U.S. National Science Foundation

ARIZONA

FY 2023 Fast Facts

$329,091,000
Total NSF Awards to Arizona

$240,059,000
Invested in Fundamental Research in Arizona

$22,225,000
Invested in STEM Education in Arizona

$8,785,000
Invested in Arizona Businesses

Top NSF-funded Academic Institutions for FY 2023

Arizona State University	University of Arizona	Northern Arizona University
$111,348,000	**$44,638,000**	**$10,809,000**

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*

Expanding the Frontiers of Science

Ultrastrong and ultraelastic alloys, which are capable of withstanding both extreme stress and recoverable (elastic) deformation before undergoing permanent (plastic) deformation, have significant uses in advanced manufacturing and other industries. However, such alloys contain intricate variations in chemical elements and their atomic positions within metallic crystals, and this tremendous complexity obstructs the efficient search for new alloys. Through the NSF Designing Materials to Revolutionize and Engineer our Future program, a project at **Arizona State University** aims to leverage the power of artificial intelligence to enable the rapid and automated design of new ultrastrong and ultraelastic metallic alloys. The project uses a unique two-stage automated research workflow that transits from a data-driven approach to a physics-based approach based on integrations of artificial intelligence techniques and physical models. Such integrations enhance the understanding of deformation mechanisms in complex materials, enabling their use in structural and functional applications. The project also promotes collaboration and innovation through the archiving and sharing of codes and data on Materials Commons, a public repository and collaboration platform for materials studies.

STEM Education and Broadening Participation

A goal the NSF Tribal Colleges and Universities Program (TCUP) is to promote the advancement of intellectual leadership within TCUP institutions that will support them in addressing the scientific or engineering priorities of their tribes, communities, or broadly of the United States. Linked with this goal is the TCU Enterprise Advancement Centers funding strand, which provides support for TCUP institutions in establishing thematically based centers whose work applies the college's science, technology, engineering and mathematics instruction and research capacity to realize benefits for their identified community. Through this funding mechanism, the O'odham Language Center (OLC), conceived and directed by personnel from **Tohono O'odham Community College**, is striving to perpetuate the O'odham language of the Tohono O'odham Nation through language immersion programs at Head Start centers on the reservation. The programs are delivered in a manner designed to develop the language fluency of pre-K students who are citizens of the Tohono O'odham Nation. A slate of comprehensive activities will be undertaken, including the engagement of community instructors fluent in the O'odham language and assisting students' families in developing their fluency, in support of the overarching goal of reclaiming their Indigenous language.

Regional Innovation Engines

NSF Regional Innovation Engines (NSF Engines) represent one of the single largest broad investments in place-based research and development in the nation's history, uniquely placing science and technology leadership as the central driver for regional economic competitiveness. The **NSF Engine: Southwest Sustainability Innovation Engine**, led by **Arizona State University**, aims to equitably transform water security, renewable energy and net carbon emissions in the region by incentivizing new technology and governance, expanding infrastructure and capacity for knowledge translation and preparing a diverse and highly skilled workforce.

NCSES

According to the NSF National Center for Science and Engineering Statistics (NCSES), which is housed in NSF, Arizona ranks 14th in the nation for SBIR awards. Visit Arizona's science and engineering state profile to learn more!

24.06% of **Arizona's** higher education degrees are concentrated in S&E fields.

5.44% of **Arizona's** workforce is employed in S&E occupations.

6.41% of **Arizona'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.

CONNECT WITH NSF – For more information on NSF's impact in your state, please contact the NSF Office of Legislative and Public Affairs at congressionalteam@nsf.gov.