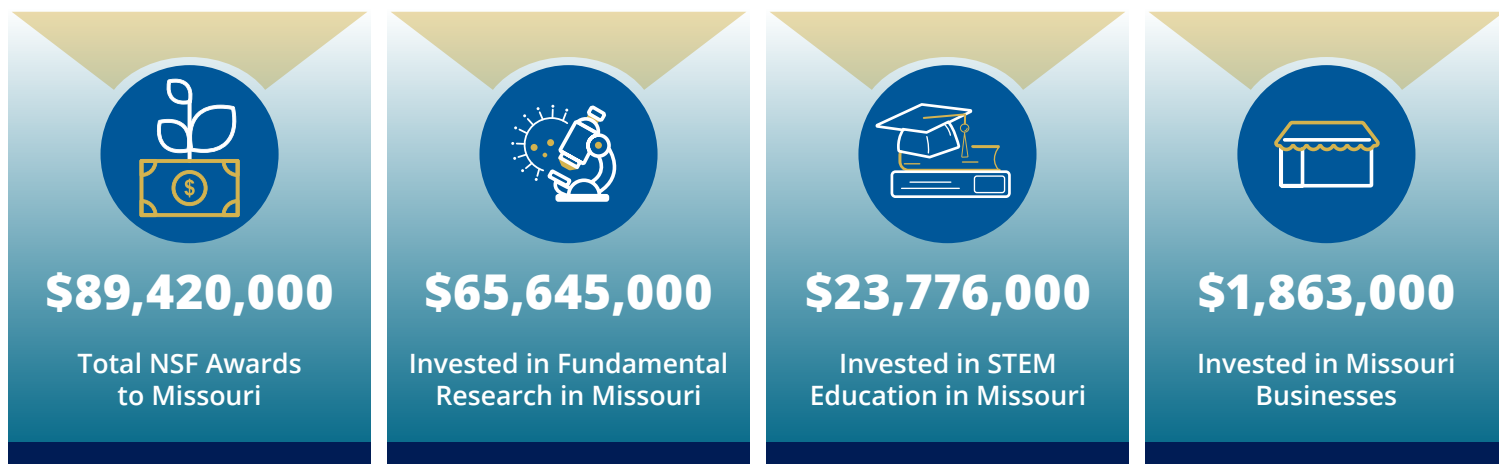




MISSOURI

FY 2022 Fast Facts

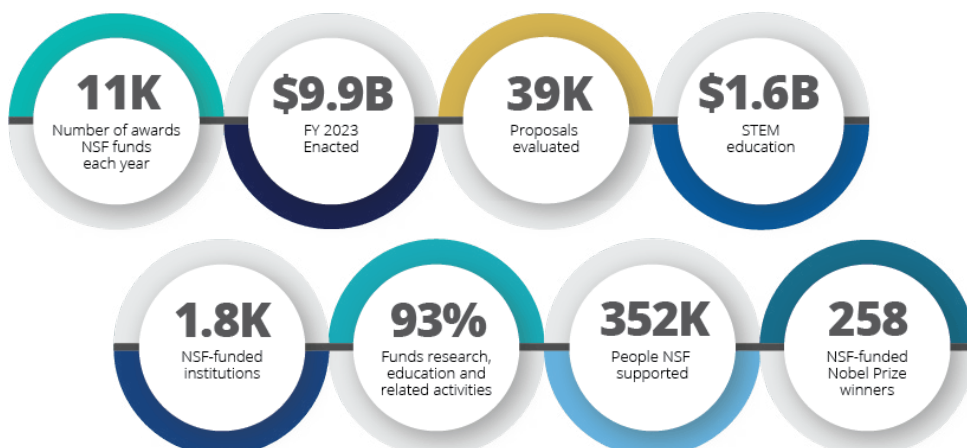


Top NSF-funded Academic Institutions for FY 2022



NSF By The Numbers

The National Science Foundation (NSF) is a [\\$9.5 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.



Data represents FY 2022 Actuals unless otherwise indicated.



Expanding the Frontiers of Science

Researchers are developing a state-of-the-art chirped-pulse Fourier transform microwave spectrometer at the **Missouri University of Science and Technology** with the support of an NSF Major Research Instrumentation award. This instrument is used to collect rotational spectra for gas phase molecules. Rotational spectra provide some of the most detailed information available about the structure of molecules. This multi-user spectrometer offers a significant increase in sensitivity and sourcing capabilities for research in a variety of fundamental gas phase physical chemistry and chemical physics fields. Moreover, this instrument promotes discovery and the progress of science in the areas of laboratory measurements of interstellar detection, experimental benchmarking for newly synthesized materials, gas phase molecular interactions, absolute molecular structure determinations inclusive of chirality, and actinide-element chemistry, among others. The development of the instrument also establishes a pipeline program for chemistry students of primarily undergraduate and Hispanic serving institutions to apply for the Missouri S&T chemistry doctoral program, thereby supporting diversity in the sciences.



STEM Education

As the manufacturing sector in the United States continues to evolve, the need for a highly skilled workforce is increasing. As a result, the nation is experiencing a critical shortage of trained professionals who have the skills required to function in an advanced manufacturing environment. With support from the NSF Advanced Technological Education program, this project improves and expands technical training opportunities in advanced manufacturing at **Ozarks Technical Community College**. As one of the few programs of its kind in the Midwest, this program develops highly skilled workers that employers are searching for and establishes an educational pipeline for students interested in manufacturing. The project provides K-12 students with opportunities to explore their interest in manufacturing trades. Students who gain an interest in automation through one of Ozarks Technical Community College's tours or summer camps will have additional opportunities to earn a degree in advanced manufacturing. These students are then qualified to fill one of the high-demand positions in advanced manufacturing available at employers in the area.



Regional Innovation Engines

The NSF Engines program envisions fostering flourishing regional innovation ecosystems across the country, providing a unique opportunity to spur economic growth in regions that have not fully participated in the technology boom of the past few decades. The NSF Engines program uniquely harnesses the nation's science and technology research and development enterprise and regional-level resources. NSF Engines can catalyze robust partnerships rooted in scientific and technological innovation to positively impact the economy within a geographic region, address societal challenges, and advance national competitiveness. [Find potential NSF engines in your state.](#)

Infrastructure

The Instrumented Multi-Platform Overlay for Networked Systems Research at **Washington University** aims to create practical software infrastructure to enable researchers to develop networked systems innovations by developing, evaluating and distributing network software that operates over smartphones, laptops, servers and routers.

NCSES

According to the [National Center for Science and Engineering Statistics \(NCSES\)](#), which is housed in NSF, 33% of science, engineering and health doctorates conferred in Missouri are made in life sciences. Visit Missouri's science and engineering state profile to learn more!

28.34% of Missouri's [higher education degrees are concentrated in S&E fields.](#)

4.65% of Missouri's [workforce are employed in S&E occupations.](#)

7.91% of Missouri'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 NSF's 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 NSF's Research Security website.](#)

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