May 3, 2021 — Joshua Ward sees engineering everywhere. In his junior year of high school, he took calculus and physics and was fascinated by how he could use math to explain almost anything around him.

Civil engineering major Joshua Ward is the 2021 College of Engineering valedictorian.

“I remember thinking one time about how the surface area of a toilet paper roll changes as you pull it, and I was like, ‘Okay. I have to go into something applied math.’”

Now a civil engineering major at Utah State, Ward is the College of Engineering’s 2021 valedictorian. The past few years have been filled with opportunities to learn and to lead and have paved the way for an even brighter future.

Coming into college, Ward says he was interested in understanding how the world works, so civil engineering seemed like a good fit. Within his major, he is particularly interested in water resources, transportation engineering, and anything involving data analysis or modeling.

“I'm always looking to find a more efficient way to do things, so a lot of times I've coded some custom Excel functions to help me in my homework.”

Ward gets to share his coding skills as manager of the Engineering Tutoring Center. In this position, he assists in developing new tutoring tools and processes for the tutors and collaborates with instructors and TAs to teach Excel and other software tools to engineering students. Most recently, he partnered with TAs from the Civil and Environmental Engineering Department to teach students how to use Excel and code to solve hydraulics and hydrology problems. He is also vice president of the USU chapter of Tau Beta Pi, the oldest engineering honor society in the United States.

“A big thing I've learned is that in your career or whatever you're going into, you need to make it about serving others. I've tried to do that in my positions on campus, and I think that's what's given me a lot of my most fulfilling experiences at USU.”

Ward’s days at USU aren’t quite over. As part of the concurrent BS/MS program, Ward is working towards a master’s in transportation engineering under the direction of Dr. Patrick Singleton. Ward has worked with Singleton as an undergraduate research assistant since 2018 and is excited to get more into transportation data.

In addition to being named valedictorian, Ward has also received numerous awards at both the department and college level, including Outstanding Senior Scholar, Outstanding Undergraduate Researcher, and Outstanding Junior Scholar. Ward’s individual achievements are impressive, but if he's learned anything at USU, it's that it's okay — and even essential — to rely on other people.

“You learn a lot in engineering, but I think you really get to understand where your limits are, what you need other people for, and how to collaborate. We all need to be part of a team.”

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