

REQUEST FOR FY 2024 APPROPRIATIONS

The Committee allocates \$62 million to the National Space Grant College and Fellowship Program and directs that all 52 participating jurisdictions receive no less than \$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 \$62 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 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 diverse and 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.

SCIENCE AND ENGINEERING WORKFORCE CRISIS

- U.S. FY 2022 federal space programs' budget totaled **\$62 billion**, NASA accounted for **\$24 billion (38.7%)**.
- U.S. projected employment growth of **10.8%** in STEM occupations and **5.3%** in All occupations, 2021–2031.
- Global space industry record-high spending of **\$469 billion** in 2021; projected growth to **\$634 billion** by 2026.
- Over **10,000** global space tech companies in 20 categories in 2021, U.S. had over **5,550**.
- **1,796** U.S. space launches in 2022, up from **287** in 2017; **2,136** global launches in 2022, up from **456** in 2017.
- Among U.S. 15-year-olds achieving highest academic proficiency levels in science or math, **27.8%** of boys and **10.4%** of girls expected to be STEM professionals at age 30.

SPACE GRANT STUDENTS

5,297 COLLEGE STUDENTS received Space Grant funding
88% Space Grant COLLEGE STUDENTS remain in STEM fields

FY22

SPACE GRANT PARTICIPANTS

1,194 AFFILIATES and COLLABORATORS
52 CONSORTIA in 50 states, DC, and PR, plus partnerships with Guam and USVI

FY22

OUTREACH

29,885 EDUCATORS ENGAGED
138,499 PRECOLLEGE STUDENTS REACHED

DIVERSITY

26% UNDERREPRESENTED MINORITY PARTICIPANTS
52% FEMALE PARTICIPANTS

FY22

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

FY22

A few notable Space Grant alumni and educators



Enrico Ramirez-Ruiz, Ph.D., Astrophysics
 Professor of Astronomy & Astrophysics, UC Santa Cruz
 White House PAESMEM STEM Mentoring Awardee
 Space Grant Consortium: California



Romina King, Ph.D., Geography
 Professor of Geography, University of Guam
 NASA Award-Winning App Maker, Coastal Zone Research
 Space Grant Consortium: Guam



Julie Read, Ph.D., Aerospace Engineering
 Flight Dynamics Officer, NASA Mission Control Center
 Trajectory Operations and Flight Dynamics
 Space Grant Consortium: Wyoming



Mary Sandy, M.S.A., Public Administration
 Director of Space Grant, Old Dominion U. Res. Foundation
 NASA Exceptional Public Service Medal Recipient
 Space Grant Consortium: Virginia



Marcos Fernandez-Tous, Ph.D., Aerospace Sciences
 Professor of Aerospace & Aeronautics, U. of North Dakota
 Hypersonics and Rocket Propulsion
 Space Grant Consortium: North Dakota



Shane Farritor, Ph.D., Mechanical Engineering
 Professor of Mechanical Eng., University of Nebraska
 Robotics, Planetary Exploration, Surgical Robotics
 Space Grant Consortium: Nebraska



Elaine Stewart, M.S., Space Systems Engineering
 Aerospace Engineer, NASA Goddard Space Flight Center
 Contamination Engineer for James Webb Space Telescope
 Space Grant Consortium: Delaware



Ross Weidman, M.S., Aeronautical & Astronautical Eng.
 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

