Managing New Technology Introduction | Spring 2016 | Not Final

Instructor: Shimon Shmueli, shimon@pdx.edu
Time: Tuesdays, 5:30 – 9:10 p.m.
Location: PSU campus
Office hours: Please coordinate ahead of time or just schedule at bit.ly/calpdxs
Updates: This syllabus may be updated with appropriate notifications.

Course Description
Management procedures and key underlying concepts for effective planning, development, and introduction into volume production utilizing new technology are covered. Emphasis on semiconductor technology and manufacturing but most principles and methodologies are generally applicable to both hardware and software. Technologies and market needs co-evolve, feeding on each other through explicit and implicit exchanges between customers and industries. Occasionally these exchanges are interrupted by performance discontinuities as shown in the Technology S-Curve on the right. In this course we will zoom in on those inflection points where opportunities arise, pitfalls are quite common, and proactively managing them is vital.

Those technology intersections are of great interest to managers who must foresee them and strategically align technologies and market trends. There are many lessons to be learned from Apple’s creation of the PC era, Digital’s failure to transition to it, and IBM’s adapting strategy that allowed it to do well in the PC market until the mid-90’s.

There are many factors at play at these junctures: market pressures, technologies and architectures, managerial foresight and decision making, industry standards, network effects, managerial cognition, and more. In this course we will study cases such as the VHS vs. Betamax war and Kodak’s failure to transition to digital photography, meet industry guests who experienced or are at the midst of technology transitions, and study theoretical background and best practices that aim to help managers lead those stormy transitions.

Required Textbooks, Software, etc.
- Articles and cases will be posted on D2L and purchased by students at Harvard Business Publishing website

Cases
During the term student will prepare to discuss in class 8 cases. With the cases you will find the article Learning by the Case Method by John S. Hammond that you should read before you study for the first case.

Course Deliverables (not final)
Article Briefs
Submit briefs on assignments. In each brief you should write your own takeaways/reflection (not a summary!) in one or two paragraphs and list 1-3 questions/issues you would like to discuss in class.

Case Notes
For each of the assigned cases you need to submit your personal case preparation notes. There are no specific expectations as learning styles and organization vary widely among students and of course your class contribution does not necessarily have to align with your notes.

At the beginning of each of your case notes, write 3 issues or questions that you would like to discuss in the class. Also Send those questions to the GSA who will compile and send them to me before class starts.
Paper
Each student will identify a past or current technology inflection point and will analyze it based on tools we acquire in class and own literature research. Students will also prepare a 20-minute presentation and class discussion.

Team Project
TBA

Class Policies

Gadgets: Use of laptops in class is not allowed. Use of phones is allowed only for urgent messages. You may take pictures with your phones during class, but do not share anything on any media without the appropriate permissions.

Attendance & Participation: You are expected to attend and actively participate in all sessions.

Ethics & Collaboration: Collaboration among course students and teams is encouraged with work related to team projects. Violation of academic honesty with respect to individual work and deliverables will not be tolerated. Please review Policies & Codes of Conduct at PSU.

Written Materials: Use standard fonts (e.g. Arial, Calibri, Times New Roman) of 10 points, single space, 1” margins, and numbered pages. Only MS Word documents will be accepted.

Presentations: Only PowerPoint will be accepted. Please make sure to use a minimalist design that is not too distracting and space wasteful.

Desire2Learn: Log into d2l.pdx.edu using your ODIN name and password. We will use D2L for submissions via drop boxes, grade posting, and distribution of additional reading materials.

Grading
TBA

This is a case-based course and up to 30% will be assigned to class engagement.

Have Fun!