

Transformative Learning Spaces - Equipping Students with Cutting-Edge Skills



UW-Whitewater junior Anthony Davis, left, and Professor Peter Jacobs have worked together for more than a year and have an easygoing relationship. Davis was in the Research Apprenticeship Program last year and now is an undergraduate research student with Jacobs, who is chair of the geology, geography and environmental science department. Davis compiles data from the elemental sampling of soil and sediment using the device at right.

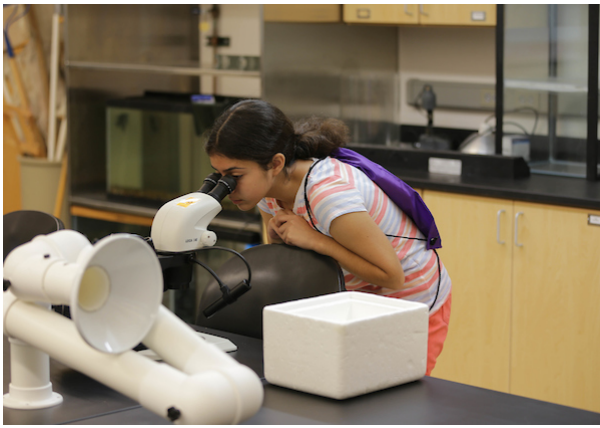


UW-Whitewater senior Francesca "Franny" Smith solders groups of micro wires for bundling in the physics lab of assistant professor Ozgur Yavuzcetin. A single wire has 1/3 the diameter of a human hair. The bundles are used in research. Franny, a physics major, has been a gymnast, peer mentor and a recipient of the Reuben Klumb Senior Award.

Since the early part of this century, UW-Whitewater students majoring in the sciences have benefited from access to state-of-the-art science equipment. This includes use of the equipment both within their classes and beyond, such as when working on undergraduate research projects and in the research apprenticeship program.

Much of this equipment is located in Upham Hall and was purchased as part of the 2002 building renovation. The college has managed to maintain much of this equipment and purchase additional equipment as interest in science majors has steadily grown. Biology is now one of the top 10 majors at UW-Whitewater, and our science students have achieved impressive accomplishments and awards in recent years, including two students who received Honorable Mentions from the Barry M. Goldwater Scholarship and Education Foundation in 2017.

Some key lab equipment is nearing the end of its usable life and, as interest in science programs and undergraduate research continues to grow, it is imperative new investments are made to be able to support students in their pursuit of knowledge in class and in their own research. In particular, the college must purchase a new Nuclear Magnetic Resonance (NMR) to support the study and faculty research, with replacement cost estimated at \$350,000. *(continued)*



UW-Whitewater Science Detectives camp includes chemistry, biology, geography and physics activities led by faculty to interest young students in the sciences.

Beyond the purchase of new equipment, it is important that ongoing support exists for regular maintenance and the purchase of replacement parts and warranties that maximize the potential use of this equipment. The college created the Upham Hall Science Equipment Fund many years ago to provide endowed support for these regular needs and will continue to seek investment to help extend the usable life for all equipment purchases.

Students frequently report that the advanced training they receive from exposure to such high-end scientific equipment gives them a competitive advantage when applying for jobs and graduate school. Access to equipment such as the Nuclear Magnetic Resonance attracts promising students and top-notch faculty to come to UW-Whitewater for the opportunity to use this equipment as part of an undergraduate experience. Imagine what breakthroughs our students and faculty may discover to impact daily lives thanks to the access to the right equipment to test new scientific theories. The Transformative Learning Spaces fund will allow for that possibility.