**Project Title:** Using Early Introduction to Undergraduate Research to Recruit, Retain, and Graduate More (science, technology, engineering, and math) STEM Majors

**Principal Investigator:** Dr. George Shields, Professor of Chemistry, Dean College of Arts and Sciences

**Co-PIs:** Dr. M. Lynn Breyfogle, Professor of Mathematics, Associate Dean College of Arts and Sciences, and Dr. Dee Ann Casteel, Associate Professor of Chemistry, Associate Dean of Faculty College of Arts and Sciences

**Funding Agency:** National Science Foundation (NSF)

**Award Amount:** $450,000

**Award Period:** 2013-2018

This NSF STEM Talent Expansion Program (STEP) award funds a new initiative at Bucknell, The Bucknell STEM Scholars program. This project will be directed by awardees Drs. Shields, Breyfogle, and Casteel in the Office of the Dean of the School of Arts and Sciences.

The overall goal of the STEM Scholars program is to increase the number of natural science, engineering, and mathematics majors at Bucknell by 30% over 5 years and a specific goal of the program is to increase the number of students from underrepresented groups achieving a degree in engineering, natural science, or mathematics from Bucknell. To this end, the STEM Scholars program provides financial support for approximately 95 science, engineering, and mathematics majors to participate in two summers of research, starting the summer before they matriculate at Bucknell University. In addition, the STEM Scholars participate a new STEM-themed living/learning community, special first-year coursework (STEM foundation seminars), and a new interdisciplinary STEM discussion group, all of which help create an environment that encourages student enthusiasm and success in STEM disciplines. Retention of students in STEM majors will be improved through proactive mentoring and supplemental academic support. Establishing a strong peer support system through the new living/learning community, participation in high quality research opportunities, and dedicated academic and post-program advising will greatly increase the likelihood of success for STEM Scholars while at Bucknell and later as they enter STEM careers.

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