

Alfred University engineering students partnering with ASK Chemicals to improve efficiency and promote safety

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ALFRED STATION, NY – A group of Alfred University engineering students is partnering with ASK Chemicals on a Lean Six Sigma Project that will help improve efficiency and promote operational safety compliance at the Alfred Station manufacturing facility.

The six students in Amanda Jadwin’s Manufacturing Statistics class visited ASK Chemical on Monday, Feb. 11. The tour of the facility kicked off the Lean Six Sigma project that is expected to run through the end of the spring semester. Jadwin, project manager at the Center for Advanced Ceramics Technology (CACT) at Alfred University, said this is the first time the Manufacturing Statistics class, with the outcome of Six Sigma training, has been offered at the University.

Six Sigma methodology is the implementation of a measurement-based strategy that focuses on process improvement and variation reduction. Lean Six Sigma emphasizes cutting out unnecessary and wasteful steps in the creation of a product so that only steps that directly add value to the product are taken.

Developed by Motorola in the 1980s, Six Sigma has since been implemented in thousands of organizations, from manufacturing, to business and finance, to food service and medical. Six Sigma methodologies aim reduce costs and increase savings by reduce waste and defects; identify recurring problems with processes; and improve quality and productivity.

ASK Chemicals’ facility in Alfred Station, the metal filtration arm of ASK Chemicals, manufactures custom ceramic filters and employs 90 personnel. Jadwin said representatives from ASK Chemicals contacted the CACT in January, about a week before classes were scheduled to start, inquiring about the Six Sigma program. “I suggested the partnership as a real-world experience for my students,” said Jadwin.

As part of its Lean Six Sigma project at ASK Chemicals, students will create a project charter; perform process mapping exercises; compile data into reportable metrics (charts/graphs); identify waste and methods to reduce waste; and conduct a failure mode effects analysis. The class will give a group presentation to ASK Chemicals personnel in which it will propose improvement opportunities that can be incorporated into their manufacturing processes.

“Ideally, the students will visit the ASK facility weekly, discussing their observations regularly in the classroom and developing recommendations for process improvements,” Jadwin said. “We will meet with the management team at

ASK and present our findings at the end of the semester.”

To complete these tasks the class is structured to include hands-on time at ASK Chemicals and in-class lectures. The final exam for this course will be the Six Sigma Yellow Belt Certification Exam through the International Association of Six Sigma Certification.

Students, all seniors, participating in the project are: Matthew Eisenhauer (renewable energy engineering); Justin Smith and Daniel Wiener (mechanical engineering); Ian Chedzoy and Ryan Fowler (ceramic engineering); and Lucas Laing (materials science and engineering). Steve Pilgrim, professor of materials science and engineering in the Inamori School of Engineering, is taking Jadwin’s class to earn Six Sigma certification and is also taking part in the project at ASK Chemicals.

“This (Six Sigma certification) is something students can include on their resumes,” Jadwin commented. “They will stand apart from graduates of other schools who don’t have access to training in process improvement.”

Gabrielle Gaustad, dean of Alfred University’s Inamori School of Engineering, praised Jadwin’s efforts to provide students an opportunity to partner with industry to gain real-world experience.

“I am thrilled to have CACT Project Manager Jadwin offering this unique course to our engineering students,” Gaustad said. “It highlights the School of Engineering’s key objective of having industrially relevant curriculum that provides hands-on experiences to our students.”

Pictured above at the ASK Chemicals facility in Alfred Station are: (front row, from left) Steve Pilgrim, professor of materials science and engineering in the Inamori School of Engineering; Andy Norris, Quality Assurance manager for ASK; Amanda Jadwin, Center for Advanced Ceramic Technology project manager and Manufacturing Statistics class instructor; and Steve Simons, ASK plant manager; and (back row, from left): students Matthew Eisenhauer, Justin Smith, Daniel Wiener, Ian Chedzoy, Ryan Fowler and Lucas Laing.