

OFFICE OF INTERNATIONAL SCIENCE AND ENGINEERING (OISE)**\$75,320,000**
+\$24,000,000 / 46.8%**OISE Funding**
(Dollars in Millions)

	FY 2020			Change over	
FY 2020	CARES Act	FY 2021	FY 2022	FY 2021 Estimate	
Actual	Actual	Estimate	Request	Amount	Percent
\$51.04	-	\$51.32	\$75.32	\$24.00	46.8%

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 and coordinate 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 2022 Request supports this by focusing on three activities: (1) facilitating and supporting international partnerships, (2) providing opportunities for U.S. leadership to shape the global science and engineering agenda, and (3) promoting the development of a globally engaged U.S. workforce.

In FY 2022, OISE plans to relaunch a restructured Partnerships for International Research and Education (PIRE) program whose solicitation will be released in FY 2021. OISE plans to invest \$14.0 million with a focused research theme related to climate change or clean energy-related research. OISE plans to coordinate with research and education directorates to facilitate the acceleration of discovery, increase scientific impact, and to strengthen U.S. leadership in science and engineering. PIRE will continue its support for high quality research and education opportunities that cannot occur without international collaboration.

The Global Venture Fund (GVF) resources new awards and supplements that include international collaborations, as well as projects which broaden participation by lowering barriers to international research. GVF funding augments programs under the purview of the Research and Education Directorates. In FY 2022, OISE will leverage the GVF with a \$10.0 million investment to support large scale NSF activities, in cooperation with research and education directorates, in Administration and Agency priorities related to climate change and clean energy-related research. Through this investment, OISE will support collaborative research that will enable innovative international connections not otherwise possible for U.S. researchers and students, advance the frontiers of knowledge, and contribute to U.S. scientific leadership.

In FY 2022, 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 aligned with Administration and agency priorities and 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. 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 2022, OISE will continue to provide opportunities for U.S. STEM undergraduate and graduate students to participate in international research through the International Research Experiences for Students (IRES) program. The long-term goal of IRES is to enhance U.S. leadership by developing the next generation of STEM leaders. 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. In FY 2022, IRES will include two tracks:

- Track I supports international research experiences for cohorts of U.S. undergraduate and graduate students at international labs and research sites under the mentorship of host country scientists; and
- Track II supports advanced studies institutes that engage U.S. graduate students in active learning at the frontiers of knowledge with leading international experts.

OISE plans to design improvements to the IRES program using the results from an external evaluation of Track I in the FY 2022 competition. For example, OISE intends to leverage an existing registration portal for REU students to improve tracking of long-term outcomes of the program. In FY 2022, OISE will continue the pause on IRES Track III to assess it for sufficiency; IRES Track III provided support for 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. To date responses to this track do not appear to meet program objectives. Following a thorough analysis, OISE may terminate or restructure this track in FY 2022.

In FY 2022, OISE intends to resume in person MULTIPLYING Impact Leveraging International Expertise in Research (MULTIPLIER) missions, pending COVID pandemic status, with emphasis placed on Administration and agency priorities. These missions transitioned to virtual engagements in FY 2021 because of the pandemic. MULTIPLIER missions focus on fields of science and engineering where researchers outside of the United States are making significant advances and where collaborations 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 NSF international specialists an opportunity to assess international capabilities and develop scientific 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 2022, OISE will contribute to the following NSF cross-foundational activities.

- OISE will continue its support for Advanced Manufacturing at a level up to \$500,000 to increase knowledge in emerging areas to enable a new generation of manufacturing industries that do not exist today, that are compatible with human needs, that make U.S. manufacturing competitive far into the future, and that builds in resilience to global disruptions for the Nation's manufacturing infrastructure.
- OISE will continue to fund NNA at a level up to \$500,000. OISE's funds 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 continue its investment of \$1.0 million in QIS to promote international cooperation. QIS 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 propel the Nation forward as a leading developer of quantum technology.

Funding Profile

OISE Funding Profile			
	FY 2020 Actual Estimate	FY 2021 Estimate	FY 2022 Estimate
Statistics for Competitive Awards:			
Number of Proposals	428	435	500
Number of New Awards	74	75	85
Regular Appropriation	74	75	85
CARES Act	-		
Funding Rate	17%	17%	17%
Statistics for Research Grants:			
Number of Research Grant Proposals	427	430	495
Number of Research Grants	73	73	80
Regular Appropriation	73	73	80
CARES Act	-		
Funding Rate	17%	17%	16%
Median Annualized Award Size	\$100,091	\$150,000	\$150,000
Average Annualized Award Size	\$163,145	\$170,000	\$200,000
Average Award Duration, in years	3.2	3.2	3.2

In FY 2022, the number of research grant proposals and research grant awards are expected to increase due to the relaunch of the PIRE program and the support for large-scale international engagement activities.

Program Monitoring and Evaluation

The Performance and Management chapter provides details regarding the periodic reviews of programs and portfolios 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 2020 Actual Estimate	FY 2020 CARES Act Actual Estimate	FY 2021 Estimate	FY 2022 Estimate
Senior Researchers	312	-	320	330
Other Professionals	91	-	90	100
Postdoctoral Associates	16	-	20	20
Graduate Students	71	-	70	110
Undergraduate Students	39	-	40	230
Total Number of People	530	-	540	790

