

Wise Beyond His Years

At just 17, Sam Mercer '23 wins Goldwater Scholarship

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Sam Mercer '23, a chemical engineering major from Sanford, Maine, has received the prestigious [Barry M. Goldwater Scholarship](#), the nation's premier undergraduate award for science, math, engineering and technology (STEM) majors.

Mercer is one of just 410 college sophomores and juniors to receive a Goldwater Scholarship for the 2020-21 academic year. Goldwater Scholarships cover the cost of tuition, fees, books and room and board up to a maximum of \$7,500 per year. Goldwater is viewed as the premier scholarship for sophomore and junior STEM students who plan to pursue a Ph.D. and have a career in research.

“I was ecstatic to learn I won a scholarship,” says Mercer, who applied for it to expand his options in pursuing graduate education. “Earning such an award has reinforced my commitment to a career in research and the financial support allows me to focus more on my research, career and outreach efforts.”

Mercer works with Nan Yi, assistant professor of [chemical engineering](#), in the field of catalysis studying methane conversion processes and how to improve the turnover rate of desirable reaction products, including syngas and methanol. He was recently awarded a [Summer Undergraduate Research Fellowship](#) through the [Hamel Center for Undergraduate Research](#) to continue his research with Yi.

Mercer graduated high school when he was just 15 and entered UNH younger than most first-year students. However, he was determined to establish himself as a competent researcher while still being mindful of his age that prevented him from securing certain internships and joining some programs before he turns 18.

He quickly built his portfolio as a first-year student through the [Innovation Scholars program](#) working with UNH’s InterOperability Laboratory and as a participant in the [Hamel Center’s Research Experience and Apprenticeship Program \(REAP\)](#).

“Winning the Goldwater Scholarship at 17 years old not only validates my strong passion for research and desire to use it to be involved in my community, but also because it shows me that entering college younger than my peers was the right choice,” says Mercer.

Mercer’s passion for research came from a desire to pursue a career that would change the world for the better. That led him to explore how energy can be processed and utilized and consider how to improve the economic viability and sustainability of industrial methods for energy. He plans to pursue a Ph.D. in chemical engineering and conduct research in nanotechnology for applications in energy production processes while teaching at the university level.

“I hope to evaluate my research in energy from social, economic and environmental perspectives,” adds Mercer. “This will ensure my work aligns with the public policy that will always positively benefit others.”

Outside his research, Mercer has been very active at UNH. He serves as a learning assistant for the department of physics, is a member of the American Institute of Chemical Engineers and is an author in this year’s issue of the [Inquiry Journal](#). He has also founded Eizent Innovations, an organization that operates similar to a start-up. Eizent works with the UNH Entrepreneurship Center and has presented at multiple business competitions, including the Holloway Competition, the Maurice Prize Competition, the WildcatTank and the Social Venture and Innovation Challenge. One of the goals of the organization is to bring together fellow students in the [College of Engineering and Physical Sciences](#) (CEPS) to gain a profound background in innovation, business and entrepreneurship through extracurricular learning while building technical skills in computer science.

“We still have a lot to learn,” says Mercer. “Eizent and the ECenter have given me an incredible platform to learn how to think not only about my research, but also how I can implement it practically to make real-world change.”

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