ETM 527/627: Competitive Strategies in Technology Management

Spring 2013

CONTACT INFORMATION

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Office Hours: Wednesday afternoons or by appointment

Course Overview & Learning Objectives

COURSE DESCRIPTION

ETM 527/627: COMPETITIVE STRATEGIES IN TECHNOLOGY MANAGEMENT is a four-credit, graduate-level course structured around lectures, guest lectures by industry leaders, and historical case studies. This course provides practical tools and approaches, rooted in research and practice, to develop competitive strategies in technology management.

COURSE OBJECTIVES

The objective of this course is to provide the foundation for managers to “think strategically.” There is an abundance of sources that explain the process of developing strategies. This course aims to provide approaches to establish successful strategies when future is unknown and a variety of external drivers will impact the business. A theoretical and practical basis is provided to develop short-term and long-term strategies for competitive advantage in technology-based industries.

An approach of managing technology for a strategic competitive advantage is provided through:

(1) Understanding the general theory and broad external drivers for strategic business planning.
(2) Approaches to integrate technology strategy into business planning.
(3) Learning from practical experience through cases presented and reviewed in the class.

Guest Speakers

The course will be supplemented by weekly talks presented by external speakers. These speakers will typically be industry thought leaders and executives who have executed strategies for large corporations. Each student will select one of the speakers’ topics and provide a written and presentation analysis of the topic.

Confirmed speakers for the Spring 2013 course include:

- Dr. Don Kania: CEO, FEI; Past COO, Veeco Instruments
- Ms. Kathy Stromberg: Director, PECI; Past VP Global Consumer Marketing, HP
- Mr. Dave Howell: Founder & CEO, Avatron Software
• Mr. Mark Schneider: Founder/CEO, Carbon Audio; Past GM/Corporate VP, Kodak and Logitech
• Dr. Kevin Icisin, CTO, Tektronix
• Mr. David Wetchler: Strategist, Office Printing Products, Hewlett Packard
• Mr. James Stewart: CEO, SharperCounsel; Past GM and VP, Hewlett Packard
• Dr. Hossein Alavi: Director, Intel’s Radio Integration Lab; Former visiting professor, University of Toronto
• Mr. Terry Oliver: Chief Technology Innovation Officer, BPA

**TEXTBOOK**


**REQUIRED READINGS**

The weekly assignments will be available early in the quarter. For your benefit an “Assignment Template” will be provided for the reading assignments. The guest speaker final report is due by the end of the term and will include both a 20-min presentation and a written report.

**Preparation**

You will be expected to prepare for class by reading the assigned materials and completing project and group work as assigned. Although you are expected to be familiar with all the concepts and terminology introduced in the readings, you will not be required to memorize detailed information. You must be able to intelligently discuss the patterns, concepts, and strategies described in each chapter of the text. You must also be familiar with the case studies throughout the book. Finally, you are expected to attend the lectures each week, understand the concepts that are presented, and contribute to the class discussion. Material presented during the lecture parallels the text and the historical studies, but frequently contains additional material not covered in these sources.

**Written Assignments**

There are weekly reading assignments from both the text and selected case studies. The written assignment is to be turned in by the beginning of the next class.

**EVALUATION**

The course evaluation will be determined as follows:

- 40% - Individual weekly assigned readings.
- 20% - Presentation of the assignment (teams of two members each).
- 30% - Finals: report and presentation of a selected guest speaker topic.
- 10% - Individual class participation
This course is not about number of pages, hours in class, or number of e-mails. It is about ideas, concepts, and communication; the grade will reflect your ability to understand ideas and communicate them to the rest of the class and to the professor.

**COURSE SCHEDULE**

Class will be held from 5:30 pm to 9:10 pm on Wednesdays in room TBA on the PSU Main Campus. Please check the ETM website for updates.

**ABOUT THE PROFESSOR**

Dr. Ron Khormaei is the President of ADN Management Solutions, LLC which provides Business and Operations consulting to growing technology companies. He is also an Adjunct Professor at Portland State University with courses and research in Technology Management and New Product Development areas. His consulting and classes specifically cover technology strategy, roadmaps, and new product generation. Dr. Khormaei was the General Manager at Lensbaby, the only US manufacturer of lenses for SLR cameras, until mid-2012. He started his career at Planar Systems in Beaverton, Oregon, leading development of advanced displays. After Planar, he held various management roles for 13 years in Hewlett-Packard and led technology developments resulting in numerous consumer and commercial products. His last role at HP was Director of Engineering at company’s OEM Printer Division where he managed a global engineering team of over 100 and multiple external design partners. After HP, Dr. Khormaei became the Director of Engineering at Logitech’s Audio Business. He earned a Ph.D. in Electrical Engineering from Oregon State University in 1995. He has led multidisciplinary development programs, involving global teams, in consumer electronics systems and imaging development areas. He has served on multiple Advisory Boards and taught graduate-level courses at universities including Oregon State, UC-Riverside, and Portland State University. He has been awarded 2012 OSU Academy of Distinguished Engineers recognition, published over 30 papers, and has 7 US patents. Dr. Khormaei has established and led multiple successful external consortia as well as global university and industry partnerships.
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<thead>
<tr>
<th>Date</th>
<th>Week</th>
<th>Lectures</th>
<th>Lecture Theme/Learning Objectives</th>
<th>Assigned Reading</th>
<th>Guest Speakers</th>
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<tbody>
<tr>
<td>4/3</td>
<td>1</td>
<td>Introduction - Chapter 5</td>
<td>Introduces modern strategy theory in the context of effective thinking, strategic planning, and innovation. Multiple schools of strategy theory are compared and contrasted to enable the students a view into their advantages and shortcomings.</td>
<td>(None)</td>
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<td>4/10</td>
<td>2</td>
<td>Strategy Process - Chapter 1</td>
<td>The strategy process is abstracted as a holistic organizational process or system. The process includes strategic thinking, strategic vision, planning scenarios, strategic business models, the strategic plan, and strategy implementations in operational plans. This enables strategists to gain a 360 degree view to execute effective strategic plans</td>
<td>Case Study - Strategy and Technology Discontinuities: Netflix to Split DVD and Web Services</td>
<td>Dr. Hossein Alavi: “Challenges in Managing Innovation” (6:00pm)</td>
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<td>4/17</td>
<td>3</td>
<td>Planning Scenarios - Chapter 4</td>
<td>Planning scenarios are the context for strategy and are described in terms of top-down strategic impacts on the future challenges and opportunities of the organization. The context consists of externalities such as the economy, government, technology, and culture. These must be taken into account for any sound strategy.</td>
<td>Case Study – Comparison of Nokia and Amazon: Market Strategy and Innovation</td>
<td>Mr. James Stewart: “Creating Your Performance Framework”</td>
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<td>4/24</td>
<td>4</td>
<td>Strategic Plan - Chapter 6</td>
<td>A strategic plan implements a strategy based on a strategic vision. Planning and vision are related as the analytic and synthetic aspects of strategy. To fulfill its analytical role, the strategic plan needs to describe the needed actions in terms of means and ends and include planning logic, SWOT analysis, and business plans. This lecture details the sections of the strategic plan with illustrations.</td>
<td>Case Study – As Its Economy Sprints Ahead, China’s People Are Left Behind</td>
<td>Dr. Kevin Ilcisin</td>
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<td>5</td>
<td>Strategic Vision - Chapter 7</td>
<td>Strategic vision is a key aspect of strategy and innovation. The concept of intuitive vision is introduced and its benefits to cope with unanticipated problems and opportunities are highlighted. The role of executive management in setting the vision and sources of the vision are clarified. Strategic vision is decomposed and analyzed as strategic perception, commitment, preparation, and policy.</td>
<td>Case Study – Strategic Re-Engineering at Coats Viyella</td>
<td>TBA</td>
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<td>6</td>
<td>Strategic Business Models - Chapter 3</td>
<td>A comprehensive strategic business model is described for business profitability and competitive advantage. Detailed architectures of alternative strategic business models are presented with inputs and outputs of resources, sales, profits, and capital. The concept of strategic policies matrix is also introduced to represent the business models for business totality.</td>
<td>Case Study – Defending the Eurozone and the Euro Crisis</td>
<td>TBA</td>
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<td>5/15</td>
<td>7</td>
<td>Diversification Strategy - Chapter 12</td>
<td>The concepts of strategic planning are extended to multi-business diversified firms. Examples of business models for a diversified firm are presented for new and mature industries.</td>
<td>Case Study – Google and the competitive web landscape</td>
<td>Mr. Mark Schneider</td>
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<td>Week</td>
<td>Location</td>
<td>Description</td>
<td>Case Studies</td>
<td>Presenter</td>
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<td>Knowledge Assets - Chapter 13</td>
<td>Significant competitive advantage can be gained through technological innovation and developing knowledge as a business asset. Multiple perspectives of knowledge, financial, operations, and customer perspectives are considered and the multipath flows described for business success.</td>
<td>Case Studies – (1) China, (2) MF Global</td>
<td>Mr. Terry Oliver</td>
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<td>5/29</td>
<td>9</td>
<td>Operations &amp; Control - Chapter 10</td>
<td>Strategy must translate to operations. This course extends the strategic planning model to a holistic managed system for operations and control. The operations model includes all three dimensions of managed systems: transformation, support, and control. Extensive examples for services and products are provided detailing the interactions amongst the dimensions. The students can easily adapt these examples to a variety of industries for their own use and strategy.</td>
<td>Case Studies – (1) Brazilian Science, (2) Google Lab</td>
<td>Dr. Don Kania</td>
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<td>6/5</td>
<td>10</td>
<td>Summary</td>
<td>The course summary is presented in this last lecture.</td>
<td>Presentations on guest speaker topic by each student</td>
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<td>6/12</td>
<td>11</td>
<td>Guest Speaker Analyses</td>
<td>Students to present their analysis—situation, options, pros, cons, and recommendations—of one self-selected guest speaker topic.</td>
<td>Presentations on guest speaker topic by each student</td>
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