



STRATEGIC PLAN 2005 – 2010 (Revised 2007)

INTRODUCTION

North Carolina Space Grant (NC Space Grant), established in 1991, is an active member in a national network of university-based consortia. Established by Congress and implemented by NASA, the National Space Grant College and Fellowship Program contributes to the nation's science enterprise by funding research, education, and public service projects through a national network of 52 Space Grant consortia. NC Space Grant has eleven university member institutions, 7 industry/government/non-profit partners and has managed and provided nearly \$12 million in support to North Carolina citizens.

VISION FOR THE NC SPACE GRANT

To expand the opportunity to participate in NC Space Grant programs to all citizens of North Carolina.

MISSION

To promote, develop and support aeronautics and space-related science, engineering and technology training and programs in North Carolina.

FUNDING

NC Space Grant program funding is provided through an annual base grant from NASA, annual recurring funding from the NC General Assembly, supplemental competitive grants from NASA, private contributions, and annual matching funds from the consortium members.

University Member Institutions

Appalachian State University
Elizabeth City State University
Duke University
NC A&T State University

NC Central University
NC State University
UNC-Asheville
UNC-Chapel Hill

UNC-Charlotte
UNC-Pembroke
Winston Salem State University

Partners

Kenan Institute for Engr, Tech & Science
Lord Corporation
North Carolina Biotechnology Center
North Carolina Department of Public Instruction
Pisgah Astronomical Research Institute
RTI International
3TEX

Advisory Council

NASA Langley Research Center
Virginia Space Grant Consortium
RTI International
NC Board of Science & Technology
e-NC
Lord Corporation
UNC Office of the President
NC DOT, Aviation Division
NC Museum of Life and Science
NC Community College System
Pisgah Astronomical Research Institute

Goals for the NC Space Grant are established in the areas of: Fellowships and Scholarships; Higher Education; Research Infrastructure; K-12 Professional Development; Informal Education and Public Outreach; and Expansion and Growth. A common focus is to expand programs to more citizens of North Carolina, and involve women, underrepresented minorities, and persons with disabilities. These goals and desired outcomes are specific and measurable and have the acceptance of all NC Space Grant participants. While aggressive, they are realistic, can be achieved in the time frame suggested and are aligned with NASA guiding documents and North Carolina's needs in education and training.

Fellowships and Scholarships

- Better equip the future STEM workforce.
 - Engage 15-25 students per year in hands-on, aero/space-related research projects with an emphasis on networked collaborations within the consortium, NASA laboratories and shared facilities such as Pisgah Astronomical Research Institute.
 - Engage 10-20 students per year in aero/space-related study projects.
 - Facilitate positive mentor relationships between 25-45 students and faculty members per year.
 - Provide venues for 25-45 students to conduct research presentations annually.
- Actively pursue the participation of women, underrepresented minorities, and persons with disabilities.
 - Increase the participation of women to 50%, and maintain this percentage participation through 2010.
 - Maintain the participation of underrepresented minorities at or above 27.1% through 2010.
- Desired Outcomes
 - 75% of undergraduates who participate will pursue aero/space-related graduate studies or employment.
 - 75% of graduate students who participate will obtain aero/space-related employment.
 - Increase the number of yearly awards granted by 100%.
 - Significantly improve engineering and science student's training in hardware design and development.

Higher Education

- Better equip the future STEM workforce.
 - Provide 10-15 extramural, aero/space-related work/study experiences to students per year.
 - Facilitate positive mentor relationships between 10-15 students and faculty members per year.
 - Provide venues for 10-15 students to conduct research presentations annually.
 - Increase the number of extramural, aero/space-related work/study experiences by 50%.
 - Participate in the International Masters Program in Aerospace Engineering.
 - Develop 4 sustainable interdisciplinary and/or distance learning courses which engage 10-20 students each and are focused on enriching students understanding of complex aero/space issues.
 - Coordinate with Space Grant Consortia from other states to generate support for education programs of mutual interest.
- Enhance Pre-College Educators knowledge of aero/space issues.
 - Provide professional development training for 25 pre-college educators per year.
 - Engage 100 pre-college educators annually at the NC Space Grant NASA Educator Resource Center Satellite Center.

- Partner, as appropriate, with other organizations to provide pre- and in-service teacher development workshops and training opportunities.
- Actively pursue the participation of women, underrepresented minorities, and persons with disabilities.
 - Increase the participation of women to 50%.
 - Maintain the participation of underrepresented minorities at or above 27.1%.
- Desired Outcomes
 - 75% of undergraduates who participate will pursue aero/space-related graduate studies or employment.
 - 75% of graduate students who participate will obtain aero/space-related employment.
 - 75% of training participants will report that their knowledge of aero/space issues has been enhanced. 75% of training participants will report that they will use provided training in their classroom.
- Leverage funds with other sources to provide additional support for Higher Education programs.

Research Infrastructure

- Enhance the research infrastructure of the educational institutions of the state.
 - Provide 5 seed grants per year to new or transitioning faculty members to facilitate their professional development.
 - Provide information to consortium institutions on NASA research programs and grants.
 - Facilitate research collaborations between NC Space Grant member universities and NASA Field Centers.
 - Establish a database of aero/space-related projects and principal investigators in North Carolina.
 - Coordinate with Space Grant Consortia from other states to generate support for research programs of mutual interest.
- Actively pursue the participation of women, underrepresented minorities, and persons with disabilities.
 - Increase the participation of females to 50% of all participants.
 - Maintain the participation of underrepresented minorities at or above 27.1%.
- Desired Outcomes
 - 75% of faculty awarded seed grants will receive promotions within 5 years.
 - 75% of faculty receiving seed grants will serve as Principal Investigators on aero/space-related research projects within 5 years.
- Leverage funds with other sources to provide additional research development projects.

Informal Education and Public Outreach

- Enhance informal educator knowledge of aero/space issues.
 - Provide professional development training for 25 informal educators per year.
 - Partner, as appropriate, with other organizations to provide informal educator development workshops and training opportunities.
- Inform and educate the public on the importance of NASA programs to the United States.
 - Provide 5 competitive grants targeted to increasing the public's knowledge of and appreciation of NASA sponsored programs per year.
 - Participate in 20 speaking engagements annually.
 - Recruit and equip university faculty to inform and educate the public.
 - Serve as a resource for the news media on up-to-date aero/space information.
 - Serve as a resource for officials in state government on current programs and future trends in aerospace and space science with potential impact to North Carolina.

- Coordinate with Space Grant Consortia from other states to generate support for public service programs of mutual interest.
- Engage 1,000 high school and university students each year by co-hosting annual Space Day and Astronomy Day events.
- Engage 1,000 members of the general public each year by participating in annual Space Day and Astronomy Day events.
- Actively pursue the participation of women, underrepresented minorities, and persons with disabilities.
 - Increase the participation of females to 50% of all participants.
 - Maintain the participation of underrepresented minorities at or above 27.1%.
- Desired Outcomes
 - 75% of training participants will report that their knowledge of aero/space issues has been enhanced.
 - 75% of training participants will report that they will use provided training in an informal education setting (such as museum, science centers, and community organizations).
- Leverage funds with other sources to provide additional support for public service projects.

Expansion & Growth

- Expand NC Space Grant Membership.
 - Increase the geographic footprint of NC Space Grant in North Carolina.
 - Add 2 academic members.
 - Add 2 industrial members.
 - Add 2 non-profit members.
 - Add 2 government agency members.
- Increase Funding for NC Space Grant.
 - Attain “Designated” status.
 - Work through the NC General Assembly to obtain annual recurring funds to support the expansion of programs and accessibility throughout the state.
 - Pursue supplemental competitive funding opportunities as they arise from NASA and other sources.