Student Research Through Diversity Program
Grant is a Win/Win

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Intern Hadir Elsayed with her supervisor Mike Kwiatkowski, process engineering manager.

For Hadir Elsayed, interning with Rotary and Mission Systems’ Owego, New York, Industrial Engineering team presented a dual opportunity. In addition to learning the ins and outs of process engineering, Hadir was able to give back to her team – something that not all interns get a chance to do.

How? The Binghamton University student spent the summer researching the failure factors in Lean Six Sigma (LSS) implementation and documenting processes to share key findings with the Owego team.

Hadir was able to enroll in the student research program thanks to a grant from the Louis Stokes Alliances for Minority Participation (LSAMP) Program, which is supported by the National Science Foundation.

“‘The overall goal of the program is to assist universities and colleges in diversifying the nation’s STEM workforce,” Hadir explained. “They do this by increasing the number of STEM baccalaureate and graduate degrees awarded to populations that have historically been underrepresented in these disciplines.’

“I thank Lockheed Martin not only for the opportunity to intern, but for my team’s support of my research,” said Hadir. “My team’s flexibility made it so that I could be committed to working and learning, while still putting in the hours required for my research project. I’m glad that I could share the insights of my research project to benefit future Lean Six Sigma implementation here at Lockheed Martin.”

“I’m grateful Hadir has chosen to share her research,” said Mike Kwiatkowski, process engineering manager and Hadir’s supervisor. “Keeping the top failure factors in mind as we execute on projects will help us in achieving our Key Results.”

Lockheed Martin has a strong relationship with Binghamton University and other colleges and frequently recruits students like Hadir for internships and career opportunities. To learn more about Lockheed Martin’s Diversity & Inclusion initiatives, read the 2016 Global Diversity and Inclusion Annual Report.
Hadır’s Findings

“Lean Six Sigma protocols reduce waste, foster continuous improvement and are typically a win/win for all involved,” Hadır said. “Employees become more efficient and the resulting product is of more consistent quality; that makes customers happy.”

She elected to study the failure factors of Lean Six Sigma to better understand what is needed in order for LSS programs to work.

According to Hadır, there are three key factors to consider ensuring the success of the combined LSS programs:

1. **Manager Support and Engagement** – It’s important that projects have strong project managers that understand the importance of what the LSS protocols can bring to improve efficiency and reduce waste. The more the managers understand the process and its benefits, the more they are likely to support the LSS approach.

2. **Education** – When project participants don’t know about LSS, or why it is important, they can reify the process and view it as extra work. It’s essential to educate employees about why LSS is important and in fact critical for becoming a high-performing team. When employees understand the process, they are more likely to suggest solutions.

3. **Project Selection** – One size does not fit all. While LSS may be a good fit for certain types of projects, it does not work in every circumstance. For example, the project scope can be too large or too small. Industries/professionals can assess and prioritize projects using a [project selection matrix]. If the project is not assessed correctly, it could fail.

Hadır presented her research findings at an undergraduate research conference in July at the University of Buffalo. In addition, she was glad that throughout her internship she was able to share her work with her colleagues at Lockheed Martin.

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Interesting project and very pertinent to what we are doing in Owego Ops. Nice work Hadır and Mikel!

Mark Felice (mark.felice@lmco.com)  SEPTEMBER 8, 2017  reply  Report this comment

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