UW-Stout: Upward bound students experience STEM fields during campus workshops

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Menomonie, Wis. — Fifteen high school students from northwestern Wisconsin recently visited University of Wisconsin-Stout to participate in workshops that focused on STEM.

As participants in the Upward Bound program, they tour and participate in many activities on campuses around Wisconsin and Minnesota.

UW-Stout welcomed the students with three workshops that demonstrated what a polytechnic university has to offer for a future career in STEM — science, technology, engineering and mathematics.

As Adam Maki, the Upward Bound math and science adviser explained, “Upward Bound programs serve high school students from families in which neither parent holds a bachelor’s degree and from families who meet federal income guidelines. The goal of Upward Bound is to help these students recognize and develop their potential and to encourage them to pursue post-secondary degrees and successful careers after high school.”

The students were from five high schools, Barron, Shell Lake, Spooner, Turtle Lake and Unity, the latter in Balsam Lake. UW-Stout professors and staff planned and led the activities, each of which focused on a different aspect of STEM.

Students split into groups and traveled around campus to get hands-on experience in three labs in Fryklund, Jarvis and Micheels halls.

In the first lab, the students made hockey pucks using programming CNC, computer numeric controlled machining centers, that fabricate parts using subtractive manufacturing methods.

Paul Craig, an instrumentation technician in the engineering technology department, wanted students to learn “that there are many opportunities in engineering related to manufacturing and design

in many different industries. A person only needs to open the door to see them."

In the second lab, students got hands-on experience in the plastics lab creating water bottles and tic-tac-toe boards using acrylic that included their name engraved on the board. This workshop was instructed by Wei Zheng, professor in plastics engineering.

Taylor Anderson, a sophomore at Barron High School, said the second lab was her favorite. She liked watching the tic-tac-toe board being made "because I liked seeing the

machine do its own thing, and we also got to go in the room with all the robots and see all the different kinds of robots this school has to offer."

In the last lab, the students worked together to quickly create and test out their tabletop games using prototype kits.

Jackie Cummings, a May graduate from the Master of Fine Arts program in design, was the instructor of the game design workshop. She wanted students to "leave knowing they're capable of thinking like game designers, working collaboratively

and following through on an idea."

The students, who come from many backgrounds and have vast career aspirations, said they learned a lot from their day on campus. Many did not know UW-Stout offered so many hands-on labs that allow them to utilize equipment that they could potentially use out in the field once they graduate.

They also said Upward Bound has given them the opportunity to see universities up close.

"We've done a lot of different things preparing for college. Upward Bound has helped us out a lot with the ACT

preparation," said Autumn Larrabee, a junior from Spooner. "We've also done a lot of different college tours, and I think that is helpful allowing us to see the college campuses and how different they can be."

UW-Stout has collaborated with Upward Bound in the past and will continue this partnership to help show students what college and UW-Stout specifically have to offer them.

"We have had summer programs on the UW-Stout campus in the past and will have it there again this year. Thus, it seemed like a fantastic place to grow our partnership," Maki said.

“We have also partnered with UW-Stout professors and graduate students during our virtual summer programs in the last two years to engage our students in interior design, human anatomy and game design. This was an amazing experience for our students, and we want to continue offering these opportunities. I would love to see this collaboration continue to happen in the future.”

UW-Stout’s College of Science, Technology, Engineering, Mathematics and Management offers 20 undergraduate and 11 graduate programs.

Heavan Hightower, a sophomore at Barron High School, said, “People should take opportunities that are given to them more often” and “expand your thinking. I think college is really, really hard, but this program showed us how easy it actually can be if you do the small, simple things and how easy it is to get scholarships.”