



U.S. National
Science Foundation



DELAWARE

FY 2023 Fast Facts



\$37,353,000

Total NSF Awards
to Delaware



\$31,988,000

Invested in Fundamental
Research in Delaware



\$5,365,000

Invested in STEM
Education in Delaware



\$2,189,000

Invested in Delaware
Businesses

Top NSF-funded Academic Institutions for FY 2023

University of Delaware
\$33,301,000

Delaware State University
\$974,000

NSF By The Numbers

The U. S. National Science Foundation (NSF) is an [\\$9.06 billion](#) independent federal agency created by Congress in 1950 to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense. NSF's vital role is to support basic research and researchers who create knowledge that transforms the future.

DID YOU KNOW?

NSF has funded the work of **261** Nobel Prize winners over 75 years.



\$9.06B
FY 2024
Total Enacted

93%
Funds research,
education and
related activities



11K
Awards



1.9K
Institutions



353K
People

**Data represents FY 2023 Actuals unless otherwise indicated*



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2415 Eisenhower Avenue | Alexandria, VA 22314



Expanding the Frontiers of Science

Tomorrow's technological applications, such as smart vehicles and augmented reality, demand continuous Gigabit-per-second wireless connectivity everywhere. Such demand calls for effective mechanisms to guarantee efficient and secure radio frequency spectrum access. Existing methods use simple techniques that can detect users' presence in the spectrum but cannot sense the "who, when and how?" of the spectrum being utilized. The **University of Delaware** is leading an NSF Future of Semiconductors (FuSe) award to facilitate artificial intelligence/machine learning (AI/ML)-enabled radio frequency perception over the entire spectrum through the combined use of photonic and electronic small chips. The education component of the project addresses the dearth in the US-based semiconductor workforce through a combination of training on photonic and electronic chip design, AI/ML, and wireless technology skills. The FuSe team mentors women and minorities who are underrepresented in topics such as semiconductors, chip design, and wireless communications. Outreach to high schools using AI-based projects helps to create a pipeline of students to pursue engineering degrees focusing on semiconductors and computing.



STEM Education and Broadening Participation

Regulation of the synthesis, storage, release and degradation of the neurotransmitter acetylcholine (ACh) is essential for normal organismal capabilities, such as the ability to move, think and remember. Through funding from The NSF Historically Black Colleges and Universities - Undergraduate Program (HBCU-UP), **Delaware State University** is leading a project which uses the fruit flies to study the ACh regulation system to determine how changes in vesicular ACh transports affect ACh release and behavior regulation. The project uses a wide range of sophisticated tools and methodologies (including the ability to record electrical activity from fly brain cells) to train undergraduate and graduate students from historically underrepresented backgrounds, equipping them with an up-to-date set of transferrable skills in science, technology, engineering and mathematics and broadening their participation in the advanced STEM workforce. The project also includes a strong focus on research training and educating K-12 students through a virtual internship program.



Regional Innovation Engines

NSF Regional Innovation Engines (NSF Engines) Development Awards help organizations create connections and develop their local innovation ecosystem within two years to prepare a strong proposal for becoming a future NSF Engine. An award serving Delaware, New Jersey, New York and Pennsylvania, including project partner **Delaware State University**, is seeking to unite the region's rich array of photonics research and development, manufacturing and workforce resources. Health care, telecommunications, clean energy, advanced manufacturing, defense and countless other industries depend on enabling photonic technologies. The goal of this project is to develop a coherent strategy for use-inspired research and long-term economic growth.

EPSCoR

COMPETITIVE RESEARCH | Delaware is one of 28 U.S. states or territories under the [NSF Established Program to Stimulate Competitive Research \(EPSCoR\)](#). **\$2,625,337** in awards have been made to Delaware academic institutions through EPSCoR in FY 2023. For more information, visit Delaware's EPSCoR state web page.

NCSES

According to the [NSF National Center for Science and Engineering Statistics \(NCSES\)](#), which is housed in NSF, 29% of science, engineering and health doctorates conferred in Delaware are made in engineering. [Visit Delaware's science and engineering state profile to learn more!](#)

33.79% of **Delaware's higher education degrees are concentrated in S&E fields.**

5.45% of **Delaware's workforce is employed in S&E occupations.**

6.28% of **Delaware's total employment is attributable to knowledge - and technology - intensive industries.**

Learn More

CHIPS & SCIENCE – The CHIPS and Science Act's investments in the U.S. National Science Foundation will help the United States remain a global leader in innovation. Implementation of this legislation will be key to ensuring that ideas, talent and prosperity are unleashed across all corners of the nation. [For more information, please visit the NSF CHIPS and Science website.](#)

RESEARCH SECURITY – NSF is committed to safeguarding the integrity and security of science and engineering while also keeping fundamental research open and collaborative. NSF seeks to address an age of new threats and challenges through close work with our partners in academia, law enforcement, intelligence and other federal agencies. By fostering transparency, disclosure and other practices that reflect the values of research integrity, NSF is helping to lead the way in ensuring taxpayer-funded research remains secure. [To learn more, please visit the NSF Research Security website.](#)

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