

Developing the next generation of explorers

WHAT IS NC SPACE GRANT?

North Carolina Space Grant leads the way in developing and promoting aeronautics and space-related science, technology, engineering and math (STEM) education. Since 1991, these education and outreach efforts have equipped the current and future aerospace workforce. Our consortium spans academic institutions across North Carolina and partners with NASA, industry, nonprofits and state government agencies.

Number of public participants impacted in FY2018

Number of higher education students engaged in NC Space Grant activities in FY2018

BY THE NUMBERS

Number of educators who received professional development training in NASA-related content

Percentage of NC Space Grant students who remain in STEM fields after graduation.



HOW WE WORK

Since its inception, NC Space Grant has facilitated funding for millions of dollars of STEM research and public outreach efforts. Our mission: **to equip the workforce with a diverse talent base** prepared to address challenges in the aerospace and aviation industries.

Through a combination of federal, state and private funding, we promote competitive, space-based undergraduate, graduate and community college fellowships and scholarships; internships; K-12 programs; professional development for educators; and public science initiatives.

NC Space Grant is committed to advancing aerospace and aviation engagement for all North Carolinians through hands-on experiential learning and teambased activities and challenges. In 2018 alone, we funded more than 278 students and touched the lives of more than 23,000 members of the general public.

Inspired by NASA's revolutionary research and a pioneering state aerospace sector, we help train our country's future STEM leaders.

OUR PARTNERS

From our NC State University headquarters in Raleigh, NC Space Grant collaborates with colleges and universities statewide, plus the community college system and many other partners, including NASA centers, industry, planetariums and museums.

COLLABORATIONS: As part of the Lift Off NC: Apollo + Beyond initiative in 2019, NC Space Grant is collaborating with museums and institutions statewide to celebrate the 50th anniversary of the first moon landing.



COMMUNITY ENGAGEMENT: The first NC Space Grant-supported Star Party of the year took place Feb. 5 in Nags Head.

STUDENT TEAM SUPPORT: A UNCC student makes adjustments before a NASA launch competition.



SENDING STUDENTS INTO SPACE

NASA assigned former NC Space Grant student scholar Christina Hammock Koch to the next mission to the International Space Station. Astronaut Koch will serve as a flight engineer on Expedition 59/60, which is anticipated to launch in spring 2019. Koch grew up in Jacksonville, North Carolina, and earned bachelor's degrees in electrical engineering and physics, and a master's degree in electrical engineering, from NC State University. As an NC Space Grant awardee, Koch attended the NASA Academy program at Goddard Space Flight Center in 2001 and has since gained expertise in space science instrument development and remote scientific field engineering.

CELEBRATING APOLLO LUNAR LANDING

NC Space Grant is a founding member of the Lift Off NC: Apollo + Beyond initiative, which is bringing museums and institutions together to celebrate the 50th anniversary of the Apollo 11 moon landing. In 2019, members will host and sponsor festivals, exhibits, films, rocket launches, space camps, astronomy days, musical performances, educational programming and more than 50 moon-watching parties. NC Space Grant will support appearances by NASA Apollo missions flight director Gerald D. Griffin at three Lift Off NC events. Students attending our SPACE Symposium in April will hear from Griffin, as well as from aerospace and space-related industry representatives. NC Space Grant's lunar-themed Statewide Star Party events are expected to reach more than 100,000 attendees in over 50 locations. Leading up to the events, NC Space Grant is offering professional development workshops for more than 150 educators, including K-12 classroom teachers, museum educators, librarians and park rangers. Educators will receive activity kits complete with materials to host their own Star Party events in their respective communities.



SUPPORTING STUDENTS

Undergraduates across North Carolina share their first-rate STEM know-how with the rest of the nation through the financial backing of NC Space Grant. By participating in national team competitions sponsored by NASA and other STEM-related organizations, these students prepare for tomorrow's challenges. In the 2018 NASA Student Launch Initiative, the **UNC-Charlotte High-Powered Rocketry** team sent a launch vehicle 5,381 feet into the atmosphere, where it deployed a rover and a set of flexible solar panels, garnering two first-place wins and four second-place wins. Students from the **Duke Electric Vehicles** team won first place at the Shell Eco-Marathon Americas 2018 competition, with their vehicle designed to use the smallest amount of energy possible to carry a passenger. After the competition, they used their winning hydrogen-powered vehicle to set a new Guinness World Record for fuel efficiency. In the NASA Robotic Mining Competition, the **UNC-Charlotte 49er Miners** robotics team built a rover designed to extract simulated ice from Mars-like terrain.



In 2018, NC Space Grant supported the **Durham Technical Community College** robotics team, **The ProgrammaBulls**, who scored major wins at the 3rd Annual NASA Swarmathon at NASA Kennedy Space Center in April. The team carried away two first-place wins and a second-place win, earning a cash prize to continue their work. DTCC also leveraged NC Space Grant support into significant advances in the Community College High-Altitude Ballooning Competition and the NASA High-Altitude Student Platform (HASP), where teams launch payloads on weather balloons.