Real-world capstone

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Civil and environmental engineering students using McLaren’s new hospital for hands-on learning

More than 70 civil and environmental engineering students at Michigan State University are getting real-world experience as they dig through the details of the plans for the new $450 million hospital for their senior capstone project.

It all started when MSU instructor Anthony Ingle, PE, reached out to McLaren Greater Lansing’s design and construction team to ask for information he could use to base his students’ senior capstone project on.

“As soon as I found out about the hospital project, I was pursuing it full-fledged because this is really exciting to me,” said Ingle. “This project demonstrates building relationships with McLaren and Michigan State University, so I thought that was a great opportunity.”

Students are working in teams to take on specific aspects of the intricate infrastructure that goes into a project of this size and scope.

“We’re trying to essentially design the infrastructure,” said Ingle. “There are many different disciplines like hydrology, stormwater runoff, detention basins, structures and framing of a building, geotechnical support, and traffic engineering.”

To make the project as realistic as possible, Ingle needed to get ahold of a large amount of very accurate data about the new hospital and its surroundings. McLaren Greater Lansing’s design team was more than willing to help.

“We’re happy to be able to give students somewhere to apply their learning,” said Austin Holcomb, director of facilities for McLaren Greater Lansing. “It gives them an opportunity to see where their passion is.”

Ingle said he is grateful to the design team for volunteering their time to meet and the information they were able to share.

“It takes a lot of information to make a realistic project. You can’t just invent things like existing conditions for soil borings or geotechnical reports,” Ingle noted.
Analyzing McLaren Greater Lansing’s new hospital project as a capstone brought a new level of realism for the students as they finish their degrees.

“A lot of our undergraduate work has been crunching numbers and doing problems on paper,” said environmental engineering student Rachel Zywiczynski. “I’m going to remember this because it’s our first chance to act as project managers and it encompasses everything we’ve learned.”

Ingle said his biggest ambition is to offer realistic projects for students to work on.

“It makes their work more meaningful because they can actually drive past the site and see things that are happening. After they graduate they can come back and tell people, ‘I worked on that job when I was a student.’”

McLaren Greater Lansing and MSU are continuing to explore new and innovative ways to partner on the delivery of care, the education of future health care professionals, and clinical research programs.

For more information on how McLaren Greater Lansing is redesigning health care, and for updates on construction, click here.

**Want to hear more?**

The MSU students will present their research findings during the 2019 Spring Design Day on Friday, April 26, in the College of Engineering Building. Students will discuss their capstone project and feature slides during multiple presentations at:

- 8 a.m. in Room 1538 Engineering Building
- 9:20 a.m. in Room 3400 Engineering Building
- 10:40 a.m. in Room 3540 Engineering Building.

Student presentations are open to the public.

**Related Website:** Story courtesy of Lansing State Journal and McLaren Greater Lansing Communications contact: Patricia Mroczek

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