NSGA
National Space Grant Alliance

Inspiring and preparing the next generation STEM workforce 2024

REQUEST FOR FY 2025 APPROPRIATIONS

The Committee allocates $65 million to the National Space Grant College and Fellowship Program and directs that all 52 participating jurisdictions receive no less than $1.1 million each, such that planned activities can continue without interruption.

SPACE GRANT HIGHLIGHTS

Established by Congress in 1989 and Re-authorized in 2022. Competitive, highly effective national partnership program responsive to NASA-aligned state, regional, and national priorities.

Administered by State consortia. Catalysts to strengthen STEM literacy and prepare students for careers in STEM fields to meet future national workforce needs.

Engages students in authentic STEM-based learning experiences. Programs comprise internships, fellowships, and apprenticeships involving NASA staff and facilities, universities, and industry partnerships. Hands-on experiences include launch vehicle and payload development; engineering challenges; space flight operations; drones; remote sensing; and STEM research.

Leverages partnerships across State consortia and with NASA. Relies on state-based networks in partnership with NASA to cultivate a diverse, inclusive, and broad-based high-technology workforce in academia, industry, and government.

FUNDING JUSTIFICATION

The requested $65 million provides additional funding to:

- **Strengthen and promote our national network** of state-based programs in partnership with NASA; develop, expand, and sustain a diverse, innovative, and entrepreneurial STEM workforce.
- **Improve student accessibility** to a widening and evolving range of STEM-based authentic learning opportunities, researchers, and mentors.
- **Broaden, extend, and accelerate participation** of underrepresented minorities, women, rural, low-income, first-generation, and nontraditional students in inclusive STEM-based academic programs and careers.
- **Advance the nation's STEM education, literacy, and workforce pipeline** to further the progress of space and earth sciences and engineering that transforms the future and sustains our global leadership.




The NATIONAL SPACE GRANT ALLIANCE exists to enhance the capacity of the United States of America to carry out education, research, and public outreach activities in science, technology, engineering, and mathematics (STEM) disciplines; particularly in fields related to space, aeronautics, and earth system science.

Inspiring and preparing the next generation STEM workforce

SCIENCE & ENGINEERING WORKFORCE CHALLENGES IN THE GLOBAL SPACE ECONOMY

- US 2021 space economy $212B revenue, $130B GDP, $51B industry compensation, 360K industry jobs.
- Global 2022 space economy $546B, projected growth to $770B (41%↑) by 2027.
- US 2023 government space budget $73B (NASA $25B); 63% of global government budget in 2023 and 75% in 2000.
- Global 2023 government space budget hit record high $117B; $59B for defense surpassed civil for first time.
- Global 2022 private space industry revenue $428B, up from $396B (8%↑) in 2021.
- US 2022 private space investment over $12B, 72% growth over prior 3 years.
- US 2022-2032 projected employment growth of 10.8% in STEM jobs and 2.3% in non-STEM jobs.
- US 2023 security space budget $21B to National Security Space investment accounts, up 20% from 2022.

SPACE GRANT STUDENTS

6,300 **COLLEGE STUDENTS** received Space Grant funding

88% **Space Grant COLLEGE STUDENTS** remain in STEM fields

FY23

SPACE GRANT PARTICIPANTS

1,250 **AFFILIATES and PARTNERS**

52 **CONSORTIA in 50 states, DC, and PR,** plus partnerships with Guam and USVI

FY23

OUTREACH

22,759 **EDUCATORS ENGAGED**

576,449 **PRECOLLEGE STUDENTS REACHED**

Data citations at: https://spacegrantalliance.org/

FY23

DIVERSITY

32% **UNDERREPRESENTED PARTICIPANTS**

43% **FEMALE PARTICIPANTS**

FY23

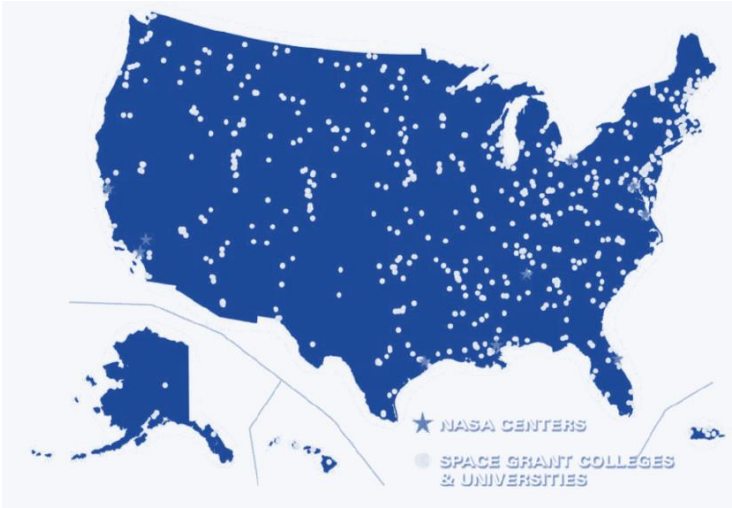
A few notable alumni from an expansive network of STEM potential

Eduardo Velazquez, M.S., Aerospace Engineering
Director of Crew Starship Engineering, SpaceX
Lead NASA Artemis 3 Human Lunar Lander design and engineering
Space Grant Consortium: California

Dante Lauretta, Ph.D., Earth and Planetary Sciences
Director of Arizona Astrobiology Center & Professor, U. of Arizona
PI of OSIRIS-Rex - first mission to obtain asteroid sample
Space Grant Consortium: Arizona

Erin Rezich, Ph.D., Space Resources
Aerospace Engineer, NASA Glenn Research Center
Lead lunar excavation tooling design and rover testing activities
Space Grant Consortium: Delaware

Ross Weidman, M.S., Aeronautical and Astronautical Engineering
Systems Engineer, NASA Jet Propulsion Laboratory
Orbital mechanics, propulsion systems, and programming
Space Grant Consortium: West Virginia



Examples of Space Grant student internships and career placements