



challenging the leaders of tomorrow

BY LISA DRUMMOND

The Boeing Company had three projects for the Tauber Institute in 2012. From left: Mitch Adler, Kelly Neuman, Ayush Mathur, Walter James "Jim" McNerney, Jr. (Boeing CEO), Nisarg Patel, Steen Kovalck, Scott Foreman, Brianna Bogan and Anna Weiss.

Celebrating its 20-year anniversary, the Tauber Institute for Global Operations is an extraordinary model for preparing students to become dynamic leaders in the workforce.

Born out of a joint meeting between the University of Michigan College of Engineering and Business School advisory boards, and working with industry representatives from 27 corporations over two years, the Michigan Joint Manufacturing Initiative (later endowed by Detroit-area native Joel D. Tauber and renamed Tauber Institute for Global Operations) launched its first class in 1993. This collaborative effort combines industry, engineering and business stu-

dents with one goal in mind: to create new leaders capable of adapting to change as quickly as business needs and processes change.

Top graduate students from the College of Engineering and the Stephen M. Ross School of Business are admitted into the program. With a commitment to a career in operations, manufacturing or consulting, most students have undergraduate training in engineering or other technical fields.

Farhan Qureshi, a manufacturing engineer from Australia, is one such student. "As a career professional looking to gain further knowledge and skill in the manufacturing discipline, the decision to ap-

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- Procter & Gamble
- Revlon Consumer Products
- RUPS
- Whirlpool Corp.
- Woodward Inc.

ply was a simple one," says Qureshi, who will earn a Master of Engineering degree in manufacturing this year. "A part of the College of Engineering, the industrial and operations engineering and manufacturing programs are highly ranked."

PREPARING THE TEAM

Working closely with faculty advisors from both schools, the course curriculum covers operations management themes, including "Topics in Global Operations" and "Manufacturing and Supply Operations." Workshops such as value stream mapping, Toyota Kata and Six Sigma provide hands-on experience for operations proficiency. Students are trained to become a cohesive team through the Leadership Advantage Program, which explores strategies for initiating change, selling new ideas, overcoming disagreements and reaching a consensus.

As a group, the team members identify potential strengths and weaknesses, then formulate strategies to maximize their effectiveness. This prepares them to arrive at the sponsor company's project site as a cohesive team. One of the keys to functioning smoothly

as a unit is the guidance the students receive from communication coaches who help them navigate cultural and team dynamics and differences.

Earlier this year, students participated in one of the program's most popular and unique team-building exercises: the Stock Car Pit Crew Challenge. Stock car pit crew professionals, including Bill Eversole, a former NASCAR driver from Chelsea, MI, demonstrated the proper techniques to change tires in nine seconds. Students were then divided into teams of four and assigned as a front or rear tire changer, carrier or crew captain. The challenge? To remove, rotate and re-install the tires as quickly as possible. After each of four rounds, the teams met to revise their strategies and techniques to improve their time. In the end, the winning team took the checkered flag in 11.08 seconds. The point of the challenge was to help students learn from their mistakes, accept help from teammates and advisors, utilize all resources available and set a common goal.

All of this is part of the preparation for their 14-week Summer Team Projects at Tauber sponsor-corporations around the globe. >>



PHILIP D'AMICO

The first place team at the 2012 Spotlight! competition, from left: Al Woodliff of Tauber Institute for Global Operations, John Bowman of Woodward Inc., Kevin Shallcross (student), Roman Kapuscinski of Tauber Institute, Joel Tauber (philanthropist), Dot Gregg (student), Scott Nisbet of Woodward Inc. and Larry Seiford of Tauber Institute.



LUIS GUZMAN



DWIGHT CENDROWSKI



COURTESY ALCOA



COURTESY BORGWARNER

Clockwise from top left:

Students Justin Moyer and Harsha Ravula work on their 2012 Great Giant Pineapple Company team project in Indonesia.

Alec Cohen and Jessica Skinner (sitting) working on the Amway project in 2012.

Students Katelyn Bevier and Stephanie Kuo work at the Borg-Warner Cadillac Plant in Cadillac, MI.

Students Akshay Desai and Jon Landstra work at the Alcoa team project in Whitehall, MI.

OFF TO WORK ...

How do students get paired with sponsor corporations? First, companies submit their proposals to the Tauber Institute. Project examples include lean process design and implementation; manufacturing site strategic assessment; process improvement; product complexity analysis; big data usability; and plant floor layout. Companies whose projects are selected for the year then present those projects to the students. Students are interviewed by the potential sponsors, after which both students and companies rate each other. A linear optimization algorithm based on mutually expressed preferences is then applied to match program sponsors with teams made up of students from the engineering and business schools.

Student teams work at the sponsor's site in a col-

laborative internship. Students function as consultants focused on a specific issue involving operations or manufacturing, with the goal of helping the company earn or save money. It's a concept that works. Over the last three years, \$10 million has been saved — the sum of 35 projects from 28 companies. For sponsors, that's return on investment with clout.

According to Michael Keegan, Chrysler Group LLC senior vice president, supply chain management, "Chrysler's global supplier footprint is vulnerable to numerous risks, including natural disasters, logistics disruptions, supplier constraints and economic turbulence. The Tauber team's excellent analysis, focusing on transparency of risk throughout the multi-tiered supply chain, gave us valuable insights and helped propel us in the right direction for risk management."

Students participate in the Stock Car Pit Crew Challenge.

The Tauber program, says Keegan, provides a “best of both worlds approach, with highly skilled and energetic students onsite, bolstered by the expertise and thought leadership of the faculty.”

For the students, it’s a chance for an internship like no other. In addition to honing their analytical and supply chain mapping skills, they gain firsthand experience solving a substantive problem that will bring a product or service to consumers. Students are exposed to high-level executives and have the opportunity to demonstrate their critical-thinking and problem-solving capabilities to key decision makers.

RATING TEAM PERFORMANCE

Once the 14-week projects are completed, the teams return to the University of Michigan to compete in the Spotlight! scholarship competition, where students present their projects to corporate representatives, alumni, faculty and other students. Judges evaluate the projects on scope, implementation, impact and presentation, and scholarships are awarded to the top-performing teams.

As an overlay to graduate studies, participation in the Tauber Institute gives students a unique experience yielding advanced leadership, critical thinking and collaborative skills that are highly attractive to corporations.

“The program prepares students for the challenges in the workplace,” says Theresa Ceccarelli, Tauber Institute for Global Operations marketing manager. “We had a 98 percent hiring rate in 2012,” Ceccarelli says. “And 44 percent of students who participated in the program went to work for the company whose project they worked on, for another sponsoring company or a board member company. I’ve seen firsthand how you can successfully integrate business and engineering into a collaborative team that can get great results.”

Next on the horizon for the Tauber Institute for Global Operations is the launch of a “model factory.” Slated to open this fall, the model factory in Ann Arbor will be a training ground targeted toward students and practitioners who want to learn lean applications, activities and practices in a hands-on manner. It’s just the next step in developing new leaders with evolutionary ways of thinking for the future. 🏁



PETER SMITH