

Science & Innovation

Panel

Case Study- Working with Underrepresented STEM Undergraduates: Significantly Improving Retention, Persistence, and Graduation Rates

Malcolm J. D'Souza, Professor of Chemistry and Associate Dean of Interdisciplinary/Collaborative Sponsored Research, Wesley College

Kevin Schuman, Wesley College, Delaware EPSCoR

Kathleen Curran, Wesley College, Delaware EPSCoR

Derald Wentzien, Wesley College, Delaware EPSCoR

Agashi Nwogbaga, Wesley College, Delaware EPSCoR

Through NSF EPSCoR, Wesley College strengthened its academic environment by developing a four-year progressive core curriculum with curricular materials that engage all students in STEM undergraduate research. This session will use this program as a case study to share ideas for development of interdisciplinary STEM undergraduate research curricula. Specific content will include discussion of the efficacy and impact of comprehensive intervention programs and activities such as first year seminars, common intellectual experiences, learning communities, undergraduate research, and extensive peer and faculty mentoring.

Summary of Panel:

Faculty from Wesley College in Delaware discuss how the college culture and student population has benefited from EPSCoR support.

The University of Delaware received EPSCoR award in 2003. Prior to 2003, Wesley College did not offer research and students in STEM retention-rate was less than 40%. Partnering with UD, Wesley College launched research and summer internship programs to complement the research being done at the UD and Delaware State University, adapted curriculum and put a strong mentoring support in place.

Mentored EPSCoR related research: Environmental Sciences Chemistry

Students in STEM received more advanced coursework, earlier introduction to research, and senior capstone requirements/poster symposium. Sponsored STEM activities on and off campus included trips in and out of the state to parks, STEM sites, and other universities. The adoption of a research culture resulted in about 104 national and regional awards, 65 student authors on journal articles and a retention rate of 100% retention rate for research participants.