Engineering Innovation

By Wego Wang

Short Course: 28 June 2014(from 09h to 17h), Americana Condesa Cancun All Inclusive Resort, Cancun, Mexico

This short course highlights the essentials of a 4 graduate credits course "Engineering Innovation with Information Technology" at Harvard Extension School. (More information about this course is posted at http://www.extension.harvard.edu/courses/engineering-innovation-information-technology). It focuses on the interactions between scientific ingenuity and modern information technology (IT). This course emphasizes practical applications and product marketability with real-life case studies. The subjects cover computer-aided design, imaging, molding, simulation and manufacturing. It will also briefly discuss (bio-) mechatronics, reverse engineering, and computer game development. The presentation of this course will be supported by rich media such as videos and online supplemental references.

Course Contents

	Subject Topics
1	Principles of engineering innovation
2	Applications of information technology to engineering design
3	Computer-aided design
4	Computer-aided manufacturing
5	(Bio-)mechatronics
6	Three-dimensional imaging
7	Computer modeling
8	Part simulation
9	Reverse engineering
10	Rapid prototyping
11	Additive manufacturing
12	Video gaming technology

Who Should Attend

This course is specifically designed for the professionals with demanding schedules, but who are still interested in life-time learning opportunity about modern technology in a one-day course. The people with creative minds and appreciate innovations will enjoy it most by taking this short course. The primary audience are the executives who want to know the potential applications of modern technology in their business, the managers who seek for the knowledge of advanced technology to improve their projects, the engineers who are required the comprehensive technology skills to complete their projects, and the sales

representatives who need the basic understanding of engineering technology to promote the sales of their parts, and subsequent customer service.
The secondary audience includes but is not limited to the following professionals: the inventors who try to create new products with innovative methodology, academics (professors and graduate students) who conduct advanced scientific researches, and the attorneys in the fields of intellectual properties and patents, etc.

The participant will also receive:

- CD with course material in pdf
- Certificate of completion
- Lunch and refreshments

Course Instructor Wego Wang, Sc.D

Dr. Wego Wang has been a technical instructor and a researcher in mechanical engineering and materials science for three decades. He is an instructor at Harvard Extension School teaching “Engineering Innovation with Information Technology.” He also teaches “Machine Design” at the University of Massachusetts Lowell; and previously taught full-time at Northeastern University and part-time at Boston University. He was a research engineer with the U.S. Army Research Laboratory. He works at the Federal Aviation Administration, primarily on continuous aviation safety programs.

He was elected Fellow of ASM International in 2009, and has received many awards, commendations, and recognitions from Army Research Laboratory, Federal Aviation Administration, TMS International, Society of Manufacturing Engineers, and ASM International. Dr. Wang has authored and co-authored a number of technical and professional articles and presented lectures and reports at numerous seminars and conferences in the U.S. and abroad. He is an expert on reverse engineering. His book “Reverse Engineering: Technology of Reinvention” was published by CRC Press-Taylor and Francis Group in September 2010. This book is available in more than 160 university libraries worldwide. He was the 2005-2006 Chairman of the ASM International Boston Chapter and is currently on the executive committee of this professional organization. He also served on the executive committee of TMS Boston Section, where he was president from 1993-1995.

Dr. Wang earned a Bachelor of Science degree in Mechanical Engineering from National Cheng - Kung University, a Master of Science degree (MS) in Mechanical Engineering from National Taiwan University, as well as a second MS and a Doctor of Science degree in Materials Science and Engineering from the Massachusetts Institute of Technology.

REGISTRATION: http://www.flogen.org/ShechtmanSymposium