New Products Management—Joint Course MKTG & ETM  Fall 2008--Draft

**MKTG 548: New Products Management**
**EMGT 510/610 FEM: Front End Management for New Product Development**

Fall Term 2008  
Tuesday, 1740-2120  
SBA 290

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|                   | http://antonie.jetter.googlepages.com  

**STUDENT ELIGIBILITY:**

*MKTG 548 New Products Management* (4 Credits) is an elective course in the MBA program. Students must be an admitted MBA student to take this course. MS and Ph.D. students from approved graduate programs are eligible to take the course as well. *EMGT 510/610 FEM Front End Management for New Product Development* (4 Credits) is an elective course in the Engineering and Technology Management program.

**JOINT COURSE DESCRIPTION:**

For Fall Term 2008 the Marketing Area of the School of Business and the Engineering and Technology Management program continue their collaboration in order to offer students from both graduate schools the opportunity to work together to explore new products management from a perspective that integrates marketing and engineering management concepts.

**EMGT 510/610 FEM.** The focus of Front End Management for New Product Development has been on the very early phases of new product development – ideation, concept development and concept evaluation. These phases are often referred to as the “fuzzy front end” of innovation since they involve the often ill-structured decisions that are made under great uncertainty. Though it is widely accepted that the front end is vital for product success, many managers rely on “gut feel” rather than analytic decision making and even doubt that the front end can be managed at all. This course takes a different viewpoint and introduces students to the various questions managers face in early product development, as well as to systematic approaches to dealing with them.

**MKTG 548.** Traditionally, *New Products Management* examines the role of product innovation as the core focus of marketing strategy. The course encompasses the entire new products management process from the identification of the market need through planning for commercialization. The topics focus on marketing role in the design and development of new products including opportunity identification, concept generation/evaluation, development, and launch.

This joint course that integrates advanced concepts from marketing and technology management will provide the student with a strong foundation for future contributions to the field of new product development from both practitioner and academic perspectives. The course is intended to serve as a
complement for courses in product design and development, technology marketing, and services marketing.¹

LEARNING GOALS:

New Products Management (as the joint course) is focused on the issues that confront the senior product management and marketing executives as they address aligning innovation with the dynamics of the marketplace. It is the primary objective of the course to provide students with an applied understanding of the product innovation and management process. The course will cover:

1. The product development process as it applies across a broad range of firms that develop and/or use technology as a core element in their value propositions.
2. Understanding of front-end innovation management concepts.
3. The use of customer value concepts in product design.
4. The tools used in new products management.

ASSIGNMENTS:

1. READINGS

Please refer to the book and article reading assignments listed in the Weekly Outline. In addition, students are encouraged to regularly read the technology section of publications such as the Wall Street Journal, the Economist, Financial Times, Business Week and other leading publications with new products and products management coverage. Students should complete all weekly reading assignments prior to class time and be prepared to discuss the material.


Choose a topic that focuses on an NPM issue, process method, or strategy and develop a well-researched academic or practitioner oriented paper. The paper should survey both the academic and business periodical literature. Doctoral students may wish to focus on NPM topics that are related to their dissertation research.

Standard practice is to address this project as a two or three person team. You may, subject to instructor approval, propose a project on an individual basis (especially for doctoral students). Due to presentation time limitations in week 10, is anticipated that no more than 10-11 teams will be formed.

Deliverables:

a. Project Proposal (Due Week 2). Develop a two-page précis that identifies and describes your topic. Briefly explain its importance to the advancement of the understanding of new products management. Construct a tentative bibliography with at least five (05) sources. Subject to instructor approval.

b. Midterm Draft Submission (Due Week 6—50 pts). Prepare a written article of academic journal quality (approximately 12-15 single-space pages plus exhibits and bibliography) for the chosen topic. You may use the manuscript style of the Journal of Product Innovation Management or the Journal of Marketing for your work.

c. Knowledge Notebook (Check Week 6, Final Due Week 11—25 pts). The Knowledge Notebook is the data warehouse for your paper. It is a valuable tool to organize and document your research project. Build a first version at the beginning of the quarter and continuously improve it. The final version needs to be submitted electronically on a CD-R. It should contain the following folders:

¹ As we continue to develop this collaborative course, changes to the syllabus may occur. As always, your comments and suggestions for improvement are welcome and greatly appreciated!
i. **Knowledge Summary**
   - Summary of the issue, process or NPM strategy
   - Key research questions and issues.
   - New Ideas and implications
   - Research findings
   - Potential applications

ii. **Research Taxonomy**
   - Paradigms, research streams
   - Key research findings
   - Key relationships
   - Taxonomy chart

iii. **Working Bibliography**
   - Bibliography in journal format
   - Summaries and annotations of individual articles

iv. **Source Material**
   - Copies of important source material keyed to the bibliography.

v. Individual team member folder with reviews of assigned articles (03) and other individual contributions.

d. **Final Presentation and Submission of the Term Project**
   i. **Class presentation (Due Week 10—25 pts)**. A short (10-15 minute max) PowerPoint presentation of the key findings of your term research project is required. The PowerPoint is limited to no more than 12 slides covering the following:
      - Title Slide
      - Introduction to the topic.
      - Literature review—key paradigms, research streams, taxonomies, and research findings from the existing literature.
      - Research questions.
      - Models, cases, and/or implementation examples
      - Analyses and results.
      - Recommendations.
      - Future research.
   
   ii. **Revised Project (Due Week 11—100 pts)**. Review comments will be provided on the midterm draft and your presentation. Make the revisions and resubmit your final project.

3. **OTHER ASSIGNMENTS**

   a. **Reading Briefs (15-pts each—45 pts total)**. A 2-page (max), single spaced, reading brief is required for three (03) of the articles on the reading list (your choice). Reviews are due the following week after they are assigned in the Weekly Outline. **No more than one review per person may be submitted in any given week.** **Be prepared to lead/participate in class discussion on all articles.**

   Reading briefs consist of the following 6 chapters

   i. **Title**: Full article citation, article number according to reading list, your name, course number, date.
   
   ii. **Article Overview / Abstract**: Briefly summarize the thesis, goals, findings and conclusions of the work (30% of space).
   
   iii. **Key Learning Points**: What are the key learning points / main findings of the article? Identify, define, and critically assess—a simple summary is not sufficient (30% of space).
   
   iv. **Follow-On Research**: What other work has been done in this area since the publication of the article? Compare and contrast critically. Include follow-on article(s) citation(s) under “References” at end of the review. Research the topic on PSU Library online (20% of space).
   
   v. **Applications**: What insights from the article apply to the new products management process as discussed in class? (20% of space).
vi. References: in journal format

b. NPD Tool Box Presentations (PPT only—50 pts). Tool Box Presentations (TBP) are presentations on tools and methods that are used to manage the new products management process. TBPs topics are listed in the Weekly Outline. The following is required:

i. Tool description. A clear and comprehensive description of the new products management method or tool.
ii. Applications for the method or tool. Illustrative examples and/or case studies from practice.
iii. Relationship with other methods or tools. Contrast with other tools or methods that could be used for similar applications. Does your tool or method complement any other tools or methods?
iv. Critical assessment. What are the pros and cons for using the method or tool in different application environments?
v. Conclusions.
vi. References.

A good toolbox presentation enables informed decisions about what method or tool to choose in a given situation and how to apply it. Presentations are based on a thorough literature review. Please see Addendum 1 to the syllabus. **TBPs are scheduled to last for 20 minutes (sharp) with 10 minutes Q&A.**

Please email your PowerPoint to the instructors and bring sufficient handouts (6 slides per page) for class distribution.

CLASS CONTRIBUTION:

Class contribution will be evaluated by each student’s performance on class attendance and cogent participation in class discussions (100 pts).

GRADING PROCEDURES:

A numerical grade will be assigned to each of the activities delineated below. The activity grades will be averaged in order to produce a final grade based on the following standards:

<table>
<thead>
<tr>
<th>Assignment/Activity</th>
<th>Points</th>
<th>Grading</th>
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<tbody>
<tr>
<td>Research Project—Proposal (Week 2)</td>
<td>-</td>
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<tr>
<td>Research Project—Midterm Draft Submission: (Week 6)</td>
<td>50</td>
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<tr>
<td>Research Project—Presentation (Week 10)</td>
<td>30</td>
<td></td>
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<tr>
<td>Research Project—Final Draft (Week 11)</td>
<td>100</td>
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<tr>
<td>Knowledge Notebook CD</td>
<td>25</td>
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<tr>
<td>Article Reviews (3 @ 15-pts each)</td>
<td>45</td>
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<tr>
<td>Tool Box Presentation (TBP)</td>
<td>50</td>
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<tr>
<td>Your class contribution (attendance + discussion, etc.)</td>
<td>100</td>
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<tr>
<td>Total</td>
<td>400</td>
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Grades will be assigned in increments of A, A-, B+, and so on. An average of 92.5 points or greater = A.
CLASS POLICIES:

a. Academic honesty is a requirement for passing this course.
b. Late papers are not considered without a valid medical reason. If you cannot attend class when an assignment is due, please make arrangements for its timely delivery.
c. Assignment submissions should be in hardcopy form. Word, PowerPoint, and Excel are standard. Emailed copies of assignments are not acceptable unless specified.
d. No recording device whatsoever may be used in this class without instructor approval.
e. All materials for this class are for your personal and private use only. They may not be posted or transferred to others under any circumstances.
f. Computers may be used for class purposes. No email, other online communications, or web surfing are permitted during class time.
g. If you have a special need, please notify the instructors.

ASSIGNED NEW PRODUCTS MANAGEMENT ARTICLES (See Weekly Outline)

**WEEKLY OUTLINE:**

<table>
<thead>
<tr>
<th>Week</th>
<th>Dr. Jetter Lecture Topics</th>
<th>Dr. Harmon Lecture Topics</th>
<th>Readings/Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction&lt;br&gt;The Fuzzy Front End&lt;br&gt;Importance of the “Fuzzy Front End” (FFE)&lt;br&gt;The FFE defined&lt;br&gt;Empirical findings about the FFE – the state of the art</td>
<td>Introduction to customer-value focused NPD&lt;br&gt;NPD customer value orientation&lt;br&gt;NPD process overview</td>
<td>Read:&lt;br&gt;• NPM: 1 &amp; 2&lt;br&gt;• Articles: #5 (Khurana &amp; Rosenthal)&lt;br&gt;• Syllabus / Assignment of “TBPs”</td>
</tr>
<tr>
<td>2</td>
<td>Opportunity Identification&lt;br&gt;Product Innovation Charter (PIC)&lt;br&gt;Product platform issues&lt;br&gt;NPD Policy Issues&lt;br&gt;Politics and Regulation&lt;br&gt;Product liability, environment, ethical issues</td>
<td></td>
<td>Read:&lt;br&gt;• NPM: 3 &amp; 20&lt;br&gt;• Articles: #6 (Koen et al.). #11 (Skold and Karlsson)&lt;br&gt;Turn in:&lt;br&gt;• Project topic proposal</td>
</tr>
<tr>
<td>3</td>
<td>A brief review of “Strategic Management”&lt;br&gt;Product and Portfolio Strategy&lt;br&gt;Scenario planning + Scenario planning class exercise</td>
<td></td>
<td>Read:&lt;br&gt;• NPM: pp. 119-123; 516-517&lt;br&gt;• Articles: #8 (Schoemaker)</td>
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<tr>
<td>4</td>
<td>Concept Generation&lt;br&gt;Market pull / Technology push&lt;br&gt;Collecting existing product ideas&lt;br&gt;Identifying technological opportunities&lt;br&gt;Sources of new product ideas&lt;br&gt;– Lead User Method&lt;br&gt;– Ethnography/Emphatic Design</td>
<td>Understanding What Customers Want&lt;br&gt;Measurement Approaches&lt;br&gt;Identifying customer needs&lt;br&gt;Value analysis</td>
<td>Read:&lt;br&gt;• NPM: 4 &amp; 5 + pp. 509-514&lt;br&gt;• Articles: #12 (Veryzer and de Mozota)&lt;br&gt;Present:&lt;br&gt;• TBP #1 (Lead User Method)&lt;br&gt;• TBP #2 (Ethnography/ Empathic Design)</td>
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<td>5</td>
<td>Concept/Project Evaluation&lt;br&gt;The concept evaluation system&lt;br&gt;Cumulative expenditures curve&lt;br&gt;ATAR model&lt;br&gt;The Full Screen&lt;br&gt;Portfolio management&lt;br&gt;Multi-criteria approaches&lt;br&gt;Indices&lt;br&gt;Managerial judgment&lt;br&gt;The scoring model</td>
<td>Concept Testing&lt;br&gt;Definitions&lt;br&gt;Market analysis activities&lt;br&gt;Benefit segments&lt;br&gt;Valuing the concepts&lt;br&gt;Sales Forecasting and Financial Issues&lt;br&gt;Product Protocol&lt;br&gt;Customer requirements&lt;br&gt;Engineering characteristics</td>
<td>Read:&lt;br&gt;• NPM: 6 &amp; 7&lt;br&gt;• Articles: #10 (Schreier and Prugl)&lt;br&gt;Present:&lt;br&gt;• TBP #3: Perceptual Mapping&lt;br&gt;• TBP #4: Value Engineering</td>
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<td>6</td>
<td>11/4/08</td>
<td></td>
<td>Read:&lt;br&gt;• NPM: 8-12&lt;br&gt;• Articles: #2 (Cooper, R., et al.), #9 (Schmidt and Druehl), #1 (Armstrong &amp; Brodie)&lt;br&gt;Present:&lt;br&gt;• TBP #5: TRIZ&lt;br&gt;Turn in:&lt;br&gt;• Midterm paper (draft)</td>
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WEEKLY OUTLINE (Cont’d)

<table>
<thead>
<tr>
<th>Week</th>
<th>Dr. Jetter Lecture</th>
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<th>Readings/Assignments</th>
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<tr>
<td>7 11/11/08</td>
<td>Veteran’s Day Holiday University Closed</td>
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</tbody>
</table>
| 8 11/18/08 | Development Team Management (Ch. 14)  
- Team structure  
- Projectization  
- Team building  
- Culture  
- Managing the team  
- Overcoming barriers  
- Globally dispersed teams | Design  
- Meeting NPD goals  
- Ecological design  
- User-oriented design  
- Intangible design factors  
Product Use Testing | Read:  
- NPM: 13-15  
- Articles: #4 (Ettlie and Kubarek), Article: #7 (Reid & Brentrani)  
Present:  
- TPB #6: Open Innovation  
- TPB #7: User-Centered Design  
- TPB #8: Ecological Design |
| 9 11/25/08 | Implementation of the Strategic Plan (Ch 17)  
- Launch cycle  
- Launch tactics  
- Alliances  
- ATAR requirements | Market Testing  
Launch Management | Read:  
- NPM: 16-19  
Article: #3 (Danneels)  
Present:  
- TPB #9: Value Networks  
- TPB #10: New Service Development Models |
| 10 12/2/08 | Final Project Presentations | | Present:  
Final Projects |
| 11 12/9/08 | Finals Week | | Hand in:  
Written final projects due |
ADDENDUM 1:

TPB Assignments and Suggested Sources

All source material is available in the textbook, course readings and in follow-on research from the PSU library in electronic format. Some suggestions for your reading are indicated below. For the presenting teams additional literature survey is required.

TPB1—Lead User Method
- NPM p 97

TPB2--Empathic Design / Ethnography
- NPM p. 111 on Observation

TPB3—Perceptual Mapping
- NPM pp. 129-139
- NPM pp. 201-203 (Joint space maps)

TPB4—Value Engineering
- www.value-engineering.com
- www.npd-solutions.com

TPB5—TRIZ
- http://www.triz-journal.com
- www.triz.org
- www.innovation-triz.com

TPB6—Open Innovation
- www.openinnovation.net

TPB7—User-Oriented Design
- www.user-centereddesign.com

TPB8—Ecological Design
• Shina, Sammy (2008), Green Electronics Design and Manufacturing, Boston: McGraw-Hill
• http://www.bioneers.org/ecodesign

TBP9—Value Networks
• http://www.santafe.edu
• http://www.value-networks.com

TBP10—Models for New Service Development
• http://www.almaden.ibm.com/asr/SSME/
• http://wpcarey.asu.edu/csl

ADDENDUM 2:

Recommended Periodicals and Journals:

| MIT Technology Review | Electronic Business | Electronic Markets |
| Journal of Marketing | R&D Management | Business Week |
| Journal of Marketing Research Visions (PDMA) | PC Magazine | Long Range Planning |
| Research-Technology Management | Research Management | IEEE Transactions |
| Harvard Business Review InformationWeek | Business 2.0 | Planning Review |
| | IEEE Spectrum | Foreign Affairs |
| | The Economist | The Futurist |

Recommended NPM Books:


Sun Tzu (5th Century B.C.), *The Art of War*, Translated by Thomas Cleary (1988), Shambala Publications


Recommended NPM/FEM articles:


