ETM

Department of Engineering and Technology Management

Technology Management Seminar Series

Spring 2012

Charles Weber, Ph.D.
Associate Professor, ETM, Portland State University

Charles Weber holds (among other degrees) a B.S. degree in engineering physics from the University of Colorado, Boulder; an M.S. degree in electrical engineering from the University of California, Davis; and a Ph.D. in management from MIT’s Sloan School of Management. He joined Hewlett-Packard Company as a process engineer in an IC manufacturing facility. He subsequently transferred to HP’s IC process development center, working in electron beam lithography, parametric testing, microelectronic test structures, clean room layout, and yield management. From 1996 to 1998, Charles managed the defect detection project at SEMATECH as an HP assignee. In December 2002, he joined the faculty of Portland State University, where he is an associate professor of engineering and technology management. Charles Weber’s research interests are in organizational learning, problem solving, knowledge management, innovation and entrepreneurship.

Jiting Yang holds a B.S. degree in biomedical engineering from Xi’an Jiaotong University, China and an M.S. degree in information technology from University of Queensland, Australia. Upon graduation, she worked at as a technical consultant in product lifecycle management (PLM) and in software project management at Applied Materials China. Currently, she is a doctoral student in technology management at Portland State University.

Profitability versus Return on Investment in VLSI Circuit Manufacturing
by Charles Weber and Jiting Yang

A qualitative empirical study of the VLSI circuit manufacturing explores profitability and return on investment in that industry. The study finds that 1) leading-edge VLSI circuit manufacturing ventures tend to be highly profitable, but only if the manufacturer delivers a timely revolution in organizational performance; 2) fast followers are increasingly having difficulty recovering their investment; and 3) slow followers have the highest return on investment in the industry. These findings question whether the pursuit of Moore’s law is financially sustainable. The study also provides an analytical model of a VLSI circuit manufacturing process that helps managers make investment decisions through scenario planning.

Day: May 11, 2012
Time: 3:15 – 4:20 pm
Room: FAB 10
1900 SW 4th Avenue
Portland, OR 97201