ISM 101: Management of Technology Seminar

Instructor: Subhas Desa
Office: E2, Room # 561
Phone: 831-459-1641
E-mail: sdesa@soe.ucsc.edu

Seminar Times: Thursday, 4 PM - 5:45 PM

Class Location: E2, Room #180 (“Simularium”)

Instructor Office Hours: Tuesday 3:00 – 6:00 PM

About the seminar
This seminar will expose students to the breadth and depth of the management of technology through weekly talks by leading industry practitioners and university researchers in the fields of technology and business. Topics covered will include engineering/product design and development, information technology, operations, business strategy, microeconomics, finance, and marketing. These topics will be addressed within the context of high technologies such as software, information systems, semiconductors, storage and networks, nanotechnology, and biotechnology.

Operation of the seminar:
The course will mostly alternate weekly between talks by UCSC faculty and practitioners from industry as follows:

Week 1: Introduction and overview of the MOT Seminar
Weeks 2, 4, 5, 8: executives from large, medium and small high-technology companies will provide business perspectives on the development, management, and commercialization of technology
Weeks 3, 6, 7, 9: UCSC faculty will provide mostly technological perspectives on the development, management, and commercialization of technology, focusing on their domains of expertise such as software, networking, and semiconductors
Week 10: Closure: summary and conclusions from the series; lessons learned

Contents of the seminar
The actual topics covered during any quarter will depend on the speakers selected for that quarter and will include many of the topics listed below:

Technology and Product Development in high-tech domains such software, semiconductors, networks and storage, and biotechnology
Supply Chain Management and Globalization
Marketing of new technologies and products
Technology, market, and business strategy for “High-Tech” products
Managing technology and product development
Economics and finance of technology development
Managing the product development process
Information systems for integrating the management, planning, execution, and monitoring of product development
Innovation and creativity in new technology and product development
Technology Research in domains such as robotics, storage, databases, and computer graphics

Work involved in the seminar
The workload for this seminar will involve approximately 1.5 hours per week of "in-classroom" time and an average of 2 hours per week of "out-of-classroom" time. Students are expected to write a comprehensive two-part term paper as follows:

Choose one of the “technology” domains presented by a UCSC faculty member. For this domain briefly describe the technology, and the state of the art in this technology field; discuss opportunities for innovation, and the corresponding implementation and commercialization challenges. This will form one part of your paper.
Choose one of the “business” topics covered by a speaker from industry. For this topic define the problem or issue, briefly describe how the problem was addressed/solved, present key results, describe lessons learned, and discuss future opportunities. This will form the other part of your paper.

Grading
Attendance: 20%
Notebook: 20%
Term Paper, Part A: 30%
Term Paper, Part B: 30%
Extra Credit: 10% (for asking and answering questions in class)

Term Paper Due Dates:
- Draft for Part A due on Thursday 5/7;
- Draft for Part B due on Thursday 5/28
- Final Paper (Parts A and B, revised plus a short 300-word “piece” integrating Parts A and B) due on Tuesday 6/9.

(Instructions for each part will be provided the week before it is due. “Draft” means a well written, near-perfect paper. The instructor will provide feedback on each draft, which should then be incorporated into each draft to produce the final version.)

General comments
- Note that ISM 101 is a seminar, which is intended to get you interested in and excited about the field of Management of Technology (MOT). To learn and master the fundamentals of MOT you must take the MOT sequence of courses ISM 105 (MOT1) and ISM 125 (MOT2) that are offered, respectively, in Fall and Winter. We also offer a General Education course, ISM 80C (“Starting a New Technology Company”) in Spring and Summer.)
• During the ISM 101 presentations in the classroom, please in listening to and interacting with the speaker, and taking notes. Please do not be engaged in any “non-ISM 101” activity, e.g., surfing the web, sending e-mails, etc.
• **Attendance is mandatory.** Please contact me ahead of time if you have to miss a seminar for some important reason.
• **Keep a notebook** (including speaker names, titles, and dates of each talk) in which you take notes for each seminar. These notes will also be very helpful when writing the term paper.
• **Immerse** yourself in this experience. Don’t be too concerned if you’re a little lost during a talk. If you are too lost see me, and we can take care of the issue.
• Help make the talk interactive by **asking questions**, and **answering questions** posed by the speaker.
• If you have any problems related to the seminar, please see me immediately so that we can quickly resolve the issue.

**Important Note:** A speaker’s presentation will be available on the class website, [www.soe.ucsc.edu/classes/ism101/Spring09](http://www.soe.ucsc.edu/classes/ism101/Spring09),

if the speaker uses Power Point slides and gives permission to make these slides available to the class. You can view seminar presentations from last quarter at [www.soe.ucsc.edu/classes/ism101/Winter09](http://www.soe.ucsc.edu/classes/ism101/Winter09).

**Reading List (optional):**


**Spring 2009 Presentations:**

4/09/09: Dr. Roy Levin, Director, Microsoft Research Silicon Valley, on “Managing Innovation at Microsoft”.

4/16/09: Professor John Musacchio, Information Systems Management on “Game Theory and Wi-Fi Pricing

4/23/09: Eric Ornas, Chief Operating Officer, Satori Labs, “On creating a Start-up”

4/30/09: Robert Siegel, General Partner, X/Seed Capital Management, Sand Hill Road, Menlo Park, on “Venture Capital in High-Tech Startups”

5/7/09: Mark Cianca, Director, Portfolio Management Group, Information Technology Services, UC Santa Cruz, on Aligning Information Technology with the business needs of the institution

5/14/09: Professor James Davis on “Modeling shape and motion for computer graphics and robotics”

5/21/09: TBA (speaker will be either from Seagate or Plantronics)

5/28/09: Professor Patrick Mantey, Computer Engineering and Information Systems Management, on “Multi-Media Technologies”

6/4/09: Closure: class discussion and lessons learned.