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## LSU Engineering, Education Faculty Project to Provide Opportunities for Low-Income, High-Achieving Students

### [LSU College of Engineering](#)

BATON ROUGE, LA – A team of LSU College of Engineering and LSU School of Education faculty has been awarded a six-year, nearly \$1.5 million National Science Foundation grant for its project, "Preparing Resilient Individuals to Succeed in Engineering (PRISE): A Scholarship Program Focusing on the Retention and Success of Underprepared Students in Engineering at Louisiana State University."

The project will fund 45 scholarships over six years to full-time students who are pursuing bachelor's degrees in biological, civil, chemical, computer, electrical, environmental, industrial, mechanical, and petroleum engineering, as well as computer science. First-year students will receive four-year partial scholarships. Academically eligible students should have an ACT composite score of 25 or higher and will be evaluated on high school GPA, performance in high school STEM coursework, math ACT/SAT scores, performance on the math ALEKS test, and their willingness to take challenging courses offered at their schools.

"PRISE provides educational and career opportunities for underprepared and high-achieving students with financial need through an evidence-based model," said LSU Electrical & Computer Engineering Professor Theda Daniels-Race, principal investigator on the project. "While this program is solely focused on underprepared students with financial need, an indirect project outcome will be increased diversity in engineering."

"Louisiana has a large number of students without adequate access to courses to prepare them for engineering that also demonstrate significant financial need. The program creates a population of students who serve as ambassadors for others of similar backgrounds in their communities, particularly engaging students from their hometowns through ENGage LSU, a program aimed at middle school students exploring the vast opportunities available in engineering careers."

Joining Daniels-Race on the project are College of Engineering Associate Dean of Academic Affairs Craig Harvey, Associate Director of Diversity Initiatives Sarah Jones, Director of Academic Affairs Liz Melvin, and School of Education Professor Jennifer Curry.

As part of the project, researchers will study the relationship between early intervention efforts with underprepared, at-risk first-year students and their success in completing an engineering degree. Such a study has never been conducted.

Specifically, the team will investigate which types of interventions best support low-income, high-achieving students' overall academic performance; which interventions best support low-income, high-achieving students' persistence to graduation; how self-efficacy, coping self-efficacy, and interest in engineering change as a result of the interventions; how does career self-efficacy change as a result of the interventions and does it vary by racial/gender identity; and can an employer's implicit bias toward high-GPA students be impacted through participation in internship opportunities with PRISE students?

Internship experiences are fundamental to student employment placement at graduation, Harvey said. This project integrates this key aspect into the PRISE scholars' experience.

"To promote early-career engineering experience, PRISE scholars will be eligible to receive a supplement between the first and second year," he added. "The premise is to provide the employers with an incentive to recruit and hire a scholar that may not meet their traditional hiring practices (e.g., GPA of 3.2+) with less financial risk."

"The industry recruiters, interviewers, and employer evaluators will go through a training regarding the National Association of Colleges & Employers (NACE) competencies to clarify the competencies against which PRISE scholars are evaluated and will fill out pre-, mid-, and post-tests regarding the students career [aptitudes]. The [college's] Diversity Advisory Board will be a critical element in identifying companies to participate."

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