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**Flying into the future**

### **Students gain career-ready skills with Mathy Construction partnership**

Written by UW-La Crosse University Marketing & Communications

A quarry in western Wisconsin recently became the launchpad for a high-flying classroom experience, thanks to a new partnership between UW-La Crosse and Mathy Construction.

Led by [Niti Mishra](https://www.uwlax.edu/profile/nmishra/), an associate professor in the [Geography & Environmental Science Department](https://www.uwlax.edu/academics/geography/), students in UWL’s unmanned aerial systems course took their drone surveying skills beyond the classroom and into the field.

The collaboration allowed students to apply their academic learning to a real-world setting by conducting aerial mapping with advanced drone technology. At the same time, Mathy gained valuable geospatial data and the opportunity to connect with emerging talent in a growing industry.

“This partnership bridges classroom learning with real-world practice,” Mishra explains. “Mathy is expanding and seeks skilled graduates, and we aim to prepare students for industries where drone mapping is now standard.”

Drone technology has become essential in sectors such as construction and mining, where it improves efficiency in tasks like stockpile measurement, cut-and-fill calculations and site monitoring.

During this project, students flew a light detection and ranging (LiDAR)-equipped drone over one of Mathy’s quarries to analyze volumetric changes, which gathers critical information for resource management. Students also compared LiDAR and photogrammetric methods, gaining experience with both and learning how to evaluate which is more effective in different scenarios.

For Mathy, the partnership is an opportunity to support student learning while exploring innovative applications of drone technology in their own operations.

“Completing a drone surveying project on a quarry property provided a valuable, industry-specific opportunity for the students,” says Andrew Peters, aggregate development geologist and hydrogeologist at Mathy Construction. “The unique quarry setting presented a new challenge. We hoped students would gain an understanding of how this data can drive decision-making in the aggregate production industry.”

Peters says Mathy Construction values partnerships like this one for the perspective and experience they offer students.

“It is our hope that partnerships like ours with UWL allow students to broaden their view of what lies ahead,” Peters says. “We want to give them experience not just academically, but through direct interaction with industry professionals.”

For students, the chance to work on-site was a meaningful extension of their coursework.

“It’s super insightful to take the skills we’ve learned and apply them in the field,” says Aidan Kuhn, a senior biology major. “It shifts our focus from just knowing the skills to actually using them.”

The hands-on nature of the project also helped students better understand their career options.

“It helps shape our understanding of the types of jobs we might pursue after school,” Kuhn says. “We can see how the skills we’ve developed can make us valuable to a company and help save time and money.”

According to Mishra, opportunities like this do more than build technical knowledge — they open students’ eyes to the real-world impact of their work.

“Students witness how drone data is used to make operational decisions in mining, agriculture, insurance and beyond,” he says. “By partnering with Mathy, we give students direct exposure to these high-demand skills and connect them with potential career paths.”