeholders, both within the IGE community and more broadly through publications, professional meetings, and electronic communications platforms.

Projects are not required to have an external evaluator. However, leadership teams should have the expertise in the learning sciences, education research, and evaluation to implement robust data collection methods appropriate to the targeted outcomes or model tested. Multiple iterations of data collection and analysis over the duration of the award are strongly encouraged, when appropriate.

3d. Results from Prior NSF Support: The PI and Co-PIs who have received NSF funding (including any current funding) must provide information on major achievements and relevance to the proposed IGE project of the prior award(s) with an end date in the past five years. Individuals who have received more than one prior award (excluding amendments) should report on the award(s) most closely related to the proposal. Complete bibliographic citation for each publication resulting from an NSF award must be included in either the Results from Prior NSF Support section or in the References Cited section of the proposal. For further information see Chapter II.C.2.d(III) of the PAPPG.

4. **Budget and Budget Justification:** Provide an annual budget for up to three years total duration. The system will automatically generate a cumulative budget. The proposed budget can range between $300,000-$500,000 and should be consistent with the costs to develop, implement, and evaluate the pilot. The budget should include funds for the PI and a Co-PI or evaluator to attend an annual IGE meeting in Washington, DC during each year of the project. For further information on allowable costs see Chapter II.C.2.g of the PAPPG.

   4a. Graduate Student Support: IGE projects will not support graduate student stipends or cost of education, including tuition and fees. However, graduate students that are solely engaged in an educational research component that aligns with their thesis research (e.g., College of Education, Discipline-based educational research units) may be grant-supported.

   4b. Faculty/Senior Personnel Salaries: Salary support must be consistent with contributions to the project. Support for postdoctoral fellows is not allowed unless they explicitly have an instructional, training, or education/assessment role that aligns with their professional goals.

   4c. Other Budget Items: Direct costs for explicit participant support and programmatic elements must be commensurate with the goals specified in the proposal. Other budget requests (e.g., travel, equipment, and research support) must be integral to goals specified in the proposal.

   Budget Justification (five-page limit): The Budget Justification must clearly explain how funds will be used in the proposed project. For proposals with any subawards, each subaward must include a separate budget and budget justification of no more than five pages.

5. **Supplementary Documentation:**

   Letters of Collaboration and Support: Letters of collaboration, using the standard NSF format (see PAPPG Chapter II.C.d(iv)), may be provided from partner organizations, including international ones, that play a significant collaborative role in the project.

   Data Management Plan: All proposals are required to include a Data Management Plan of up to two pages; it should be included as a separate Supplementary Document with Data Management Plan as the heading. The Data Management Plan should describe how the project would conform to the NSF policy on dissemination and sharing of research results as well as any educational products (e.g., curricular materials). This plan will be reviewed as part of the intellectual merit and broader impacts of the proposal. Data management requirements and plans relevant to the Directorate for Education and Human Resources are available on the NSF website at https://www.nsf.gov/bfa/dias/policy/dmp.jsp. For more information see Chapter II.C.2.j of the PAPPG.

   Postdoctoral Mentoring Plan: A Postdoctoral Mentoring Plan is required if postdoctoral fellows receive IGE support, which is allowed only if they participate in an instructional, training, or evaluation capacity.

No other items or appendices are to be included. ***Full proposals containing items other than those required above or by the PAPPG will not be reviewed.***

FULL PROPOSAL CONTENT – IGE Innovation Acceleration Hub Proposals

Cover Sheet: If international activities are proposed, whether or not they will be funded via the IGE award, the international cooperative activities box should be checked and the individual countries listed. For planning purposes, use May 1 as the award start date for proposals submitted to the FY2021.

Project Description

The page limit for the Project Description is 15 pages. The Project Description must address the following topics:

1. ***Goals, Objectives, Priorities, Activities, Functions:*** The Project Description should describe project goals and objectives as well as anticipated priorities, activities, and functionalities of the Hub. The proposed activities should demonstrate the strong capabilities of the organization and its responsiveness to the STEM education research community.
2. ***Project Management Plan:*** The management plan should describe the roles and responsibilities of key staff associated with the proposed activities to be undertaken by the Hub. The plan should also include details about how the team will work with the community to assess and address needs as well as a schedule for platform protype development and usability testing. A functional online platform is expected by the end of the first year of funding.
3. ***Communications Plan:*** Proposals must include a plan for frequent communications to: IGE projects to solicit resources and feedback and external stakeholders to showcase project resources, facilitate awareness and connections that would expand and strengthen the IGE community of practice. The plan should address how the organization will reach multiple populations including goals for use and strategies for achieving those goals.
4. ***Evaluation Plan:*** Proposals must include an evaluation plan that specifies criteria or metrics relevant to the goals of the project and describes how

evaluation will be conducted. The plan must include metrics for usability, usage, and community engagement for multiple stakeholder populations. The plan should include both formative and summative assessment and describe how assessment findings would be shared with the IGE community and the NSF. Year-one metrics should focus on timely execution with a focus on deliverables, stakeholder feedback, and troubleshooting responsiveness. Year-two metrics should focus on successful build-out/refresh efforts including communications with IGE projects and Hub visibility. Metrics for year-two and subsequent years should include usage data and content analysis. Final metrics and benchmarks will be developed in conjunction with the NSF IGE leadership team. The Hub is required to have an external evaluator.

Other Required Sections of the Project Description: Per guidance in the PAPPG, the Project Description must contain, as a separate section within the narrative, a section labeled "Broader Impacts." Proposers can decide where to include this section within the Project Description. The proposal must also describe “Results of Prior NSF Support” as outlined in the PAPPG.

Budget and Budget Justification. Budgets should be in NSF format and include up to five pages of budget justification. The budget justification should be in narrative form and include detailed explanations for each line item with budget resources listed in the budget. Information about what may or may not be included in the budget or budget justification is outlined in the NSF PAPPG. For proposals with subawards, each subaward must include a separate budget and budget justification of no more than five pages. Funds should be budgeted for the principal investigator or a project member to attend a two-day grantees' meeting in the Washington, D.C. area each award year.

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. submitter's local time):

  November 04, 2020

  IGE Project Proposals and IGE Innovation Acceleration Hub Proposals

  March 25, 2022

  March 25, Annually Thereafter

  IGE Project Proposals

Proposals for the IGE Innovation Acceleration Hub will be accepted in the first year of this solicitation with an November 4, 2020 deadline only and will not be accepted in subsequent years.

D. Research.gov/Grants.gov Requirements

For Proposals Submitted Via Research.gov:

To prepare and submit a proposal via Research.gov, see detailed technical instructions available at: https://www.research.gov/research-portal/appmanager/base/desktop?_nfpb=true&_pageLabel=research_node_display&_nodePath=/researchGov/Service/Desktop/ProposalPreparationandSubmission.html. For Research.gov user support, call the Research.gov Help Desk at 1-800-673-6188 or e-mail rgov@nsf.gov. The Research.gov Help Desk answers general technical questions related to the use of the Research.gov 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.

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: https://www.grants.gov/web/grants/applicants.html. In addition, the NSF Grants.gov Application Guide (see link in Section V.A) provides instructions regarding the technical 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.

Proposers that submitted via Research.gov may use Research.gov to verify the status of their submission to NSF. For proposers that submitted via Grants.gov, until an application has been received and validated by NSF, the Authorized Organizational Representative may check the status of an application on Grants.gov. After proposers have received an e-mail notification from NSF, Research.gov should be used to check the status of an application.

VI. NSF PROPOSAL PROCESSING AND REVIEW PROCEDURES

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

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

Proposers should also be aware of core strategies that are essential to the fulfillment of NSF's mission, as articulated in *Building the Future: Investing in Discovery and Innovation - NSF Strategic Plan for Fiscal Years (FY) 2018 – 2022*. These strategies are integrated in the program planning and implementation process, of which proposal review is one part. NSF's mission is particularly well-implemented through the integration of research and education and broadening participation in NSF programs, projects, and activities.

One of the strategic objectives in support of NSF's mission is to foster integration of research and education through the programs, projects, and activities it supports at academic and research institutions. These institutions must recruit, train, and prepare a diverse STEM workforce to advance the frontiers of science and participate in the U.S. technology-based economy. NSF's contribution to the national innovation ecosystem is to provide cutting-edge research under the guidance of the Nation's most creative scientists and engineers. NSF also supports development of a strong science, technology, engineering, and mathematics (STEM) workforce by investing in building the knowledge that informs improvements in STEM teaching and learning.

NSF's mission calls for the broadening of opportunities and expanding participation of groups, institutions, and geographic regions that are underrepresented in STEM disciplines, which is essential to the health and vitality of science and engineering. NSF is committed to this principle of diversity and deems it central to the programs, projects, and activities it considers and supports.

A. Merit Review Principles and Criteria

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

1. Merit Review Principles

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

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

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

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

2. Merit Review Criteria

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

The two merit review criteria are listed below. **Both** criteria are to be given **full consideration** during the review and decision-making processes; each criterion is necessary but neither, by itself, is sufficient. Therefore, proposers must fully address both criteria. (PAPPG Chapter II.C.2.d(i). contains additional information for use by proposers in development of the Project Description section of the proposal). Reviewers are strongly encouraged to review the criteria, including PAPPG Chapter II.C.2.d(i), prior to the review of a proposal.

When evaluating NSF proposals, reviewers will be asked to consider what the proposers want to do, why they want to do it, how they plan to do it, how they will know if they succeed, and what benefits could accrue if the project is successful. These issues apply both to the technical aspects of the proposal and the way in which the project may make broader contributions. To that end, reviewers will be asked to evaluate all proposals against two criteria:

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

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

1. What is the potential for the proposed activity to

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

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

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

Additional Solicitation Specific Review Criteria

Additional solicitation-specific review criteria for IGE Project proposals (Standard and Continuing Grants) include:

- **Knowledge generation to inform improvements in graduate education:** Are the research questions, hypotheses, and methodologies clear? Is the proposed research informed by the relevant STEM graduate education literature? To what extent would the project generate the knowledge needed to inform implementation and adaptability of potentially transformative improvements to graduate education? Is the proposal grounded in a theory of change?
- **STEM education, disciplinary/interdisciplinary training, and workforce needs:** Does the proposal adequately identify the intended contribution(s) of the IGE project to STEM education, disciplinary/interdisciplinary training and/or workforce needs? For example, is it aimed at a need in a single discipline or is it targeting skillsets in response to interdisciplinary research? Does the proposal ground the identified need in the literature?
- **Evaluation and assessment:** Is there a well-conceived plan, including tangible metrics aligned with the goals and timeline, to evaluate the outcomes of the proposed project? Does the assessment plan include the gathering of data needed to test hypotheses? Does the evaluation plan align with the theory of change?

Additional solicitation-specific review criteria for IGE Innovation Acceleration Hub proposals (Cooperative Agreement) include:

- **Communications and Outreach:** Does the communication plan include frequent communications to IGE projects to solicit resources and feedback? How will the organization obtain feedback and engagement from multiple populations to identify goals for use and strategies for achieving those goals? (Priority consideration will be given to proposals that demonstrate a plan to make the Hub a useful resource for NSF-supported projects, beyond the IGE program, related to research on innovation in graduate education.)
- **Assessment and Evaluation:** Does the plan include a clear timeline and performance metrics to evaluate the outcomes of the proposed project? Is there a plan to obtain regular feedback from stakeholders that will be used to improve the Hub?

B. Review and Selection Process

Proposals submitted in response to this program solicitation will be reviewed by Ad hoc Review and/or Panel Review, or Reverse Site Visit (IGE Innovation Acceleration Hub only).

Review methods are described in the Review and Selection Process, section VI.B.

Reviewers will be asked to evaluate proposals using two National Science Board approved merit review criteria and, if applicable, additional program specific criteria. A summary rating and accompanying narrative will generally be completed and submitted by each reviewer and/or panel. 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 strives to be able to tell applicants whether their proposals have been declined or recommended for funding within six months. Large or particularly complex proposals or proposals from new awardees may require additional review and processing time. The time interval begins on the deadline or target date, or receipt date, whichever is later. The interval ends when the Division Director acts upon the Program Officer's recommendation.

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. After an administrative review has occurred, Grants and Agreements Officers perform 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.

Once an award or declination decision has been made, Principal Investigators are provided feedback about their proposals. In all cases, reviews are treated as confidential documents. Verbatim copies of reviews, excluding the names of the reviewers or any reviewer-identifying information, 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.

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 notice, 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 notice; (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 notice. 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 https://www.nsf.gov/awards/managing/award_conditions.jsp?org=NSF. Paper copies may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-8134 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 *Proposal & Award Policies & Procedures Guide* (PAPPG) Chapter VII, available electronically on the NSF Website at https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg.

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 no later than 90 days prior to the end of the current budget period. (Some programs or awards require submission of more frequent project reports). No later than 120 days following expiration of a grant, the PI also is required to submit a final project report, and a project outcomes report for the general public.

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

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

More comprehensive information on NSF Reporting Requirements and other important information on the administration of NSF awards is contained in the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG) Chapter VII, available electronically on the NSF Website at https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg.

VIII. AGENCY CONTACTS

Please note that the program contact information is current at the time of publishing. See program website for any updates to the points of contact.

General inquiries regarding this program should be made to:

- Daniel Denecke, telephone: (703) 292-8072, email: ddenecke@nsf.gov
- Vinod K. Lohani, telephone: (703) 292-2330, email: vlohani@nsf.gov
- Karen McNeal, telephone: (703) 292-2138, email: kmcneal@nsf.gov
- Dorian Davis, telephone: (703) 292-7181, email: ddavis@nsf.gov

For questions related to the use of FastLane or Research.gov, contact:

- FastLane and Research.gov Help Desk: 1-800-673-6188
- FastLane Help Desk e-mail: fastlane@nsf.gov.
- Research.gov Help Desk e-mail: rgov@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, "NSF Update" is an information-delivery system designed to keep potential proposers and other interested parties apprised of new NSF funding opportunities and publications, important changes in proposal and award policies and procedures, and upcoming NSF Grants Conferences. Subscribers are informed through e-mail or the user's Web browser each time new publications are issued that match their identified interests. "NSF Update" also is available on NSF's website.

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

ABOUT THE NATIONAL SCIENCE FOUNDATION

The National Science Foundation (NSF) is an independent Federal agency created by the National Science Foundation Act of 1950, as amended (42 USC 1861-75). The Act states the purpose of the NSF is "to promote the progress of science; [and] to advance the national health, prosperity, and welfare by supporting research and education in all fields of science and engineering."

NSF funds research and education in most fields of science and engineering. It does this through grants and cooperative agreements to more than 2,000 colleges, universities, K-12 school systems, businesses, informal science organizations and other research organizations throughout the US. The Foundation accounts for about one-fourth of Federal support to academic institutions for basic research.

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

Facilitation Awards for Scientists and Engineers with Disabilities (FASED) provide funding for special assistance or equipment to enable persons with disabilities to work on NSF-supported projects. See the *NSF Proposal & Award Policies & Procedures Guide* Chapter II.E.6 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 https://www.nsf.gov

- **Location:** 2415 Eisenhower Avenue, Alexandria, VA 22314
- **For General Information** (NSF Information Center)**:** (703) 292-5111
- **TDD (for the hearing-impaired):** (703) 292-5090
- **To Order Publications or Forms:**

  Send an e-mail to: nsfpubs@nsf.gov

  or telephone: (703) 292-8134
- **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 System of Record Notices, NSF-50, "Principal Investigator/Proposal File and Associated Records," and NSF-51, "Reviewer/Proposal File and Associated Records." 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:

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Office of Budget, Finance, and Award Management
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