

USU Students Win Big at Civil Engineering Event

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The Utah State University Chapter of the American Society of Civil Engineers won awards in all event categories they entered after a successful trip to Reno to compete in the Intermountain Southwest Student Symposium. There students competed in a number of events including a concrete canoe race, a steel bridge competition, construction of a timber building, environmental, surveying and writing competitions. USU will host the ISWS conference in Spring 2024.

In total, 39 students traveled and participated across seven events. They placed in the following:

Timber Strong: 1st place overall



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This was the first time USU ASCE participated in the Timber Strong competition, which requires students to design, model and build a two-story wood frame building. They took first place for their building, The Scotsman's Cottage, which had a country cottage theme.

Surveying: 1st place overall



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The surveying competition requires students to use standard field equipment and procedures to solve common problems encountered in the industry. The team had five tasks: 1. Create a topographic map with the provided data and present the map, 2. Record distance based on steps, 3. Use a level and a measuring rod to measure different elevations down to one specific point, 4. Use total station to stake the corners of a building based on distance and angles, and 5. With the given data, calculate where cuts and fills will be needed for a sewer line. This is the second year in a row that USU students have secured 1st place.

Concrete Canoe: 2nd place overall



The theme for USU ASCE concrete canoe was Ursa Major, a space themed canoe inspired by Bear Lake and the USU Space Dynamics Lab.

The concrete canoe competition provides students an opportunity to gain hands-on experience by building a canoe out of concrete to test their concrete mix designs and project management skills. In addition to placing second overall, the team also placed second in the final project prototype category and second in the women's sprint and co-ed sprint. This is a major improvement from placing fifth in 2022.

Brett Safely oversaw the design, quality and presentation of the USU ASCE concrete canoe. This was his third time participating in the conference and says it is always one of his favorite parts of the school year.

"Everyone is very supportive of each team that participates," he said. "We make efforts to congratulate and root for our fellow Aggies and our friends. I can't wait for next year."

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Environmental Design: 2nd place



The environmental design team tested water filters they designed to bring awareness to water quality.

The environmental design competition changes every year. The purpose is to create awareness of water quality needs and to provide practical, hands-on experience for students interested in water resources and environmental engineering. Students built and tested a water filter to simulated removal of mine tailings from contaminated water. The filter is constructed on-site in a timed competition.

Steel Bridge: 3rd place overall



Isaac Hilton, Preston Palmer, Bronson Dean, Zeb Astle and Jake Rowlan made up this year's steel bridge competition team.

The Student Steel Bridge Competition challenges students to extend their classroom knowledge to a practical and hands-on steel-design project that grows their interpersonal and professional skills, encourages innovation, and fosters impactful relationships between students and industry professionals. Each student team must develop a concept for a scale-model steel bridge to span approximately 20 feet and hold 2,500 lbs. There are time constraints set in place and bridges are load-tested, weighed and judged on aesthetics.

This year the team was captained by Jake Rowlan and made up of five members: Isaac Hilton, Preston Palmer, Bronson Dean, Zeb Astle and Rowlan.

Sustainable Solutions: 3rd place



Students needed to reimagine surrounding spaces to create a cohesive and walkable corridor for this year's Sustainable Solutions challenge.

Sustainable Solutions requires students respond to a real-world challenge that helps them develop a stronger understanding of sustainability and how to incorporate it into the real world. The 2023 topic focused on the fictional city of ASCE wanting to revitalize one downtown block of Engineering Street. Students needed to reimagine surrounding spaces to create a cohesive and walkable corridor.

Non-technical Paper: 3rd place

Students submitted 2,000-word papers on how an engineer balances regulations and ethics. The paper had to be nominated by the faculty advisor of the chapter. This year the paper was presented by Megan Doyle, and the topic was on balancing legal regulation and ethics in civil engineering.

"I am immensely proud of my students," said Austin Ball, club advisor for ASCE. "They dedicate their time for months to prepare for this competition and their dedication paid off. It speaks volumes of their educational commitment that USU was the only school to place in every category we entered. I hope their success encourages them to take on the many professional challenges they will face with confidence."

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