

OFFICE OF INTERNATIONAL SCIENCE AND ENGINEERING (OISE)

\$74,040,000
+\$22,751,058 / 44.4%

OISE Funding
(Dollars in Millions)

FY 2021		FY 2022 (TBD)	FY 2023 Request	Change over	
FY 2021 Actual	ARP Actual			FY 2021 Actual Amount	Percent
\$51.29	\$1.45	-	\$74.04	\$22.75	44.4%

About OISE

OISE is the focal point for NSF's international science and engineering activities and promotes an integrated Foundation-wide international engagement strategy. The Office manages and coordinates catalytic internationally-focused programs, and advances international activities that offer opportunities for U.S. researchers through active engagement and outreach with international counterparts. OISE's FY 2023 Request focuses on three activities: (1) facilitating and supporting international teams and partnerships, (2) providing opportunities for the U.S. to shape the global science and engineering agenda, and (3) promoting the development of a globally engaged U.S. workforce.

In FY 2023, OISE proposes to launch Global Centers (GC). This international center-level activity will enable interdisciplinary and international teams to address grand societal challenges through use-inspired research. Year one will focus on topics related to climate change and clean energy. OISE will prioritize GC investments in convergent center-level activities that drive scientific breakthroughs and lead to use-inspired solutions. To select the first cohort of recipients for FY 2023, OISE will release a solicitation in FY 2022 for the inaugural competition. In preparation for an FY 2023 launch, OISE is developing GC-related partnerships with international counterpart funding agencies. The solicitation will encourage international research teams to seek additional partners from multiple sectors in the U.S. and abroad to leverage financial contributions and augment team capabilities. The GCs will facilitate the education and development of a globally-engaged workforce to support the climate and clean energy disciplines.

In FY 2023, 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 2023, 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 2023, 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.

In FY 2023, OISE will continue to execute MULTIPLYing Impact Leveraging International Expertise in Research (MULTIPLIER) missions, pending COVID-19 pandemic restrictions, 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.

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 resourced by the Research and Education Directorates. In FY 2023, OISE will continue its support for collaborative research that will enable innovative international connections not otherwise possible for U.S. researchers and students.

In FY 2022, OISE launched its final Partnerships for International Research and Education (PIRE) program solicitation. This PIRE competition was aimed at building team capacity and research community awareness and interest in OISE programs in preparation for the planned FY 2023 GC launch. Thus, this PIRE competition invited interdisciplinary, use-inspired research proposals related to climate change and/or clean energy at the Principal Investigator level.

In FY 2023, 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 2021		
	Actual	FY 2022	FY 2023
	Estimate	(TBD)	Estimate
Statistics for Competitive Awards:			
Number of Proposals	272	-	550
Number of New Awards	79	-	90
Regular Appropriation	78	-	90
ARP	1		
Funding Rate	29%	-	16%
Statistics for Research Grants:			
Number of Research Grant Proposals	270	-	545
Number of Research Grants	77	-	85
Regular Appropriation	76		85
ARP	1		
Funding Rate	29%	-	16%
Median Annualized Award Size	\$100,000	-	\$150,000
Average Annualized Award Size	\$147,525	-	\$200,000
Average Award Duration, in years	2.9	-	3.0

In FY 2023, the number of research grant proposals is expected to increase by approximately 275 compared to the FY 2021 Actual, due to the launch of Global Centers. Average annual award size and duration as well as funding rate are not expected to materially fluctuate from the FY 2021 Actual and FY 2022 Request.

People Involved in OISE Activities

Number of People Involved in OISE Activities				
	FY 2021	FY 2021	FY 2022	FY 2023
	Actual	ARP Actual	FY 2022	FY 2023
	Estimate	Estimate	(TBD)	Estimate
Senior Researchers	381	4	-	400
Other Professionals	77	2	-	100
Postdoctoral Associates	13	2	-	20
Graduate Students	76	23	-	120
Undergraduate Students	36	-	-	50
K-12 Teachers	-	-	-	-
K-12 Students	-	-	-	-
Total Number of People	582	31	-	690