

**The Peter F. Drucker and Masatoshi Ito Graduate School of Management
MGT 414: Marketing of High-Technology Products and Innovations**

Dates/Time: June 23-26, 2008 Mon-Wed. 12:30-6:00 p.m.; Thurs., 9:00 a.m. to 1:30 p.m.

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Web 2.0, alternative fuels/vehicles, biotechnology, mobile technologies, computer gaming, RFID chips, computer hardware, software, telecommunications, consumer electronics...these are but a few of the exciting technologies that this course will address!

Course Objectives: Marketing of high-technology products occurs in turbulent environments, and requires rapid decision making with incomplete information. Innovations are introduced at frequent intervals, research-and-development spending is vital, and there are high mortality rates for both products and businesses.

This class will explore concepts and practices related to marketing in this unique, fast-paced environment, including the following:

- Unique marketing research tools used to uncover customer needs and to develop break-through innovations;
- Customer behavior issues in high-tech markets, including factors affecting adoption, the “chasm” in the adoption/diffusion process of break-through innovations, and special considerations in segmentation, targeting, and positioning for high-tech firms.
- Product/Technology management considerations (including managing high-tech services);
- Intellectual property concerns;
- Distribution channels and supply chain management for high-tech companies;
- Pricing strategies that are appropriate when R&D costs are high, yet downward pressure on prices make margin-recovery problematic;
- Advertising and promotion strategies to create strong brands.

A brief review of the defining characteristics of high-technology industries, types/patterns of innovation, and strategy/culture in high-tech firms will be provided (i.e., concepts from Innovation Management), as will a brief review of market orientation and strategic alliances.

Rather than focusing on a specific high-technology industry, the class is designed to explore a range and diversity of industries and contexts. However, because a large majority of high-tech products are used by business customers (as opposed to consumers in personal households), many of the underlying principles for this class will draw from theories of *business-to-business marketing*, modifying them as appropriate for the high-tech environment. Issues for both small and big business will be addressed.

The course will provide a balance between conceptual discussions (based on readings of concepts and practices) and applied/hands-on analysis.

Course Materials:

Book: Mohr, Jakki, Sanjit Sengupta, and Stanley Slater (2005), *Marketing of High-Technology Products and Innovations*, Upper Saddle River, NJ: Prentice Hall.
See www.markethightech.net

Course Readings: Three-four articles from the popular business press and *Harvard Business Review*, as appropriate. I will have these available by early June.

Note: I will post a set of powerpoint slides as a structure for what we will cover during the week. This will be the best way to facilitate your advance preparation for class participation, by jotting down some thoughts/ideas/reactions/questions/examples on these slides as you do your pre-course reading. In addition, it will be very helpful to you for your exam. See also the note on pre-reading/preparation at end of the tentative agenda.

Pre-Requisite: The pre-requisite for this course is a Principles of Marketing course. Because we will be discussing how basic marketing concepts and practices are adapted for and used in a high-tech environment, basic knowledge of these marketing concepts is required. Please see me if you lack this basic knowledge. Moreover, the first 4 chapters of the book will be covered in a rather cursory manner; students must come to class with this material "under their belt," so to speak.

Educational Philosophy: "I hear and I forget; I see and I remember; I do and I understand"
--Chinese Proverb

This statement captures my educational philosophy very well. I believe that a classroom environment which stimulates active learning will enhance understanding, retention, and future utilization of the material. As such, this course will utilize a variety of tools designed to facilitate the "doing" component of learning. I see my role as the facilitator of student learning. It is the student's job to actively participate, to be involved, to come to class prepared to learn.

Course Requirements: (Each is explained below in detail)

Class Participation	20%
Current Events Write-up/ Presentation	15%
Case Briefs	25%
Take-Home Exam	40%

Exam: The exam will assess both factual knowledge about the readings and material covered during the week-long course, as well as your ability to integrate, synthesize, and critically interpret the material. Other questions will be application in nature, asking you to apply your knowledge to analyze and solve a particular firm's marketing problems.

Exam Due Date: Monday, July 7th, 12:00 noon. Please submit your exam electronically to my email address as a Word attachment. I will confirm receipt of each email individually. If you have not received a confirmation email from me, it means your email did not go through, and you should contact me by phone immediately (cell = 406-544-5837). Fax is a good alternative! (406-243-2086). I do not accept late work under any circumstances. It is not fair to me, you, or your classmates.

Class Contribution: In order to stimulate active learning, class time will include student input and discussion. Obviously, the quality of a discussion class is a function of the quality of each student's preparation. *I am most interested in your ability to demonstrate learning of class concepts* (from the readings), which could include:

- description/elaboration on concepts in readings (for example, see suggested discussion questions at end of each chapter),
- an application of class concepts to current events (i.e., show how class concepts relate to current events, or analyze current events in terms of class concepts), and/or
- a critical assessment of class concepts (i.e., conditions under which they would be more or less useful, and why).

Because we are here for the purposes of learning, it is entirely appropriate to ask provocative questions as part of the learning process.

My evaluation stresses the thoughtful, meaningful contributions to class discussions and not the quantity of participation per se. Quality contributions are based on:

- the quality of the insights exhibited,
- the student's ability to maintain continuity of discussion (i.e., pays attention to existing discussion/prior comments)
- answering follow-up questions (which requires some degree of thought about the material—above and beyond mere reading—prior to class).
- your contribution to the spirit of the class (contributes to a positive learning environment).

Current Events Write-up/Oral Presentation: The objective of the assignment is for each student to link concepts we are learning in class to an actual company/technology example through seeking out a current article and writing a one-page summary (see below). Some students will be selected (randomly) to present their analysis in class (please plan for about 5 minutes—no more).

A sign-up sheet will be passed two weeks prior to the start of class. Each student will select a day on which they will submit a copy of their article and their 1-2 page written analysis in the morning, one hour prior to the start of class. *Any student who wishes to submit their analysis (and if randomly selected, give their presentation the first day of class) may contact me in advance—and I thank you for volunteering!*

Grading will be based on: specific tie to class concepts (clear elaboration, accuracy in applying the material); critical insight; communication skills.

Each student should find an article in the popular business press or industry trade journal that provides a current example of a high-tech company/technology and its marketing/business strategy (any link to relevant class concepts). I do not recommend reviewing an article that provides a generic list of concerns on a particular topic (i.e., 10 things to consider in high-tech branding).

Each student will write a one-page summary with the following:

- a. provide a brief summary of the article (1 paragraph)
- b. specifically identify and discuss how the article relates to 1-2 class concepts (2 paragraphs)
- c. provide a critical analysis of whether or not the strategy described in the article is being appropriately used, given your understanding of the strategy based on class concepts (1-2 paragraphs). For example, you may come to the conclusion that IBM needs to

work on its customer relationships by improving communication with its dealers, and merely advertising its commitment to a customer-focus will be insufficient.

In your critical analysis, please show an ability to offer specific suggestions for improvement, based on the class concepts you have identified in (b) above.

Case Brief: Two weeks prior to class, a list of possible high-tech company case scenarios and corresponding due dates (during the week) will be posted. Students will work in groups of 2-3 students, and each team will select one case scenario to analyze. Each team will submit a case brief at the start of class, which includes a 2-3 page analysis of your recommended course of action. For each case brief, identify the key problem(s) that need to be solved. Articulate and justify (based on class concepts) the best solution to each problem. Be sure to recognize any down-side risks and a mitigation plan for those risks. What are the key issues for the firm to successfully implement your recommendation? If applicable, attach an appendix with supporting documentation (tables, figures, quantitative analysis) to support your decision. Note: The discussion questions are provided as a starting point for your analysis; they are meant to point you in the right direction for your analysis. Merely answering the questions will not constitute an acceptable write-up.

The case brief should be 2-3 pages in length (exclusive of supporting appendices), free of spelling and grammatical errors, font size 12 with one inch margins on all sides.

Each student is required to complete a peer evaluation form. You will be asked to rate the contribution of your group members, including yourself. The peer evaluation scores will be used in determining how many points each member receives for his/her contribution to the group project.

Course Grading: I grade on a normal curve. Your final letter grade in the class is based upon the distribution of total points at the end of the class.

Tentative Outline of Days/Topics

Chapter

Monday, June 23rd

12:30-2:15	Introductions Review: Characteristics of High-Tech Environment	1
2:30-4:00	Review: Strategy/ Corporate Culture in High-Tech Firms	2
4:15-6:00	Review: Relationships/Alliances in High-Tech Firms Application Reading on technology trends (TBA)	3 (1 st half)

Tuesday, June 24th

12:30-2:15	R&D/Marketing Interaction	4(2 nd half)
2:30-4:00	High-Tech Marketing Research Tools	5
4:15-6:00	Customer Behavior Issues in High-Tech Markets	6

Wednesday, June 25th

12:30-2:15	Product/Technology Development/Management	7
2:30-4:00	Distribution Channels in High-Tech Markets	8
4:15-6:00	Continued, and Application reading on technology/marketing trends (TBA) Drucker, Peter (1985), “The Discipline of Innovation,” <i>Harvard Business Review</i>.	

Thursday, June 26th

9:00-10:30	Pricing Considerations in High-Tech Markets	9
10:45-12:00	Advertising and Promotion	10
12:00-12:30	Lunch	
12:30-1:30	Summary and Wrap-up, Course Evaluations	

Monday, July 7th, 12:00 noon. **Final Exam Due**

Class textbook pre-reading/preparation: To prepare for class, I STRONGLY recommend that you write-out the answers to the discussion questions at the end of each chapter. ***This will:***

- ❖ Aid you immensely in class discussion each day—particularly if you prepare very far in advance, it is a good memory jog the night before class;
- ❖ Aid you in exam preparation. That way, when you go to write your exam, you will be ready to go.

** Please use the posted Powerpoint slides as a tool to know what I will cover/emphasize from each chapter. **

Discussion Questions for Article/Cases

Drucker, Peter (1985), “The Discipline of Innovation,” *Harvard Business Review*.

1. For each of the 7 kinds of innovation, please identify and describe a current example from the high-tech arena.
2. What are the specific marketing implications that arise from the ideas regarding innovation in this article?

Self-Evaluation of Class Participation
(Due Thursday, end of class)

Name:

1. Please assign yourself a participation grade based on a 100-point scale:

My Score: _____

What did you think was very good with respect to your participation record? Please be quite specific!

In hindsight, what might you have done to have a better participation record?

Peer Evaluation Form—Case Work

Please specify (in terms of percentages) the relative allocation of work/effort/commitment that you and your partner(s) devoted to your case. The percentages must sum to 100%. For example, if you and each of 2 partners devoted an equal amount of effort to the project, assign each of the 3 of you 33.33%.

	Percentage Allocated
My Name: _____	_____
Partner1: _____	_____
Partner2: _____	_____
Total	100%