



Federal Funding Recommendations & Guidance for Appropriations Fiscal Year 2023

Overview

The FY23 funding recommendations outlined in this document were developed in consultation with the [Association of American Universities](#) (AAU) and [Association of Public Land-Grant Universities](#) (APLU). Stony Brook University (SBU) is a member of both AAU and APLU.

For research agencies and programs, SBU's funding recommendations draw from and align with: 1) agency or program authorization levels specified in law (example: Energy Act of 2020) or in introduced or pending legislation (examples: the America COMPETES Act, and the U.S. Innovation and Competition Act); and 2) recent analyses and reports and legislation (example: AAAS Analysis 2022: [As Congress Considers COMPETES, How Short Are We From The Old COMPETES?](#))

For student aid and other higher education programs, SBU's recommendations generally seek to restore programs to at least the highest funding level prior to sequestration cuts, or to increase funding in FY23 to meet students' needs and make up for inflation losses over the years. The recommendations build on SBU's recommendations for FY22 and are also informed by: AAU's call to triple the maximum Pell Grant award by 2024 and the Administration's proposal to double the Pell Grant maximum award by 2029.

Department of Defense (DOD) Research and DARPA

For FY23, SBU recommends \$2.929 billion overall for 6.1 basic research, \$4 billion for DARPA, and \$20 billion for Defense S&T.

Defense basic research contributes significantly to our nation's economic and national security. DOD relies on technological innovation as a force multiplier, and cutting-edge advances make our military the best-equipped and most effective in the world. Defense and other federally sponsored research at universities has led to technologies vital to our military, such as radar, lasers, precision-guided weapons, the Internet, body armor, GPS, and much more.

Addressing complex military challenges requires innovative technologies. As the battlefronts and rivals' capabilities continue to evolve, new disruptive technologies are essential in quantum information sciences, artificial intelligence, advanced communications, robotics, and other areas that will enable our military to preserve a leading edge and avoid strategic surprise.

Defense 6.1 basic research programs support not only cutting-edge research, but also the next generation of U.S. scientists and engineers. The NDSEG Fellowship program helps attract and retain top U.S. citizens for study in fields vital to addressing national security challenges. It is imperative that the Defense Department invest in the foundational science and technologies to confront these challenges.

SBU's recommendations are the same as those of the Coalition for National Security Research and constitute a 6-percent increase over FY22 enacted levels. These funding recommendations are consistent with the strategic approach to harnessing and protecting the National Security Innovation Base outlined in the National Defense Strategy, as well as the goals of the Quadrennial Defense Review. Defense S&T comprises 6.1 basic research, 6.2 applied research, and 6.3 advanced technology development programs.

Department of Education

Student Aid

For FY23, SBU urges Congress to support the doubling of the Pell Grant maximum award in FY23. Doubling the maximum Pell Grant to \$13,000 would serve as an important step in reclaiming much of the original purchasing power of the Pell Grant. The Pell Grant program is the single most important tool to enable low-income students to access and afford college. According to the Congressional Budget Office (CBO), the program provided more than 7 million students with grants last year. However, Pell Grants no longer cover the majority of costs for students attending a four-year institution, and therefore many low-income students must take on higher levels of debt that prevents them from fully contributing to the economy or earning advanced degrees. Most Pell 4 recipients come from households that earn less than \$50,000 annually. This investment is necessary now more than ever as the COVID-19 pandemic has had a devastating impact on the finances of many students and families.

SBU urges Congress to increase support for other federal student aid programs that provide grants and work-study to low- and middle- income students. **Specifically, SBU supports increasing the Supplemental Educational Opportunity Grants (SEOG) to \$1.09 billion and Federal Work-Study to \$1.52 billion, to restore the programs to their high-water marks, adjusted for inflation.**

The SEOG program provides targeted, need-based grant aid of up to \$4,000 per student to 1.6 million students. Participating colleges match federal dollars to make more than \$1 billion in grant aid available. Over 99 percent of all SEOG recipients are Pell Grant recipients, and SEOG recipients have higher need on average than students receiving only Pell Grants. Increasing funding to \$1.09 billion in FY23 would restore the programs to pre-sequester levels, adjusted for inflation.

Federal Work-Study has been shown to positively impact a student's ability to afford college and to improve their chances of graduating. Federal and institutional funding for Work-Study helps more than 600,000 students work part-time to help pay their college costs. Studies show that students who work on campus have higher graduation rates. Increasing funding to \$1.52 billion would restore the programs to pre-sequester levels, adjusted for inflation.

Graduate Education

For FY23, urges Congress to provide \$35 million for the Graduate Assistance in Areas of National Need (GAANN) program. This is the authorized level for GAANN, and at this level of funding the program would provide support for additional students in disciplines critical to our nation's continuing security and prosperity. The GAANN program helps ensure a strong pipeline of talented experts and educators who will help to meet the demands of our 21st century workforce. The current funding level does not allow the program to run a competition each year, stifling the country's ability to support graduate education in important areas of national need. The Student Aid Alliance recommends the same funding level for FY23.

In addition, SBU urges Congress to expand the Graduate Assistance in Areas of National Need (GAANN) Program to include "Computer Science + X" (CS+X) programs (also referred to as Applied Computer Science and Data Literacy Programs), aimed at integrating the humanities and computer science, in order to provide technology-focused students in need with the broader skill set required for high tech jobs. In light of the growing use of products like Amazon Echo, Siri, and Voice Command, the importance of having software understand human speech, and thus, naturally communicate with people, means that U.S. technology experts must also be experts in linguistics to understand how human speech works. Furthermore, the healthcare impact of CS+X learning is invaluable. For example, future prosthetic limbs will not only be controlled by a paralyzed patients' thoughts, but also be capable of sensing, feeling, and aesthetically appearing the same as our natural limbs. This will require blending expert skills of computer science with behavioral science, art, and design.

Education Research

For FY23, SBU urges Congress to provide at least \$814.5 million for the Institute of Education Sciences (IES) to advance rigorous education research. IES supports high-quality education research that results in teaching and learning innovations that offer tremendous returns for our society. This level of funding would help build upon the essential research and data infrastructure on which state and local education leaders depend, restore cuts to critical programs, and increase funding for programs for which funding has stagnated. Additionally, this funding would enable IES to continue this critical work and to evaluate the impact the COVID-19 pandemic has had on learning. It would also facilitate the adoption of evidence-based strategies to mitigate learning loss that has occurred due to the pandemic. Our education system will be stronger in the future if we provide meaningful, sustained support for rigorous education research and evaluation today. This is the same funding level proposed in the Senate version of the FY22 Labor-HHS-Education Appropriations bill. The Friends of IES coalition also recommends this funding level for FY23.

International Education

For FY23, SBU urges Congress to support \$161.1 million for the Department of Education's Title VI International Education and Foreign Language programs in FY23. U.S. economic competitiveness and national security depend in part on our ability to understand

an increasingly globalized world and the geopolitical factors that affect it and U.S. interests. Title VI programs play an integral role in developing the talent we need to compete on the global stage and protect our nation's security by creating deep expertise in world regions and languages of strategic interest to the U.S. Graduates who have benefited from Title VI programs go on to successful careers in government, business, academia, and the military. They educate thousands of students, teachers, policymakers, military and diplomatic officials, faculty, and the general public. They engage in diplomatic missions in areas of strategic importance around the world. Restoring Title VI to its historic level of funding is vital to ensuring its programs continue to contribute effectively to our national security, global leadership, and economic competitiveness. Increased investments in Title VI would help meet growing national security demands for foreign language and area studies experts by supporting new centers (NRC, CIBER), making Foreign Language and Area Studies (FLAS) fellowship stipends equal to NSF graduate fellowship stipends, and increasing the number of FLAS fellowships. Our nation needs a steady supply of graduates with expertise in less commonly taught languages, world regions, and transnational trends.

Department of Energy (DOE) Research

SBU recommends \$8.8 billion for the Department of Energy's Office of Science for FY23.

This represents an increase of 18 percent above FY22 and is consistent with the bipartisan House and Senate DOE Science for the Future Act. The DOE Office of Science is the nation's primary supporter of basic physical sciences research. Funding at this level is important to enable the Office of Science to maintain its existing level of support for its core scientific research programs and scientific user facility operations. Sustained and predictable funding growth for the Office of Science is critical to ensuring continued U.S. leadership in other fields of scientific research including the biological sciences, quantum information sciences, computing, artificial intelligence, and engineering. The Energy Sciences Coalition, a broad-based coalition of organizations representing scientists, engineers, and mathematicians in universities, industry, and national laboratories, also supports this level of funding in FY23.

For ARPA-E, SBU recommends at least \$500 million, consistent with the level authorized in the Energy Act of 2020. Stable and sustainable funding for ARPA-E is essential for the advancement of high-risk, high-reward energy research that is unlikely to be supported by industry.

National Aeronautics and Space Administration (NASA)

SBU recommends \$9 billion for NASA's Science Mission Directorate (SMD) in FY23. This represents an 18.2 percent increase over FY22. This amount would provide funding for major SMD missions and support robust investments in improved data integration, analysis, and Global Climate Modeling capabilities that take advantage of new and existing space-based observations.

SBU recommends \$1 billion for the Aeronautics Research Mission Directorate (ARMD) in FY23. This reflects a 13.5 percent increase over FY22.

SBU recommends \$1.5 billion for the Space Technology Mission Directorate (STMD) in FY23, which is a 36.4 percent increase over FY22. This amount supports continued advancement in missions to the Moon and Mars.

SBU recommends \$154 million for NASA’s Office of STEM Engagement and \$65 million for the National Space Grant College and Fellowship Program for FY23, which is consistent with the Space Grant Coalition’s level of requested support for the program. These increases will support students in all 52 U.S. jurisdictions and improve NASA’s engagement with underrepresented populations.

National Endowment for the Humanities (NEH)

SBU urges Congress to provide \$201 million for the NEH in FY23. This level of funding is consistent with the request of the National Humanities Alliance (NHA), a nationwide coalition supporting the humanities on campus and in local communities. Funding the NEH at \$201 million would allow the agency to continue to rebuild its capacity to support peer-reviewed humanities research, education, and community programs. Programs funded by the NEH stimulate creativity and innovation while developing cultural competencies critical to global leadership and successful diplomacy.

National Institutes of Health (NIH)

For FY23, SBU urges Congress to provide at least \$49.1 billion for NIH, a \$3.5 billion increase over FY22. This recommendation excludes funding for the recently funded Advanced Research Projects Agency for Health (ARPA-H). If ARPA-H is to be housed at NIH, then additional appropriations as proposed in the President’s FY23 budget should be added to NIH’s funding. This increased investment would allow for the NIH’s base budget to keep pace with the biomedical research and development price index (BRDPI) and allow meaningful investment growth of 5 percent. This level of investment represents sustained, predictable growth and allows the United States to invest in scientific opportunities.

Robust NIH funding improves the lives—and quality of life—of millions of current and future patients, creates jobs, and supports U.S. economic and national security. The current pandemic underscores the value of consistent investment in NIH-supported science. NIH-funded biomedical research performed at universities has been critical to combatting the COVID-19 pandemic through the development of diagnostics, treatments, vaccines. The COVID-19 mRNA vaccine development was made possible because of fundamental science that was supported over the span two decades. Advances in the treatment of sickle-cell anemia and childhood cancers are based on years of basic research. Even before scientific discoveries are made, however, NIH research grants are helping fuel America’s economy by contributing to economic activity and job creation in every state. Our nation’s biomedical research enterprise is also an economic powerhouse. Approximately, 83 percent of NIH funding puts more than 300,000 scientists to work at 2,500 institutions across the country. Every research dollar that leaves NIH does double duty. In FY21 the \$35.73 billion awarded to researchers in the 50 U.S. states and the District of Columbia supported 552,444 jobs and \$94.18 billion in economic activity (see United for Medical Research’s [2022 report](#)). The Ad Hoc Group for Medical Research Funding and United for Medical Research recommend the same funding level for NIH in FY23.

National Science Foundation (NSF)

For FY23, SBU recommends at least \$11 billion for the National Science Foundation (NSF).

This represents a \$2.2 billion increase above FY22. There is an immediate need for this amount of funding in order to realize the goals of advancing NSF's current and future work. Congress has supported vast new responsibilities for NSF in both the House and Senate versions of recent competitiveness authorization legislation (S. 1260 and H.R. 4521). NSF has a critical role in expanding access to STEM participation for historically underrepresented groups and addressing equity. However, NSF can't achieve these ambitious goals without sufficient resources.

This increase for FY23 would allow the U.S. to start to catch up to the pace of investment other countries are making in research and development. Data from the National Science Board's 2022 Science and Engineering Indicators confirmed that confirms China has overtaken the United States as the world's leader in several key scientific metrics, including the overall number of papers published and patents awarded.

In the last decade, NSF has only received modest increases in funding, averaging about 2.5 percent a year. That rate of growth will not allow the U.S. to advance, especially in areas policymakers have identified as key to our economic and national security such as artificial intelligence, bioengineering, advanced manufacturing, and quantum science. NSF needs a significant funding increase in FY23 to jump start the agency and get it back on track to compete globally.

In addition to addressing global competition, there are other reasons to support the \$11 billion request, including to address unmet in high-quality proposals that are submitted each year but cannot be funded. Every year, NSF declines thousands of research ideas, and in FY20 almost \$4 billion worth of those proposals were rated very good but were not funded due to inadequate resources. Funding rates remain below 30 percent, and grant sizes and duration are insufficient to support the highest quality research. The current Director of NSF has estimated that to truly maximize the value of existing NSF grants, the duration and size of each research project should be increased by 50 percent.

NSF is committed to the fundamental, interdisciplinary, and transformative research and education needed to ensure that the U.S. remains competitive in the decades ahead. For over 70 years, NSF-funded research has proven essential to national security, economy, and maintaining our global competitiveness. As the only federal agency charged with the promotion of scientific progress across all scientific and engineering disciplines, NSF is the cornerstone of America's basic research enterprise. It supports more than a quarter of all the non-medical basic research at our colleges and universities across the nation and plays a key role in rebuilding our economy after the pandemic. The Coalition for National Science Funding (CNSF), a group of more than 140 organizations, recommends the same funding level.

National Oceanic and Atmospheric Administration (NOAA), Oceanic and Atmospheric Research

For FY23, SBU urges Congress to provide at least \$800 million for NOAA Oceanic and Atmospheric Research. In the decades and century to come, we will experience extraordinary

changes on our planet, with consequences that may dramatically change the way we live our lives. Reducing uncertainty, through the prediction of weather, climate and ecosystem change, requires NOAA funded scientific research to continuously improve our understanding of the Earth as an interdependent system of ocean, air, land and living world.

SBU recommends Congress appropriate \$140 million in FY23 for the National Sea Grant College Program and \$18 million for Sea Grant Aquaculture Research.

In 2020, the Sea Grant program helped generate an estimated \$520 million in economic benefits; created or supported 11,000 jobs; created or sustained 1332 businesses; provided 34 state-level programs with funding that assisted 285 communities improve their resilience; helped over 11,000 people adopt safe and sustainable fishing practices; helped restore or protect an estimated 4.2 million acres of habitat; and supported the education and training of nearly 2000 undergraduate and graduate students.