NATIONAL SCIENCE FOUNDATION

Overview

The National Science Foundation (NSF) is an independent federal agency created by Congress in 1950 "to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense..." NSF is vital because we support basic research and people to create knowledge that transforms the future. This type of support:

- Is a primary driver of the U.S. economy
- Enhances the nation's security
- Advances knowledge to sustain global leadership

With an annual budget of $9.5 billion (FY 2023), we are the funding source for approximately 23% of the total federal budget for basic research conducted at U.S. colleges and universities. In many fields such as mathematics, computer science and the social sciences, NSF is the major source of federal backing.

We fulfill our mission chiefly by issuing limited-term grants -- currently about 11,200 new awards per year, with an average duration of three years -- to fund specific research proposals that have been judged the most promising by a rigorous and objective merit-review system. Most of these awards go to individuals or small groups of investigators. Others provide funding for research centers, instruments and facilities that allow scientists, engineers, and students to work at the outermost frontiers of knowledge.

NSF's goals -- discovery, learning, research infrastructure and stewardship -- provide an integrated strategy to advance the frontiers of knowledge, cultivate a world-class, broadly inclusive science and engineering workforce and expand the scientific literacy of all citizens, build the nation's research capability through investments in advanced instrumentation and facilities, and support excellence in science and engineering research and education through a capable and responsive organization. We like to say that NSF is "where discoveries begin."

NSF is committed to expanding the opportunities in STEM to people of all racial, ethnic, geographic, and socioeconomic backgrounds, sexual orientations, gender identities and to persons with disabilities.

We value diversity and inclusion, demonstrate integrity and excellence in our devotion to public service and prioritize innovation and collaboration in our support of the work of the scientific community and of each other.

While broadening participation in STEM is included in NSF's merit review criteria, some programs go beyond the standard review criteria. These investments — which make up NSF's Broadening Participation in STEM Portfolio — use different approaches to build STEM education and research capacity, catalyze new areas of STEM research, and develop strategic partnerships and alliances.

Many of the discoveries and technological advances have been truly revolutionary. In the past few decades, NSF-funded researchers have won some 236 Nobel Prizes as well as other honors too numerous to list. These pioneers have included the scientists or teams that discovered many of the fundamental particles of matter, analyzed the cosmic microwaves left over from the earliest epoch of the universe, developed carbon-14 dating of ancient artifacts, decoded the genetics of viruses, and created an entirely new state of matter called a Bose-Einstein condensate.

NSF also funds equipment that is needed by scientists and engineers but is often too expensive for any one group or researcher to afford. Examples of such major research equipment include giant optical and radio telescopes, Antarctic research sites, high-end computer facilities and ultra-high-speed connections, ships for ocean research, sensitive detectors of very subtle physical phenomena and gravitational wave observatories.

Another essential element in NSF's mission is support for science and engineering education, from pre-K through graduate school and beyond. The research we fund is thoroughly integrated with education to help ensure that there will always be plenty of skilled people available to work in new and emerging

scientific, engineering, and technological fields, and plenty of capable teachers to educate the next generation.

No single factor is more important to the intellectual and economic progress of society, and to the enhanced well-being of its citizens, than the continuous acquisition of new knowledge. NSF is proud to be a major part of that process.

Specifically, the Foundation's organic legislation authorizes us to engage in the following activities:

A. Initiate and support, through grants and contracts, scientific and engineering research, and programs to strengthen scientific and engineering research potential, and education programs at all levels, and appraise the impact of research upon industrial development and the general welfare.
B. Award graduate fellowships in the sciences and in engineering.
C. Foster the interchange of scientific information among scientists and engineers in the United States and foreign countries.
D. Foster and support the development and use of computers and other scientific methods and technologies, primarily for research and education in the sciences.
E. Evaluate the status and needs of the various sciences and engineering and take into consideration the results of this evaluation in correlating our research and educational programs with other federal and non-federal programs.
F. Provide a central clearinghouse for the collection, interpretation, and analysis of data on scientific and technical resources in the United States, and provide a source of information for policy formulation by other federal agencies.
G. Determine the total amount of federal money received by universities and appropriate organizations for the conduct of scientific and engineering research, including both basic and

applied, and construction of facilities where such research is conducted, but excluding development, and report annually thereon to the President and the Congress.

H. Initiate and support specific scientific and engineering activities in connection with matters relating to international cooperation, national security, and the effects of scientific and technological applications upon society.

I. Initiate and support scientific and engineering research, including applied research, at academic and other nonprofit institutions and, at the direction of the President, support applied research at other organizations.

J. Recommend and encourage the pursuit of national policies for the promotion of basic research and education in the sciences and engineering. Strengthen research and education innovation in the sciences and engineering, including independent research by individuals, throughout the United States.

K. Support activities designed to increase the participation of women and minorities and others underrepresented in science and technology. The Louis Stokes Alliances for Minority Participation (LSAMP) program is an alliance-based program. The program's theory is based on the Tinto model for student retention referenced in the 2005 LSAMP program evaluation (cleared under 3145-0190 and now covered by 3145-0226). The overall goal of the program is to assist universities and colleges in diversifying the nation's science, technology, engineering, and mathematics (STEM) workforce by increasing the number of STEM baccalaureate and graduate degrees awarded to populations historically underrepresented in these disciplines: African Americans, Hispanic Americans, American Indians, Alaska Natives, Native Hawaiians, and Native Pacific Islanders. LSAMP's efforts to increase diversity in STEM are aligned with the goals of the Federal Government's five-year strategic plan for STEM education, Charting a Course for Success: America's Strategy for STEM Education.

With this fall regulatory agenda, NSF highlights the ***Robert Noyce Teacher Scholarship (Noyce) Program (RIN 3145-AA65).*** This program provides funding to institutions of higher education for

scholarships to STEM major undergraduates and professionals to become effective certified K-12 STEM teachers and experienced, exemplary K-12 teachers to become master teacher leaders in high-need school districts. Undergraduate and post-baccalaureate STEM professionals receiving funding must teach two years in a high-need school district for each year in which they have received financial support. Post-baccalaureate STEM professionals must teach for four years in a high-need school district during which time they receive annual salary supplements from the grant funds. Experienced, exemplary K-12 teachers of mathematics or science in high-need school districts receiving financial support may be supported for one year in obtaining a master's degree and then receive a salary supplement from grant funds for four years as they continue to teach in a high-need school district. Individuals who already possess a master's degree can be supported for five years with salary supplements from grant funds as they continue to teach in a high-need school district. NSF, in consultation with the Secretary of Education, plans to l propose regulations on the process of treating scholarships as Federal unsubsidized student loans for repayment purposes when the scholarship recipients fail to meet their required service obligations under the Noyce Program..

Consistent with the President's Executive Order on Modernizing Regulatory Review (Apr. 6, 2023), NSF intends to consider a variety of methods, beyond publication of the proposed regulation for public comment in the *Federal Register*, to encourage the participation and input of potentially affected individuals and entities. These additional efforts may include notices, bulletins, e-mails, phone calls, meetings, surveys, "office hours," or other means of communication, information gathering, and dialogue with academic institutions that receive or have received Noyce scholarship funding, as well as similar outreach, by NSF or these institutions, to past and present individual Noyce scholarship recipients, to obtain their views.

In addition, NSF regularly seeks feedback from customers in the form of information collections under the Paperwork Reduction Act (PRA). NSF maintains three generic PRA clearances allowing the Agency to rapidly engage the public: two clearances allow NSF to collect customer feedback on service delivery for NSF programs such as principal investigator workshops and website redesigns (OMB Control Number 3145-0215, ***Generic Clearance for the Collection of Qualitative Feedback on Agency Service Delivery*** and

OMB Control Number 3145-0254, ***Generic Clearance for Improving Customer Experience (OMB Circular A-11, Section 280 Implementation)***), and a third to allow NSF to collect information for evaluation, research, and evidence building in order to improve surveys conducted by the National Center for Science, Engineering and Statistics programs (OMB Control Number 3145-0174, ***SRS-Generic Clearance of Survey Improvement Projects for the Division of Science Resources Statistics***). Additional information regarding these collections – including all background materials – can be found at https://www.reginfo.gov/public/do/PRAMain.