

Tauber Institute for Global Operations meets industry demand for leaders who can integrate business and engineering to shape the future of operations.

The University of Michigan's award-winning Tauber Institute for Global Operations provides graduate students in the College of Engineering and Ross School of Business with high-level, operations-management work experience and the opportunity to secure coveted jobs at leading corporations. "Two to three months after graduation, nearly 100 percent of our students have taken positions," says Diana Crossley, Managing Director of the Tauber Institute, "Our internship projects set our students apart. It's much easier to envision hiring someone who not only has technical skills, but who also understands how to apply them."

The capstone of the Tauber Institute program is a 14-week internship project where teams



NEW LEADERS FOR THE EVOLVING WORLD OF OPERATIONS

of business and engineering students tackle substantive operations challenges at sponsoring companies around the globe. The project teams deliver high impact results for a wide range of industries, applying their analytical skills in areas such as lean process design and implementation, supply chain, new product development strategy, plant floor traffic issues, and product distribution.

It's a clear win-win for Education and Industry. Students gain valuable real-world experience, and sponsoring companies rack up savings. In 2016, per company calculations, sponsors saved a total of \$460 million from implementing student recommendations, an average of \$14.6 million per project savings over three years. Tauber Institute projects also delivered significant improvements in areas such as CO2 emissions, energy consumption, throughput time, and supply chain risk.

Solving Operations Problems for the World's Top Companies

Each year up to 30 companies – including Boeing, BorgWarner, Stanley Black & Decker, Amazon, and PepsiCo – participate in Tauber Institute's internship projects. In recognition of over 20 years of promoting action-based learning, the Tauber Institute won the inaugural UPS George D. Smith Prize for its preparation of students in operations research, management science and analytics.

Scott Gallett, BorgWarner VP of Marketing & Public Relations says, "When someone from Tauber comes to us, we really consider them ex-



perts in the field that have the confidence to tell us what needs to change, why it needs to change, and how we can actually implement that change.

Pictured: Global leaders in industry and academia participate in the Global Operations Conference to share, debate and strategize to advance the worldwide practice of operations. Photographer: P. Smith.



It's something that I tell people - you're going to get more than you expect."

Once companies host a Tauber student team, they often seek to expand their sponsorship to multiple internship projects. Now in their sixth year of partnership, Microsoft sponsored three project teams in 2016. Jeff Pratt, GM of Microsoft Enterprise Risk Management says, "Each year we are able to meet energetic students with bright ideas, creative people, and that can really contribute to our company.... We try to give Tauber students a real world experience. They come in, they're given a problem, they're given a community to go interact with, and we let them run on their own."

Business & Engineering Skill Set In Action

"The complementary skill set of engineering and business is the perfect fit within supply chain operations at Cisco," says Scott Morey, Sr. Director of Cisco Global Distribution Sales. "At our company, someone who has a technical background with an understanding of how products were designed and put together, combined with a business background – and an understanding of how to drive value, volume and scale – can help us solve the bulk of our business problems. The reason is that you're able to look at a problem from multiple angles, as well as see other people's

Pictured: Students with Boeing sponsored representatives taken during their team project.

30 member industry advisory board:

3M	Infosys Technologies
American Industrial Partners	Masco Corporation
A.T. Kearney Inc.	Mayo Clinic
Alcoa Inc.	McKinsey & Company
Amazon	Microsoft
The Boeing Company	National Center for Manufacturing Sciences
BorgWarner Inc.	Office Depot Inc.
Cardinal Health Inc.	Pacific Gas & Electric
Chargin Consulting Associates	Pfizer Inc.
Cisco Systems Inc.	SRG Global Inc.
ConAgra Foods, Inc.	Steelcase North America
Dell Inc.	Tauber Enterprises
The Dow Chemical Company	United Parcel Service, Inc.
DTE Energy Company	Whirlpool Corporation
Ford Motor Company	
General Motors Company	

perspectives. Hard skills, as well as soft skills, are critical to succeed in business, especially at an international operation like Cisco, which requires teamwork with people not only across the United States, but also worldwide.”

Tauber Institute students also put their coursework into action through behind the scenes tours at facilities operated by companies such as General Motors Company, Stryker Corporation, Delta

Air Lines, and UPS. During each visit, students conduct a rapid plant assessment which yields a lean state measurement sufficient to identify improvements and target next steps for lean transformation.

Students build on their industry connections by coordinating the Tauber Leadership Speaker Series, which features experts from companies like PwC, Dell, and Nissan, and plan the Tauber



Pictured: Students working onsite in Jakarta, Indonesia during their team project.

Institute’s annual Global Operations Conference. Keynote speakers at this year’s conference include Somesh Nigam, leading IBM as VP, Chief Data Office, Information & Data Governance and Healthcare Informatics; Jonathan Czaja, Stich Fix VP of Operations; and Jeff Tazelaar, Dow Chemical Company Global Supply Chain Visibility Leader.

Collaborating with Industry to Shape Education

A key challenge for the Tauber Institute is evol-

ing in an ever-changing job market that favors innovation. “We work with companies over time,” says Crossley. “However, as the economy and student interests change, we try to make sure that we continue to have a well-balanced group of industries. We’ve done outreach to include energy companies, food companies, and consumer products goods, and there has also been a lot of interest in sustainability.”

The Tauber Institute works closely with a rotating Industry Advisory Board to ensure the program consistently addresses Industry’s most



pressing challenges. “I know they listen to the board’s advice,” says former board member Doug Sunkel, Executive Director of Cummins Global Logistics. “They are always trying to keep the program relevant and make sure that students who come out of the program are marketable and will have an impact on the companies they go to work for.”

“I think that is one of the reasons our success continues,” Crossley adds. “We are constantly evolving... For example, this year we have some projects focusing on big data. This is a wonderful fit for us since there is a strong demand for analysis. Having data is one thing, but you need specialists who understand how to interpret and manipulate it in order to get to actionable results.”

Sponsoring companies appreciate their Tauber team’s access to extensive academic resources. Each student team coordinates with two faculty advisors, one from the Ross School of Business and one from the College of Engineering; a communications coach who reviews papers and presentations; and a team-dynamics coach who makes sure the students work well together.

“We also try to impart soft skills through year-round modules because those are the skills that will enable our students to get ahead,” Crossley says. “So while they are earning their MBA or Master’s in Engineering, they use their

Pictured: Students working with their project supervisor onsite to develop a collaborative strategy for the last weeks of production.

AUTHOR BIO:



**Theresa Ceccarelli | Marketing Manager
Tauber Institute for Global Operations, University of
Michigan**

Theresa is the marketing manager of the Tauber Institute for Global Operations. She has over 20 years of experience providing strategic marketing, leadership and management for all efforts related to the workforce development function in the engineering, business, and IT sectors. She holds a PhD and an MA from Wayne State University and a BA from Michigan State University.



electives for courses in the opposite school and go through training in our Leadership Advantage Program. We offer operations-efficiency and leadership modules to prepare students by further cultivating their skills, teamwork capacity, cultural awareness and business relationships. Our advisory board told us that in order for our

students to have a competitive advantage, they needed that training. As a result, some companies strictly want to interview our students because of the thoroughness of the program.”

Learn more about the Tauber Institute for Global Operations at tauber.umich.edu.

Pictured left: Faculty from both the College of Engineering and the Stephen M. Ross School of Business at the annual kick-off meeting. Each project is assigned a faculty advisor from each school who are committed to a specific project, consult regularly with the team, and make on-site visits to review progress;

Above: Using a systems thinking approach, the student team developed a plan to match operational waste to market demand.