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INDUSTRY COMMUNITIES

## Michigan Engineers Find Jobs Through Retraining Program



- Almost every program director has experienced significant difficulties in identifying and employing qualified staff to design and deliver the programs; and
- A large number of the programs operate outside of the formal engineering curriculum, which allows for more creativity and flexibility in their structure and design.

Interviewees predicted three key trends for engineering leadership education in the future: increasing focus on students' ability to operate in complex international teams; greater development of cross-national partnerships between programs; and an emphasis on student self-analysis and reflection, including building awareness of students' personal skills and providing a tailored program to meet their development needs.

*The report, which provides case studies of best-practice engineering leadership education programs, can be accessed at <http://web.mit.edu/gordonelp/elewhitepaper.pdf>.*

Like thousands of others employed by American auto companies in recent years, Jerry Tester was laid off last year. Specifically, he was let go by General Motors after 15 years as a mechanical engineer.

Luck, fate, and a little civil service, however, have combined to give Tester, and a number of other unemployed Michigan engineers, a shot at a new career. He was one of the first success stories from the Talascend Global Training Academy, which launched in February 2009 with the goal of retraining automotive engineers for careers in new fields. After completing Talascend's training program, Tester was hired as a contract designer by Detroit's Marathon Oil Co. in August.

"Marathon's interest really piqued when they saw the curriculum and all the subject matter of the courses," says Tester. "They said, 'This is just what we need.'"

Marathon has found the academy to be a bountiful source of engineering labor, hiring five graduates as of December. It's the biggest coup yet for Talascend, which has devoted a great deal of resources to the academy without any expectation of ever seeing a profit from it.

"It's cost us about half a million [dollars] for the first program, and we'll probably never see that back, but that's our investment," says Jason Dawson, president of the academy. "It was built on being here in Detroit. We're surrounded by industry professionals, but it's an industry in decline. ... It's about matching up supply and demand, matching up transferable skill sets."

Most of the money for the program comes from government subsidies. Additionally, the company teamed up with Macomb Community College in Detroit to develop the curriculum, and between the government funds and Talascend's investment, the academy is initially free to engineers.

Eventually, once the academy has become a sustainable enterprise, graduates who land jobs from the program will have to pay back \$2,500 for the retraining program.

In designing the academy, Dawson says he saw a large professional gap between the

corporate-level engineers and executives in the gas and oil industries. A shortage of employees in the 1990s created an age gap that is just now being seen, as baby boomers begin to retire and leave their companies with fewer engineers.

Dawson thought those companies would be interested in having experienced, well-rounded professional engineers come on board to plug those holes, and knew exactly where he could find such people.

"I love these guys because they're mature, they have work ethic, they're dedicated, and they want to work," Dawson says. "I say, 'Don't take our word for it; come up and meet these guys, see their resumes, decide for yourself.' They find out in the first five minutes, these engineers do the same thing [as oil and gas company engineers], they just speak a different language."

Overcoming that "language barrier" caused by unfamiliarity with the terminology used in a new area of work proved to be critical. Tester says it was among the most important skills he learned in the academy.

"It was just getting ahold of what things are used where," Tester says. "It paid off."

Dawson says that the gas and oil companies were the main targets for the retraining program at the outset, and engineers have been taught piping design, among other skills. As word of the success of the academy spreads, Dawson foresees greater interest from natural gas and nuclear power companies.

"We're forecasting very large demands from that sector," Dawson says. "Alternative energy is part of that, but the more you dig into it, there are dots that aren't connecting. Getting the infrastructure set to create that demand you need, it doesn't seem as viable in the short run."

Whatever industry latches onto the program next, Dawson will be more than happy to accommodate it. He says the academy has placed about 20% of its graduates with full-time jobs, with even more getting temporarily placed back into the manufacturing industry until more opportunities arise.