

MGMT 560: Management of Technology

Professor Lyle Ungar

Syllabus

1. The dynamics of technology change

The effect of technology change on business success and failure. Dynamics of technological change: incremental and disruptive. Product life cycles and dominant designs. The learning curve. Technology vision and corporate strategy.

2. Technology forecasting

Different types of technology forecasts and their uses. Why forecasts for new technologies go wrong. What is predictable and what is not. Quantitative forecasting methodology for production costs and product sales. Modeling by comparison with similar products.

HDTV

3. Disruptive technology change

What leads to successful introduction of new technologies; what leads to failures? Issues in the development of new high tech products. The innovators dilemma. Crossing the chasm: Why good companies fail to make the leap. The whole product.

4. Hi Tech marketing

Hi Tech marketing over the technology life cycle.

5. Managing Risk; Scenario planning

Risk and exposure. R & D portfolio management. Real options. The use of scenarios for “planning” in an uncertain world. Risks and rewards of outsourcing. Creating the future instead of forecasting: learning by doing.

Burlington Northern

Amazon

The computerless computer company

6. Conclusions/Presentations

Course Summary. Exam. Student team presentations.

MGMT 560 - Administrivia

Professor:

Lyle H. Ungar
504 Moore
(215) 898-7449
(215) 898-0587 (FAX)
ungar@cis.upenn.edu
<http://www.cis.upenn.edu/~ungar>

Course web site:

<http://www.cis.upenn.edu/~ungar/MGMT560>

See the course web site! Everything is there or on Webcafe.