



The nation's unique system of combining graduate education with cutting-edge research is a core strength of the American innovation system and continued U.S. economic competitiveness. In addition to graduate student research assistantships funded by federal research grants, several federal agencies support top graduate students through graduate fellowship and traineeship programs. A strong federal commitment to graduate STEM education is especially critical to preparing the next generation of highly skilled scientists and engineers.

Major Fellowship and Traineeship Graduate Education and Postdoctoral Programs in the Federal Government FY 2019

National Institutes of Health

Kirschstein National Research Service Awards

- **Individual Predoctoral Awards**

The purpose of this fellowship is to improve the diversity of health-related research workforce by supporting the training of predoctoral students that have been shown to be underrepresented.

- Outlook: NIH continues to receive a robust appropriation from Congress. While the President's budget requested a \$1.5 billion cut in FY19, Congress passed a nearly \$2 billion increase in NIH funding for FY19. This is a program that NIH expects to continue to fund in FY19.

- **Individual Postdoctoral Awards**

The purpose of this fellowship is to provide support to promising Fellowship Applicants with the potential to become productive, independent investigators in scientific health-related research fields relevant to the mission of participating NIH Institutes and Centers.

- Outlook: This is a program that NIH expects to continue to fund in FY19.

- **Institutional Research Training Grants**

National Research Service Award (NRSA) Institutional Training Grants are awarded to eligible institutions to develop or enhance research training opportunities for individuals, selected by the institution, who are training for careers in specified areas of biomedical, behavioral, and clinical research. All NIH Institutes offer grants to eligible institutions to develop or enhance research training opportunities.

- Outlook: This is a program that NIH expects to continue to fund in FY19.

National Science Foundation (NSF)

- **Graduate Research Fellowship Program (GRFP)**

The GRF program provides support for students in the early stages of their graduate or doctoral studies in science, mathematics, or engineering, as well as additional support for women in engineering, computer, and information science disciplines. The program is the country's oldest fellowship program that directly supports graduate students in various STEM fields.

- Outlook: In FY18, NSF announced they will offer 2,000 fellowships, the same amount that has been awarded in previous years. This is a program that NSF expects to continue to fund in FY19.

Federal Graduate Education Programs

- **NSF Research Traineeships (NRT)**

The NRT program is designed to encourage the development and implementation of bold, new, and potentially transformative models for STEM graduate education training. The program includes two tracks: the traineeship track and the Innovations in Graduate Education (IGE) track.

- *Outlook: This is a program that NSF expects to continue to fund in FY19.*

- **Graduate Research Internship Program (GRIP)**

Expands opportunities for NSF Graduate Fellows to enhance their professional development by engaging in mission related research experiences with partner agencies across the federal government. GRIP is open only to NSF Graduate Fellows, recipients of the Graduate Research Fellowship Program (GRFP) award.

- *Outlook: This is a program that NSF expects to continue to fund in FY19.*

- **Innovations in Graduate Education (IGE)**

The IGE program is designed to encourage the development and implementation of bold, new, and potentially transformative approaches to STEM graduate education training. IGE focuses on projects aimed at piloting, testing, and validating innovative and potentially transformative approaches to graduate education.

- *Outlook: This is a program that NSF expects to continue to fund in FY19.*

Department of Education (ED)

- **Foreign Language and Area Studies Fellowship (FLAS)**

FLAS provides support for the study of critical, and often under-studied, world areas and languages. It encourages graduate and undergraduate students in all disciplines, including professional programs, to develop language and competence and interdisciplinary knowledge of world areas.

- *Outlook: This is a program that ED expects to continue to fund in FY19. The Administration eliminated funding for this program in its FY19 budget, but it was level funded in both House and Senate FY19 appropriations bills.*

- **Fulbright-Hays Doctoral Dissertation Research Abroad (Fulbright-Hays)**

This program provides grants to colleges and universities for individual doctoral students to conduct research in modern foreign languages and area studies for period of six to 12 months. This program is valuable for students and institutions in fields where research abroad (Western Europe not supported) is an essential part of most dissertations. Projects deepen research knowledge on and help the nation develop capability in areas of the world not general included in U.S. curricula.

- *Outlook: The Administration eliminated funding for this program in its FY19 budget, but the House and Senate have passed level funding for the program in FY19.*

- **Graduate Assistance in Areas of National Need (GAANN)**

This program provides fellowships, through academic departments and programs of IHEs, to assist graduate students with excellent records who demonstrate financial need and plan to pursue the highest degree available in a field designated as an area of national need. The goal is to sustain and enhance the capacity for teaching and research in areas of national need.

- *Outlook: Support for GAANN has slowly eroded over time because of overall lack of support for any ED funds going to graduate students. In FY13, support totaled \$30.9 million. In FY18 and FY19, GAANN is funded at \$23 million, \$8 million less than FY17.*

Federal Graduate Education Programs

Department of Defense (DOD)

- **National Defense Science and Engineering Graduate Fellowships Program ([NDSEG](#))**

NDSEG supports individuals earning doctoral degrees in science and engineering disciplines that have the greatest payoff to national security requirements. Recipients are introduced to policymaking in the executive and legislative branches of government and provided the opportunity to contribute technical expertise and gain hands-on experience in science and technology policymaking in the Pentagon. The program is administered by the Army, Navy, and Air Force research offices.

- Outlook: This is a program that DOD expects to continue to fund in FY19.
- **National Security Education Program ([NSEP](#))**

NSEP encourages U.S. graduate students, undergraduate students, and U.S. colleges and institutions to internationalize their curricula by promoting the study of under-represented languages and areas critical to U.S. national security. NSEP has nine initiatives including the David L. Boren Graduate Fellowships and the intensive Language Flagship Fellowship.

- Outlook: This is a program that DOD expects to continue to fund in FY19.
- **Science Mathematics and Research for Transformation Scholarship for Service Program ([SMART](#))**

As part of the National Defense Education Program (NDEP), SMART's purpose is to foster a new generation of scientists, mathematicians, engineers, and technologists who will one day discover and problem solve in the nation's defense laboratories. It is an opportunity for students pursuing an undergraduate or graduate degree in Science, Technology, Engineering, and Mathematics (STEM) disciplines to receive a full scholarship and be gainfully employed by DOD upon degree completion.

- Outlook: This is a program that DOD expects to continue to fund in FY19.

Environmental Protection Agency (EPA)

- **Science to Achieve Results ([STAR](#))**

The purpose of the STAR Fellowship program is to support research in academic disciplines related to environmental research, including physics, biology, social science, and engineering.

- Outlook: There are no STAR fellowship opportunities at this time. The final cohort of STAR Fellows was selected in 2015.

National Aeronautics and Space Administration (NASA)

- **National Space Grant College and Fellowship Program ([Space Grant](#))**

NASA initiated the National Space Grant College and Fellowship Program, also known as Space Grant, in 1989 as a national network of colleges and universities. These institutions are working to expand opportunities for Americans to understand and participate in NASA's aeronautics and space projects by supporting and enhancing science and engineering education, research, and public outreach efforts.

- Outlook: Both the House and Senate recommend an appropriation of \$40 million for Space Grant in fiscal year 2018. This is a program that NASA will continue to support in FY18.
- **Aeronautics Scholarships and Advanced STEM Training and Research Fellowships ([AS & ASTAR](#))**

AS & ASTAR engages self-directed STEM learners in NASA's scientific, engineering research and development, design, and STEM operational activities. Recipients participate in research opportunities that are relevant to NASA's Aeronautics, Human Exploration and Operations, and Science mission directorates and are experiential learning experiences that contribute to graduate theses and doctoral dissertations.

- Outlook: This is a program that NASA expects to continue to support in FY18.

Federal Graduate Education Programs

- **NASA Space Technology Research Fellowships ([NSTRF](#))**

The goal of NSTRF is to sponsor a U.S. citizen and permanent resident graduate students who show significant potential to contribute to NASA's goal of creating innovative new space technologies for our Nation's science, exploration and economic future.

- *Outlook: This is a program that NASA expects to continue to support in FY18.*

National Oceanic and Atmospheric Administration (NOAA)

- **Sea Grant**

[Sea Grant](#) sponsors a variety of marine research, outreach, and education projects, primarily through the 33 state Sea Grant Programs. The National Sea Grant office offers two national fellowship opportunities for graduate students with an interest in ocean, coast, and Great Lakes resources.

- *Outlook: The President's FY19 budget request proposed eliminating the program. In FY19, the Senate has rejected the administration's proposal and increased program funding by \$6 million over FY18. This is a program NOAA expects to continue to fund in FY19.*

Department of Energy (DOE)

- **Computational Science Graduate Fellowship ([CSGF](#))**

The CSGF program is funded by the Department of Energy's Office of Defense Programs and the Office of Science. CSGF requires that graduate students plan and follow a course of study that transcends the bounds of traditional academic disciplines and requires substantive graduate work in each of the scientific or engineering discipline, computer science, and applied mathematics. Fellows receive tremendous guidance and support to assist them in becoming scientists and engineers who are able to comfortably communicate across disciplines.

- *Outlook: This is a program that DOE expects to continue to fund in FY19.*

- **Graduate Student Research Program ([SCGSR](#))**

The SCGSR program provides supplemental awards to outstanding U.S. graduate students to pursue part of their graduate thesis research at a DOE laboratory/facility in areas that address scientific challenges central to the Office of Science mission. The SCGSR program is sponsored and managed by the DOE Office of Science's Office of Workforce Development for Teachers and Scientists (WDTS), in collaboration with the 6 Office of Science research programs and the DOE national laboratories/facilities.

- *Outlook: This is a program that DOE expects to continue to fund in FY19.*

Department of State (STATE)

- **Fulbright Grants for Graduate Study and Research Abroad ([Fulbright](#))**

Fulbright was created in 1946 to foster understanding among nations through educational and cultural exchange. The U.S. Student Program is designed to give recent BS/BA graduates, masters, and doctoral candidates opportunities for personal development and international experience. Most grantees plan their own programs. Projects may include university coursework, independent library or field research, classes in a music conservatory or art school, specials projects in the social or life sciences, or a combination. Fulbright has proved particularly valuable in enabling students to undertake sustained research abroad.

- *Outlook: This is a program that State expects to continue to fund in FY19.*