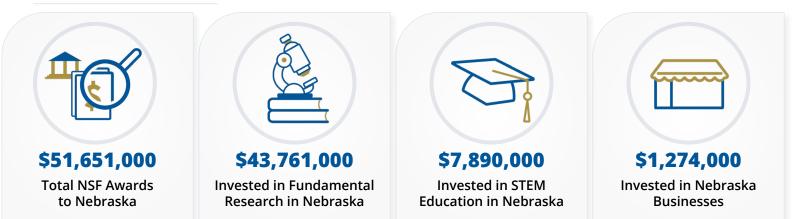


# NEBRASKA

#### FY 2023 Fast Facts



## • Top NSF-funded Academic Institutions for FY 2023



## • NSF By The Numbers

The U. S. National Science Foundation (NSF) is an <u>\$9.06 billion</u> 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.





# **Expanding the Frontiers of Science**

Through NSF funding, the **University of Nebraska at Lincoln (UNL)** high-energy physics group is addressing basic questions puzzling particle physics and science more broadly—such the origin of mass and the particle nature of dark matter—and has the potential for discoveries that may change current understanding of the physical world. The group provides software and computing leadership to the Compact Muon Solenoid (CMS) experiment at the Large Hadron Collider (LHC) at the European Organization for Nuclear Research, a particle physics laboratory in Geneva, Switzerland, and operates a Tier-2 computing center for the CMS collaboration. The UNL group is contributing significantly to the upgrades of the CMS experiment for its operation in the very high-rate collision environments foreseen in the next decade at the LHC. Central to their efforts is the construction of parts of the forward pixel detector of the CMS inner tracker. This detector system is critical to the reconstruction of many event types of special interest to the CMS program.

## **STEM Education and Broadening Participation**

**Nebraska Indian Community College (NICC)** is using an NSF Tribal Colleges and Universities Program award to develop the institution's first four-year science, technology, engineering and mathematics degree. The new Bachelor of Science in Indigenous environmental health will build on NICC's existing Associate of Science in general science studies. Designed to specifically address Indigenous community contexts, students who complete the degree will possess a strong, multidisciplinary understanding of environmental problems, their impacts on human health and well-being, and solutions to manage those issues. Data compiled through a feasibility study indicate that workforce demand for this expertise and skill set is strong in NICC's region, providing significant career opportunities for graduates and contributing to the community's economic stability. The curriculum will include partnerships with tribal elders and STEM professionals as students investigate local place-based environmental issues relevant to the Indigenous community. Core program requirements include the successful completion of a set of upper-level courses across health, environmental and Indigenous science disciplines, as well as the design and completion of both senior capstone and senior research projects.



## **Regional Innovation Engines**

U.S. National Science Foundation 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. The program seeks regional teams rooted within industry, academia, government, nonprofits, civil society and communities of practice to catalyze and foster innovation ecosystems across the U.S. to advance critical technologies, address national and societal challenges, promote economic growth and job creation, spur sustainable regional innovation and nurture diverse talent.

To stay in the loop about future funding calls and opportunities to engage, sign up for the NSF Engines newsletter.

#### EPSCoR

**COMPETITIVE RESEARCH** | Nebraska is one of 28 U.S. states or territories under the <u>NSF Established Program to Stimulate</u> <u>Competitive Research (EPSCoR)</u>. **\$10,421,472** in awards have been made to Nebraska academic institutions through EPSCoR in FY 2023. For more information, visit Nebraska's EPSCoR state web page.

#### NCSES

According to the <u>NSF National Center for Science and</u> <u>Engineering Statistics (NCSES)</u>, which is housed in NSF, 42% of science, engineering and health doctorates conferred in Nebraska are made in life sciences. <u>Visit Nebraska's science</u> and engineering state profile to learn more!

- 27.21% of Nebraska's <u>higher education degrees are</u> concentrated in S&E fields.
  - **4.59**<sup>%</sup> of Nebraska's <u>workforce is employed in S&E</u> <u>occupations.</u>
  - **5.33**<sup>w</sup> of **Nebraska's** <u>total employment is</u> <u>attributable to knowledge - and technology -</u> <u>intensive industries.</u>

#### 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 <u>congressionalteam@nsf.gov</u>.