

SMART-REU program gives undergraduates valuable research experience

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Hank Ashbaugh, PhD, director of SMART-REU (far left), with SMART-REU student participants during a swamp tour in July 2019. (Photo provided by Hank Ashbaugh)

It's a valuable opportunity when undergraduates can collaborate on research with university faculty, and programs like the Summer Materials Research at Tulane –

Research Experience for Undergraduates (SMART-REU) are creating more such possibilities. The [SMART-REU](#) is a 10-week summer program that brings in undergraduate students from across the country and pairs them with Tulane faculty in chemical engineering, biomedical engineering, chemistry or physics/engineering physics.

Funded by the National Science Foundation, the program focuses on materials science projects. The students in the summer 2019 program worked on projects in fields such as renewable energy, environmental protection — including oil spill cleanup and remediation of red tide algal blooms — and women's health issues.

"The best aspects of the SMART-REU program are that it gives undergraduate students experience participating in research and allows students to connect with one another to get a better understanding of how research is important to our communities," wrote a SMART participant from this summer.

Hank Ashbaugh, PhD, professor of chemical and biomolecular engineering and director of SMART-REU, sums up the inspiration for the program: "At the end of the day it's finding something you're passionate about, and we are trying to show the students one way, what we're passionate about. I'm always so happy when I see that it helps kids, particularly the ones who said, 'I didn't think I could do this, but now I know I can.' "

The program typically receives more than 300 applications for the 10 to 13 available spots each year, with a goal being to recruit a diverse cohort and to provide experiences for students from institutions with limited STEM research opportunities.

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In addition to laboratory experiences, the SMART-REU students participate in professional development seminars where they learn skills such as data analysis and scientific writing, as well as the graduate school application process. Participating students presented posters of their research work at the closing symposium.