

DIRECTORATE FOR SOCIAL, BEHAVIORAL, AND ECONOMIC SCIENCES (SBE)**\$360,600,000****SBE Funding**
(Dollars in Millions)

	FY 2022 Actual ¹	FY 2023 Estimate Base	Disaster		FY 2023 Estimate Total	Change over		
			Relief Supplemental Base			FY 2024 Request	FY 2023 Base Amount	Total ² Percent
Behavioral and Cognitive Sciences	\$102.69	\$102.70	\$1.00		\$103.70	\$120.41	\$16.71	16.1%
Social and Economic Sciences	104.11	104.12	1.00		105.12	121.83	16.71	15.9%
Nat'l Ctr. for Science & Engineering Statistics	56.50	56.51	22.38		78.89	90.24	11.35	14.4%
SBE Office of Multidisciplinary Activities	22.55	22.49	3.00		25.49	28.12	2.63	10.3%
Total	\$285.86	\$285.82	\$27.38		\$313.20	\$360.60	\$47.40	15.1%

¹ Excludes \$124,580 in American Rescue Plan supplemental funding.² Captures both the FY 2023 Omnibus appropriation and the Disaster Relief Supplemental base.**About SBE**

SBE researchers examine fundamental questions about the dynamic abilities of humans, the strength and resilience of essential institutions, the creation of jobs and industries, national security and relations between nations, and finding new ways to improve quality of life for all Americans. SBE-supported research empowers America's private and public sectors to grow the economy, secure the homeland, improve the health and safety of American families, enhance equitable decision making, and increase the competitiveness of farms, offices, and factories across the Nation.

SBE strategically seeks opportunities to build a better future. One way it does this is by investing in a new and increasingly diverse, dynamic, and skilled generation of young researchers in support of NSF's goal to Create Opportunities Everywhere. SBE support for early career investigators, undergraduates, graduate students, and postdoctoral research fellowships trains and prepares young scholars to develop rigorous and effective new ways to capitalize on the increasing availability of massive amounts of data to advance knowledge about human behavior. SBE researchers, for example, will have increasing opportunity to use and combine data from surveys, administrative records, brain imaging, and biospecimens, as well as output from behavioral, environmental, and geographic sensors to help others learn about how to create opportunity and improve life outcomes.

SBE is also home to the National Center for Science and Engineering Statistics (NCSES). One of only 13 principal statistical agencies in the federal government, and it is the Nation's source for science and engineering information in a global context. NCSES collects, analyzes, and disseminates information on representation across the scientific enterprise; research and development; innovation; the science and engineering (S&E) workforce; the condition and progress of STEM; and U.S. competitiveness in science, engineering, technology, and research and development.

SBE's FY 2024 Request is shaped by three guiding principles:

Support fundamental research that advances key national priorities. The research emphases include enhancing national security and preparedness; understanding, mitigating, and adapting to climate and global change; strengthening American infrastructure; broadening participation in STEM; studying the causes of, impacts on, and practices for addressing inequity throughout society; creating new opportunities for populations adversely affected by change; empowering American innovation

through research in emerging industries such as artificial intelligence (AI) with a focus on worker productivity and well-being in a growing range of work environments, including emerging industries; reliability of information networks; and improving quality of life for communities across the country.

Support NCSES, the Nation's source for information on the science and engineering enterprise. Various initiatives, including the Evidence Act, focus on improving federal agency performance and the productivity of America's S&E enterprise as a whole. These efforts require our Nation to make more effective use of the types of data that NCSES collects, analyzes, and disseminates. Increased support for NCSES allows the Nation to be more informed, more effective, and more agile in converting America's incredible talent and ability into better educational outcomes, more opportunity, greater productivity, and higher rates of innovation in all areas of American life.

Support and advance cross-directorate activities that address urgent national challenges. Whether the topic is creating the new jobs and industries that will yield an economic recovery that helps everyone, increasing national security through tools that better identify new and emerging threats, improving community resilience by improving response to natural disasters and pandemics, protecting consumers and institutions against misinformation and other attacks on vital infrastructure, broadening opportunity, understanding the people involved is critical. SBE works with all of NSF and other agencies to support research that solves big problems by putting people first.

With an FY 2024 Request of \$360.60 million, or 15.1 percent over FY 2023 Estimate Base, SBE will maximize support in disciplinary and interdisciplinary programs that support Administration and NSF-wide priorities, including advanced manufacturing research, AI, and USGCRP research. Funding will also support building research capacity at under-resourced institutions and expanding the STEM talent pool through the Build and Broaden program. SBE will also support NCSES's expanding role in the federal statistical enterprise.

The FY 2024 Request includes continued support for investments that integrate the social, behavioral, and economic sciences into multi-directorate and multidisciplinary activities that address issues of major scientific, national, and societal importance. These include research related to Brain Research through Advancing Innovative Neurotechnologies, National AI Research Institutes; SaTC; digital assets research; and Dynamics of Integrated Socio-Environmental Systems (DISES).

In FY 2024, SBE will continue its support for early career investigators—Faculty Early Career Development (CAREER) awards; undergraduates—Research Experiences for Undergraduates (REU); graduate students—Doctoral Dissertation Research Improvement Grants (DDRIG); and postdoctoral research fellows through its SBE Postdoctoral Research Fellowships (SPRF) program.

SBE's FY 2024 Request includes increased support for NCSES to initiate new data collection efforts as well as continued implementation of the Standard Application Process and development and implementation of the National Secure Data Service demonstration project. Consistent with recent executive orders that highlight the importance of objective and trustworthy data, SBE support will help NCSES continue to expand data tools, implement data collections, and address requirements of the CHIPS and Science Act (P.L. 117-167) and the Foundations for Evidence-Based Policymaking Act (Evidence Act). SBE is also committed to supporting NSF's efforts to meet all Evidence Act requirements, including having NCSES's Director serve as the Foundation's Statistical Official.

Major Investments

SBE Major Investments

(Dollars in Millions)

Area of Investment ^{1,2}	FY 2022 Actual	FY 2023 Estimate Base Total ³	FY 2024 Request	Change over FY 2023 Base Total ³	
				Amount	Percent
Advanced Manufacturing	\$0.50	\$0.50	\$3.50	\$3.00	600.0%
Analytics for Equity	-	0.75	2.04	1.29	172.0%
Artificial Intelligence	17.74	16.92	19.59	2.67	15.8%
Biotechnology	1.68	1.50	1.50	-	-
Build and Broaden	8.01	8.00	18.06	10.06	125.8%
Digital Assets Research	-	-	8.00	8.00	N/A
Climate: USGCRP	19.92	20.00	25.14	5.14	25.7%
SBE Post-Doctoral Research Fellowships	3.04	6.00	9.00	3.00	50.0%
Secure & Trustworthy Cyberspace	4.00	4.00	4.00	-	-
Strengthening American Infrastructure	6.64	6.00	8.00	2.00	33.3%

¹ Major investments may have funding overlap and thus should not be summed.

² This table reflects this directorate's support for selected areas of investment. In other directorate narratives, areas of investment displayed in this table may differ and thus should not be summed across narratives.

³ Captures both the FY 2023 Omnibus appropriation and the Disaster Relief Supplemental base.

To learn more about cross-agency themes and initiatives supported by SBE, such as Advanced Manufacturing, Artificial Intelligence, Biotechnology, Climate: USGCRP, National Nanotechnology Initiative, Networking, and Information Technology R&D, Secure and Trustworthy Computing, and Create Opportunities Everywhere, see individual narratives in the NSF-Wide Investments chapter.

- Analytics for Equity (\$2.04 million in SBE plus an additional \$2.0 million in Integrative Activities/Evaluation and Capability Assessment for an NSF total of \$4.04 million): SBE will increase support for the Analytics for Equity Initiative, which builds on the Evidence-Based Policymaking Act and E.O. 13985 by creating a new way to support social, behavioral, and economic sciences research that leverages federal data assets (ensuring privacy is protected and data are secure) and scientific advances in researching equity-related topics for greater public benefit.
- Build and Broaden (B2; \$18.06 million): SBE will increase investments in an innovative program that supports research collaborations and partnerships between scholars at MSIs and other institutions or organizations. Projects that: 1) build capacity and enhance research productivity in the SBE sciences at MSIs; 2) provide researchers with new ways to diversify and sustain collaborations; 3) foster partnerships that strengthen career and research trajectories for MSI faculty; 4) broaden participation of underrepresented entities in STEM entrepreneurship and innovation; and 5) contribute to more innovative science by diversifying research and widening the STEM pathways.
- Digital Assets Research (\$8.0 million): In FY 2024, SBE will steward, in partnership with CISE and TIP, transdisciplinary, multi-institution, and multi-sector research efforts in digital assets. This

work will explore the broad socio-technical foundational and use-inspired research on digital assets (e.g., Central Bank Digital Currencies, crypto-currencies, non-fungible tokens, etc.), including the benefits and risks of these technologies. NSF's efforts will be in alignment with the forthcoming National Strategy for Digital Assets R&D.

- SBE Postdoctoral Research Fellowship (\$9.0 million): SBE will increase its commitment to SPRF that promotes fundamental research in the SBE sciences by providing opportunities for recent doctoral graduates to obtain additional training and research experience; targets the participation of underrepresented groups in STEM; and encourages doctoral scientists who are not yet in full-time positions to take advantage of the two-year fellowship to prepare for scientific careers in academia, industry, private sector, or government. FY 2024 funding will expand support for broadening participation with an emphasis on PIs from underrepresented groups, states, and institutions.
- Strengthening American Infrastructure (\$8.0 million): SBE will increase its commitment to this investment that links experts on physical, computational, and material aspects of infrastructure design with scientists whose fundamental research explains how humans will—and will not—use infrastructure. This human-centered approach to infrastructure is a critical component to building better, smarter, and more cost-effective roads, electric grids, hospitals, and more. Improving infrastructure in these ways spurs private-sector innovation, grows the economy, and is essential to national competitiveness.

Centers Programs

SBE Funding for Centers Programs

(Dollars in Millions)

	FY 2023		FY 2024 Request	Change over	
	FY 2022 Actual	Estimate Base Total ¹		FY 2023 Base Total ¹	Percent
	Artificial Intelligence Research Institutes (Multiple)	\$1.02	\$1.52	\$1.52	-

¹ Captures both the FY 2023 Omnibus appropriation and the Disaster Relief Supplemental base.

For detailed information on individual centers programs, please see the Cross Theme Topics section of the NSF-Wide Investments chapter.

People Numbers and Funding Profiles

For detail on People Numbers and Funding Profile, please see the Summary Tables chapter.

DIVISION OF BEHAVIORAL AND COGNITIVE SCIENCES (BCS)

BCS Funding

(Dollars in Millions)

	FY 2022 Actual	Disaster			Change over		
		FY 2023 Estimate Base	Relief Supplemental Base	FY 2023 Estimate Total	FY 2024 Request	FY 2023 Base Amount	Total ¹ Percent
Total	\$102.69	\$102.70	\$1.00	\$103.70	\$120.41	16.71	16.1%
Research	97.24	97.76	1.00	98.76	115.47	16.71	16.9%
Education	0.84	0.44	-	0.44	0.44	-	-
Infrastructure	4.61	4.50	-	4.50	4.50	-	-

¹ Captures both the FY 2023 Omnibus appropriation and the Disaster Relief Supplemental base.

BCS supports fundamental research that examines the sources of the human condition and the character of thinking and behavior. Programs examine these issues at multiple levels, ranging from genetics and brain activity to social, cultural, and environmental contexts. BCS also manages infrastructure-related activities in Human Networks and Data Science, which seek to advance relevant analytical techniques and develop user-friendly, large-scale, next-generation data resources to improve quality of life for all Americans. These activities are complemented by active involvement in funding competitions and development of partnerships, inside and outside of government, that support collaborative and cross-disciplinary projects that increase understanding of the human brain, mind, and behavior. In general, about 78 percent of the BCS portfolio is available to support new research grants. The remaining 22 percent supports research grants made in prior years and the research infrastructure needed by this community.

DIVISION OF SOCIAL AND ECONOMIC SCIENCES (SES)

SES Funding

(Dollars in Millions)

	FY 2022 Actual	Disaster			Change over		
		FY 2023 Estimate Base	Relief Supplemental Base	FY 2023 Estimate Total	FY 2024 Request	FY 2023 Base Amount	Total ¹ Percent
Total	\$104.11	\$104.12	\$1.00	\$105.12	\$121.83	16.71	15.9%
Research	81.26	98.53	1.00	99.53	116.24	16.71	16.8%
Education	0.14	0.50	-	0.50	0.50	-	-
Infrastructure	22.71	5.09	-	5.09	5.09	-	-

¹ Captures both the FY 2023 Omnibus appropriation and the Disaster Relief Supplemental base.

SES is concerned with the growth of our Nation through the provision of goods, services, opportunities, and wellbeing. SES supports research on how people collectively live, work, and prosper in productive businesses and other organizations. Priority topics include: management tools, risk assessment, and planning; workforce measurement, training, and development; markets, competition, and the economy; social trends and demographics; security and preparedness;

accountable institutions and behaviors; the science of and the legal and regulatory aspects of innovation, technology, and science; the safety and trustworthiness of new technologies; as well as the statistics, modeling, and other methodologies that enable forward thinking research. In general, about 67 percent of the SES portfolio is available to support new research grants. The remaining 33 percent supports research grants made in prior years and the research infrastructure needed by this community.

SBE OFFICE OF MULTIDISCIPLINARY ACTIVITIES (SMA)

SMA Funding
(Dollars in Millions)

	FY 2022 Actual	Disaster			FY 2023 Estimate Total	Change over		
		FY 2023 Estimate Base	Relief Supplemental Base	FY 2023 Estimate Total		FY 2024 Request	FY 2023 Base Total ¹ Amount	Percent
Total	\$22.55	\$22.49	\$3.00	\$25.49	\$28.12	\$2.63	10.3%	
Research	16.27	16.43	-	16.43	16.06	-0.37	-2.3%	
Education	6.28	6.06	3.00	9.06	12.06	3.00	33.1%	
Infrastructure	-	-	-	-	-	-	N/A	

¹ Captures both the FY 2023 Omnibus appropriation and the Disaster Relief Supplemental base.

SMA provides a focal point for the range of activities that cut across SBE and NSF disciplinary boundaries. SMA supports efforts that seek to improve the scale and effectiveness of the scientific workforce. It supports REU Sites, the Ethical and Responsible Research (ER2) program, Analytics for Equity, and the SPRF program. In FY 2024, SMA will play a key role in several crosscutting NSF investments as well as interdisciplinary research and training, via activities such as the SPRF-Fundamental Research and BP tracks. As the lead directorate for managing the ER2 program, with support from other NSF directorates, SBE coordinates the Online Ethics Center for Engineering and Science award. While all SBE divisions pursue interdisciplinary work, SMA assists with seeding multidisciplinary activities for the future, such as leveraged and targeted co-funding directed towards national, NSF, and directorate priorities. In general, about 51 percent of the SMA portfolio is available to support new research grants. The remaining 49 percent supports research grants made in prior years.

NATIONAL CENTER FOR SCIENCE AND ENGINEERING STATISTICS

NCSES Funding
(Dollars in Millions)

	FY 2022 Actual	Disaster			FY 2023 Estimate Total	Change over		
		FY 2023 Estimate Base	Relief Supplemental Base	FY 2023 Estimate Total		FY 2024 Request	FY 2023 Base Amount	Total ¹ Percent
Total	\$56.50	\$56.51	\$22.38	\$78.89	\$90.24	11.35	14.4%	
Research	0.37	-	-	-	-	-	N/A	
Education	-	-	-	-	-	-	N/A	
Infrastructure	56.13	56.51	22.38	78.89	90.24	11.35	14.4%	

¹ Captures both the FY 2023 Omnibus appropriation and the Disaster Relief Supplemental base.

NCSES is one of the federal government’s thirteen principal statistical agencies with a mission to provide information regarding the S&E enterprise in a global context. NCSES provides policymakers, researchers, and the public high-quality data and analysis on R&D, innovation, the education of scientists and engineers, and the S&E workforce. NCSES also supports research; the education and training of researchers; statistical methodology and data quality improvement efforts; and information compilation and dissemination to meet the statistical and analytical needs of a diverse user community.

The FY 2024 Request of \$90.24 supports NCSES’s core data collection and analytic activities, including nationally representative surveys of U.S. investment in R&D, innovation, the education of scientists and engineers, and the science and engineering workforce, and preparation of the aforementioned reports. Funding also supports NCSES leadership of government-wide evidence building activities and initiatives such as continued management of the Standard Application Process portal for applying to access restricted-use data from statistical agencies and units, as well as informing the proposed National Secure Data Service (NSDS) through projects, including the CHIPS and Science Act authorized NSDS Demonstration Project that uses America’s DataHub. A corresponding increase of four FTE and related funding, associated with the expanded data collection efforts, SAP, and NSDS, for NCSES is included for FY 2024 in this request. Additional details regarding this staffing increase, can be found in the Personnel, Compensation, and Benefits section of the Agency Operations and Award Management chapter.

