

# USU Receives \$1M NSF Grant for BioTech Workforce Development

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The National Science Foundation has awarded Utah State University's College of Engineering a **\$1 million grant** to help prepare students for the rapidly evolving careers in life sciences and biotechnology.

The project is part of a national initiative to develop a highly trained engineering workforce that can address large-scale societal challenges such as clean energy, advanced materials and the effects of a changing climate.

The grant — one of the largest awarded in recent years to the Department of Biological Engineering — represents USU's strong leadership in bio-based engineering and its commitment to providing experiential learning opportunities for students.

"There is a significant gap in the life sciences workforce here in the Intermountain West," said Ron Sims, professor of biological engineering at USU and project lead. "Our goal is to create an experiential learning program that attracts new students, including students from community colleges, to biological engineering and the exciting career paths in this area."



*A USU student processes a sample at a lab. USU will receive a \$1 million NSF grant to develop new experiential learning programs that prepare students for rapidly changing careers in life sciences and biotechnology. (Photo Credit: USU/Matt Jensen)*

Program participants will learn emerging and novel biotechnologies that are identified as critical by industry partners but not currently offered in traditional degree programs at most universities. These experiences will be integrated with science-based fundamentals and engineering principles provided through interactions with

engineering faculty and industry experts. Students will be able to earn one of four professional certificates developed through the new program.

"Thanks to our partnerships with firms like Thermo Fisher Scientific, Cytiva and Perfect Day, we're able to provide students a hands-on learning experience where they can work alongside professional biological engineers," said Anghong Zhou, also a professor in the Department of Biological Engineering and a co-principal investigator on the project who initiated the grant.

Co-principal investigators include Angela Minichiello, USU associate professor of engineering education; Jixun Zhan, USU professor of biological engineering; and Craig Caldwell, dean of the School of Science, Mathematics and Engineering at Salt Lake Community College.

Funding for the grant comes from NSF's Experiential Learning for Emerging and Novel Technologies, or **ExLENT**, program. The agency says ExLENT grants support learning opportunities for individuals from diverse professional and educational backgrounds and increase access to, and interest in, career pathways in emerging fields such as advanced manufacturing, advanced wireless, artificial intelligence and biotechnology.

Work on the program began July 15 and is expected to run through June 2027.

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