



NORTH CAROLINA AGRICULTURAL AND TECHNICAL STATE UNIVERSITY

N.C. A&T Receives \$2 Million Grant from National Science Foundation to Revolutionize Engineering Department

Greensboro, NC August 11, 2017 – N.C. A&T's Department of Chemical, Biological and Bioengineering was one of six university engineering departmental teams in the nation to receive a "RED" Grant from the National Science Foundation. The \$2 million awards are part of NSF's multiyear effort to help universities substantially improve the professional formation of engineers and computer scientists.

"RED", which stands for Revolutionizing Engineering Departments, describes an NSF program for engineering and computer science departments to enact groundbreaking, scalable and sustainable changes in undergraduate engineering education. N.C. A&T's Department of Chemical, Biological and Bioengineering will use its award to reformulate its bachelor's programs and provide more hands-on research and design experiences.

"What matters most for A&T's RED Project is student learning, student research, a multidisciplinary faculty with a vision for high student attainment, and dissemination of our findings to other programs and schools." "With the planned changes, students will perform much more needs-finding and design. These enhance learning by creating value, self-efficacy, control and identity," said Dr. Stephen B. Knisley, department chair and principal investigator on the grant. The leadership team is also revolutionary in that it consists of engineering faculty experts in aspects of curricular innovation, social scientists and leaders in the school of education.

About the NSF RED Grants

The National Science Foundation's RED Grants enable engineering and computer science departments to lead the nation by successfully achieving significant sustainable changes



North Carolina Agricultural and Technical State University is the nation's largest historically black university. Classified a "higher research" university by the Carnegie Foundation, it is a land-grant member of the University of North Carolina System. A&T is known for its leadership in producing graduates in engineering, agriculture and other STEM fields. The university was founded in 1891 and is located in Greensboro, North Carolina.

necessary to solve 21st century technical challenges. To solve these challenges, society relies upon today's undergraduate engineering and computer science programs to prepare diverse communities of students with professional skills. The RED Grants amplify successful innovations in the introductory and capstone years to improve the entire undergraduate experience, including technical core courses during sophomore and junior years, extracurricular professional activities and increased student transfer from two-to-four-year institutions. The RED investment aligns with the NSF-wide undergraduate STEM education initiative, which is called Improving Undergraduate STEM Education (IUSE). In addition to N.C. A&T's grant, NSF made five additional RED awards in 2017 to engineering and computer science departments at Clemson University, East Carolina University, Georgia Institute of Technology, Seattle University and Texas A&M State University.



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