

OFFICE OF INTERNATIONAL SCIENCE AND ENGINEERING (OISE)**\$44,010,000**
-\$4,990,000 / -10.2%**OISE Funding**
(Dollars in Millions)

FY 2019 Actual	FY 2020 (TBD)	FY 2021 Request	Change over FY 2019 Actual	
			Amount	Percent
\$49.00	-	\$44.01	-\$4.99	-10.2%

About OISE

OISE is the focal point for NSF’s international science and engineering activities. OISE’s mission is to promote an integrated, Foundation-wide international engagement strategy and manage internationally-focused programs that are innovative and catalytic. OISE focuses on international activities to identify research opportunities for U.S. researchers through access to international knowledge, infrastructure, and capabilities. OISE’s FY 2021 Request supports this by focusing on three activities: (1) promoting the development of a globally engaged U.S. workforce, (2) facilitating and supporting international partnerships, and (3) providing opportunities for U.S. leadership to shape the global science and engineering agenda.

In FY 2021, OISE will continue its support for the Accelerating Research through International Networks (AccelNet) program. The goals of AccelNet are to accelerate the process of scientific discovery and prepare the next generation of U.S. researchers for multi-team international collaborations. AccelNet supports strategic linkages among U.S. research networks and complementary networks abroad (i.e., network of networks) to leverage research and educational resources to tackle grand scientific challenges that require significant coordinated international efforts. The program seeks to foster high-impact science and engineering by providing opportunities to create new collaborations and new combinations of resources and ideas among linked global networks. In FY 2021, AccelNet will continue to focus on NSF-priority investment areas. Each AccelNet award will build a network of networks across international and interdisciplinary boundaries. AccelNet will provide the funding to connect U.S. research networks with their international counterpart networks. These efforts will ensure the United States has access to the best ideas, people, and facilities, wherever they may be.

In FY 2021, OISE will continue to provide opportunities for STEM undergraduate and graduate students through the International Research Experiences for Students (IRES) program. IRES supports the development of a diverse, globally-engaged U.S. science and engineering workforce and the active engagement of U.S. students in international research in all disciplines funded by NSF. Given the increasingly global nature of science and engineering, the long-term goal of IRES is to enhance U.S. leadership by developing the next generation of STEM leaders. In FY 2021, IRES will continue to include three tracks:

- Track I focuses on the development of world-class research skills in international cohort experiences for U.S. undergraduate and graduate students.
- Track II is dedicated to targeted, intensive learning and training opportunities for U.S. graduate students that leverage international knowledge at the frontiers of research.
- Track III supports U.S. institutional partnerships to develop and evaluate innovative models for high-impact, large-scale international research and professional development experiences for U.S. graduate students, as individuals or groups.

IRES also plans to integrate insights from an external evaluation of Track I, due to OISE at the end of FY 2020, in the FY 2021 competition. An IRES student registration portal will facilitate tracking of long-term outcomes of the program.

In FY 2021, OISE will continue to execute MULTIPLYing Impact Leveraging International Expertise in Research (MULTIPLIER) expeditions with emphasis placed on NSF priority topics and those identified in the annual Office of Management and Budget and Office of Science and Technology Policy memo on research and development budget priorities. MULTIPLIER expeditions focus on fields of science and engineering where researchers outside of the U.S. are making significant developments and have the potential to benefit American prosperity, security, health, and well-being. MULTIPLIER expands NSF's commitment to international outreach by:

- Identifying emerging scientific research areas worldwide through a collaborative analytical approach;
- Providing subject matter experts and international specialists to assess international capabilities and develop diplomatic connections that may benefit the United States;
- Organizing short-term missions for information gathering, ground truthing and network building; and
- Preparing analysis on country—and discipline—specific insights, as well as reports and presentations.

In FY 2021, OISE will relaunch the Partnerships in International Research and Education (PIRE) program, adopting an updated approach that emphasizes coordination with NSF research and education directorates. PIRE seeks to catalyze a higher level of international engagement in the U.S. science and engineering community to enable sustained research excellence. PIRE supports high quality research and education that cannot occur without international collaboration.

OISE will continue to co-fund with NSF directorates meritorious proposals that include international collaboration through its Global Venture Fund. OISE will provide support to assure that U.S. researchers contribute to, and benefit from, complementary efforts around the globe.

In FY 2021, OISE will contribute to the NNA and QL NSF Big Ideas.

- OISE will continue supporting NNA at a level of \$1.0 million, which will support research that builds on and extends existing observing networks and scientific knowledge as well as logistics expertise to address the convergent scientific challenges in the changing Arctic. Interagency, state government, and international partnerships will be further developed to achieve pan-Arctic and Arctic-global perspectives.
- OISE will invest \$1.0 million in QL. The QL Big Idea will continue to build upon and extend the existing knowledge of the quantum world, fostering breakthroughs in the fundamental understanding of quantum phenomena and enabling the exploitation of these phenomena to disrupt the Nation's science and engineering landscape. These advances will unleash the potential of the Nation's quantum-based scientific enterprise, economy, and security.

Funding Profile

OISE Funding Profile			
	FY 2019 Actual Estimate	FY 2020 (TBD)	FY 2021 Estimate
Statistics for Competitive Awards:			
Number of Proposals	417	-	475
Number of New Awards	59	-	50
Funding Rate	14%	N/A	11%
Statistics for Research Grants:			
Number of Research Grant Proposals	413	-	450
Number of Research Grants	55	-	45
Funding Rate	13%	N/A	10%
Median Annualized Award Size	\$101,293	-	\$101,000
Average Annualized Award Size	\$177,216	-	\$250,000
Average Award Duration, in years	3.1	-	3.3

In FY 2021, OISE expects the number of research grant proposals to increase as a result of re-launch of the PIRE program to accompany the already-heavily subscribed IRES and AccelNet programs. In general, about 47 percent of the OISE portfolio is available to support new research grants, and 53 percent is available for continuing grants.

Program Monitoring and Evaluation

External Program Evaluations and Studies

- An evaluation of the IRES program began in September 2018 and will produce deliverables at various stages of the evaluation. The evaluation is expected to be completed in FY 2020. The evaluation will review educational and career trajectories of principal investigators and students and the extent of their international engagement as a result of participating in the program.
- In FY 2020, OISE will initiate an assessment of MULTIPLIER, which will focus on three years of activity to determine the effectiveness of the MULTIPLIERS as a permanent mechanism for international engagement.

Committees of Visitors (COV)

- In FY 2019, no COV of OISE programs was held a COV.
- In FY 2022, a COV will review OISE’s programs and activities.

The Performance and Management chapter provides details regarding the periodic reviews of programs and portfolios of programs by external Committees of Visitors and directorate Advisory Committees. Please see this chapter for additional information.

People Involved in OISE Activities

Number of People Involved in OISE Activities			
	FY 2019		
	Actual	FY 2020	FY 2021
	Estimate	(TBD)	Estimate
Senior Researchers	391	-	350
Other Professionals	49	-	40
Postdoctoral Associates	32	-	30
Graduate Students	145	-	130
Undergraduate Students	34	-	30
Total Number of People	651	-	580