Stanford-HKUST Joint Global Manufacturing Course

Stanford Tour Opens Eyes

Jointly offered by Hong Kong University of Science and Technology (HKUST) and Stanford University every year in the Spring Semester since 1995, IELM 550 aims at providing a group of highly motivated students with an environment to solve industrial problems. This great opportunity is offered to IELM undergraduates.

The course focuses on issues that are global in nature, and are related to Product Development, Strategic Planning and Design of Supply Chains. Three to four students from each institution work together as a team to tackle a defined problem sponsored by a company that has interests in North America and the Asia-Pacific region. Aspects of managing cross-border, cross-function, and cross-culture projects are also discussed.

Creative Learning Modes

- Joint projects sponsored by Hong Kong companies and global enterprises
- Problem formulation and joint project meetings at Stanford and HKUST
- Interactions with senior executives
- Firm visits and site visits in the US, Hong Kong and Mainland China
- Teleconferencing, video-conferencing and web cam to assist remote coordination and management

Benefits of the Program

- Strategy development and industrial problem solving for sponsors
- Network with business professionals and talented students across the Pacific
- Hands-on experience to apply theoretical knowledge to practical problems faced by the industries
- Peer learning to enhance team work spirit
- Learn how to work effectively with people of different cultures

messages from alumni

"The course provided me the first opportunity to interact with Asian business after having studied and worked in the United States for 16 years. It is one of the events that prompted my decision to return to Asia. Since then, I have worked in engineering, business development, corporate finance, and direct investment, regionally and internationally - opportunities that I would not have gotten if I were to stay in the United States."

Jack POON
President
Swiftpath

"When people talked about virtual team management on my first job as a consultant, I was (unexpectedly) able to share with them my experience! I knew exactly how the concern of different time zones could become a plus to the project by organizing project tasks to be done around the clock, how diverse cultural background could be the source of creative problem solving rather than hindering team dynamic, and how exceptionally important project schedule management is. Where else did I learn these from but the Stanford-HKUST global manufacturing course project I took as a final year student?"

Yip Man Hang
Manager
Supply Chain Management Department
Esquel Enterprises Limited

"The Global Manufacturing course provided me a great opportunity to gain the experience of working in a cross-country, cross-cultural project team. The experience of cultural exchange and knowledge sharing is unique and unforgettable."

Jason Yuen
Manager
Operations Design and Development Department
Dai Sang Bank Ltd.
Industrial Engineering Magic on Disneyland

Besides the famous Mickey Mouse, what would pop into your mind when Disneyland is mentioned? It is now time to start thinking about Industrial Engineering!

Indeed, the knowledge of Industrial Engineering has been one of the key elements used by Ms. Erin Wallace, the senior vice president of Walt Disney World Resort Operations, to climb up her career ladder in the magic kingdom, according to the magazine Industrial Engineer.

Magic makers can hardly afford mistakes. Besides finances and strategies, guest services are critical to the impression guests have when they visit Disney World. Wallace proudly relies on her industrial engineering skills to make sure no guest is disappointed.

"I look at industrial engineers as problem solvers, and truly when you think about all the things you learn as an IE, it's all for the aim and goal of solving problems in a multitude of different environments. I'm working to try to solve some of the largest kinds of problems in operations and then I also have the knowledge of how to utilize those support areas that enable operations to perform better," said Wallace. (extracted from P. 30 May 2002 Industrial Engineer)

Industrial engineering at Walt Disney World began in 1971. By 1980, its role had expanded to support all divisions of the company and other special development projects.

The work of the industrial engineering teams can be divided into the following categories:
- Capacity/demand planning and process improvement initiatives. The FastPass system that reduces customer waiting time for some of the Disney attractions is one of the latest innovations developed by the Industrial engineering department;
- Flexible bus routing, which has increased the efficiency of the 234-bus fleet;
- Customers relationship management implementation; and
- New theme park development. For example, the IE teams have expended much effort in developing Hong Kong Disneyland.

A lot of our third-year-students have finished their final year projects associated with Hong Kong Disneyland, with the following topics:
- Logistics Planning for Hong Kong Disneyland
- Warehouse Management for Hong Kong Disneyland
- Resort Services for Hong Kong Disneyland - "internal vehicle and driver pool"
- Resort Services for Hong Kong Disneyland - "the custodial service project"
- Optimizing the "food and beverage" supply chains at Hong Kong Disneyland
- The Emergency Evacuation Plan for Hong Kong Disneyland
The Mentorship Program is based on the recognition that students can gain insight, confidence, and enhanced life skills through the support and guidance of practicing professionals in engineering-related fields. The mentors, on a voluntary basis, provide guidance for the professional and social development of the students.

Our mentors come from leading industries such as Hongkong International Terminals Limited, Kowloon-Canton Railway Corporation, GeoLogistics Limited, OOCL(HK) Limited, Shiseido Dah Chong Hong Cosmetics Limited and the HK Trade Development Council.

Students and mentors can choose to meet wherever they like, from a casual environment, like a cafe, to a much more formal setting, like an office. Mentors can bring students to their companies for visitation or may even bring students outside HK for field trips. This can enhance the communication between mentors and students. Some students may also be offered job opportunities in their mentor's companies during their studies or after graduation.

"The trip to China has allowed me to get insight into the well developed logistics plans in China and I am amused by their competitiveness. In addition to that, I have benefited from this mentorship program in terms of self development and knowledge of the business world. From my mentor, I got a career picture of how the society is working and I know how to behave in such a world." said Billy, one of the participants.
Alumni Sharing - How IELM Benefited Their Career

Since the establishment of our department in 1993, we have had more than 500 graduates receiving Bachelor's (BEng), Master's (MSc/Mphil), and Doctoral (PhD) degrees, as well as Master of Technology Management (MTM).

Our graduates are professional engineers who take up supervisory and managerial functions in consulting firms, banks, airlines, international couriers, container and aircargo terminals, freight forwarders, shipping companies, global manufacturers and retailers. Examples of these companies are Deloitte & Touche Consulting Group, Broadair Express Ltd., DHL, Hong Kong Air Cargo Terminals Ltd., Exel, Park'N Shop, etc.

Below, some of our graduates share with us how they have benefited from IELM.

"Thanks to my life at HKUST for three years, it has opened my mind and is helpful to build up my logical thinking, problem solving techniques, independence, creativity and innovation, analytical reasoning, and quick response and adaptability to the demands of the dynamic, changing and complicated business market and environment. Coupled with the comprehensive and diversified technical trainings and programmes offered by the department, I believe that our students would play key roles in the society" said Zoe Chow, 2004 IELM graduate, Logistics Executive Trainee, DHL International (HK) Ltd.

"Having studied for three years at HKUST in IELM, I have received not only a superb academic education by the excellent faculty, but also the essential interpersonal skills and business knowledge for the intensive demand of today's competitive market. I have been polished to be an all-rounded person with the tailor-made academic curriculum. As well as receiving an outstanding academic education, the experience that I have gained from the Stanford course was invaluable to me. It helped me to be acquainted with people from different fields as well. These experiences were important to me as they certainly helped me to develop my career in Modern Terminals Limited, a leading container terminal operator in China and Hong Kong," said Cheung Foo Loy, 2004 IELM graduate, Terminal Planning Assistant, Modern Terminals Limited.

"I am so proud of graduating from UST IELM and being an Industrial Engineer. Industrial Engineers are in 'hot' demand in the job market and UST IELM graduates are regarded as smart and efficient. I can assure you with unforgettable life experiences at UST IELM," said Daniel Lau, (BEng 2002, MSc 2004, Engineering Trainee in Esquel Enterprise Limited)

"IELM enhanced me with technical know-hows. I am impressed by the strong connection between principles and real-life practices. With support from the department, I was also able to step out of the university and interact with professional bodies and business. I fully enjoyed the student life in HKUST IELM. It brings me forward to the world in actions," said Chan Ka Kei Raimond, (BEng 2003, External Vice President of Session 2001-2002 of IEESS, HKUSTSU; Assistant Consultant in TQM Consultants Ltd.)

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