Darrell Williams and Rachel Itabashi-Campbell have a distinct “leg up” on the competition. They are the first graduates of Wayne State University’s (WSU) Global Executive Track (GET) PhD program in industrial and systems engineering, the first doctoral program of its kind in the United States.

The GET program, which launched in 2008, is designed to help business managers and executives think more strategically, gain a greater sense of global awareness, and help organizations and industry fine-tune processes and produce sustainable value.

“A lot of organizations are struggling to manage their functions because many managers are not trained to master the dynamics of complex entities. This is what we are observing in the automotive, healthcare, defense, service-sector and government agencies. Whether it is global R&D, product development, manufacturing, quality or service, what they need is a systems perspective to effectively manage them,” said Dr. Ratna Babu Chinnam, Wayne State professor and founding director for the GET program. “Williams and Itabashi-Campbell are exactly the type of graduates we envisioned when we began this program at Wayne State. Both have the ability to significantly change the professional community forever through their research findings, problem-solving abilities and unique industry experience.”

**Risk Manager Helps Companies Succeeds**

Dr. Williams began the program in 2008. At that time, he had been working in the auto industry for more than 15 years and was searching for a way to diversify his skills, establish more credibility, and learn more about various industries and product development.

“I saw the program as a way to take my career in a different path, potentially allowing for consulting, research and publishing work in the future,” he says. “Wayne State’s program — with its solid reputation for research and the practical industry experience offered by its professors — seemed like a great way to do that.”

Dr. Williams, who left the automotive industry in 2009 and joined General Dynamics Land Systems as a risk manager in its engineering process group, focused his studies on complex product development (PD).

His dissertation highlighted the way in which understanding and quantifying complex product development and risk on the front end can save...
organizations countless resources. “If we really analyze how complex products are before developing them, we’re able to align an organization and its resources to the product complexity,” he says.

He applied his dissertation to a work project and, upon completion two years later, was pleased to find his methodology lined up well with actual outcomes. “Quantifying PD complexity in the beginning of the process showed that we could properly estimate the need for resources and reduce risk in terms of cost, schedule and performance.”

Dr. Williams’ immediate plans are to publish his work, disseminate his findings through professional organizations and extend the research into business analytics. He also wants to establish a more automated method for the process to see if quantifying complex products is possible across various industries.

**ENGINEER AIMS TO ELIMINATE MISTAKES**

Dr. Itabashi-Campbell, who was also interested in taking her career in another direction, started the program in 2008 while working full-time at TRW Automotive. She now works for Farmington Hills-based Mobis.

“My long-term goal is to go into teaching when I retire from industry. I was not in a position to leave my full-time industry job to go to school. Wayne State’s GET program is set up for working professionals and allowed me to continue in my job while earning my doctorate,” said Dr. Itabashi-Campbell.

Like Dr. Williams, Dr. Itabashi-Campbell had worked in industry long enough to know exactly what she wanted to tackle through her studies at Wayne State.

Her dissertation topic focused on learning from mistakes in engineering product development. “I’ve been working in product development in the automobile industry for a long time. We launch new products all the time and, theoretically, we use knowledge from previous launches. Not all lessons learned are properly learned, though, and we often make the same mistakes. I wanted to focus on technical problem solving and how sustained learning is achieved,” she says.

Dr. Itabashi-Campbell’s curiosity about what impedes effective learning of past lessons led her to essentially create a science behind the way organizations can become learning organizations.

“Though we’d like to, we can’t always assume humans are rational and do what needs to be done. The ‘how’ of problem solving is a lot more complex than literature suggests. And understanding that is important if you want to have sustained learning,” said Dr. Itabashi-Campbell. She added, “If done properly, companies can save a great deal of money and other critical resources by not making the same mistakes over and over again. They can also create new technology and innovation in the process of learning so they not only save money but make more as well.”

Still focused on one day entering academia, Dr. Itabashi-Campbell is spending immediate post-graduation time publishing her research and writing a book. According to Dr. Chinnam, that’s something she should definitely look into.

“In terms of impacting practice, she’s really contributing. There’s a lot for industry to learn from what she’s done. I think it’d be a best-seller,” he says.

**The GET program is exceptional for experienced, global business professionals with engineering or technical backgrounds.**

**PROGRAM SPECIFICS**

The GET program consists of two-and-a-half years of coursework and two years of research. Courses are well-aligned with the way businesses operate. For example, the year-long courses deal with the process of taking a business idea to successful product launch and going from successful product launch to business sustainability, respectively. The courses are modular and led by a cohort of experts from such areas as business, industrial engineering and anthropology, as well as senior industry executives.

Candidates, referred to as learning partners, should have a minimum of 10 years of managerial experience, a bachelor of science in engineering and a relevant master’s degree or MBA. The GET program currently has about 30 candidates from automotive, defense, IT, healthcare, consulting and other industries.

For more information, visit engineering.wayne.edu/ise/get or call 313-577-4846.

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**Kristin Copenhaver** is the Associate Director of Marketing and Communications, at Wayne State University College of Engineering. She holds a master’s degree from Wayne State University and a bachelor’s degree from Western Michigan University.