

NEW PRODUCT DEVELOPMENT & INNOVATION

Course Syllabus

1. General Information

Course name: New Product Development & Innovation

Course code: MAR

Number of credits: 3

Faculty: Marketing

Instructors:

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2. Objectives

The primary objective of this course is to prepare students to function as effective innovation and new product managers. In this course, students will learn to understand how firms can improve the way they manage their innovation processes to develop new products and services and keep abreast of the most recent developments in the innovation field.

3. Abstract

This course provides students with an in-depth understanding of new product development and innovation using a management framework. It focuses on how to successfully manage new product development in business context and how to create value and growth through innovation in new and existing markets. Students will examine the process of developing new products and many of the new product management issues faced by companies; explore the concepts, methods and tools on how to organize and manage innovation process in business context. In this course, students will also examine the role of operations and its management for improvement in new product development as well as the relationship between new technology and the market is examined within the diffusion of innovations and market adoption.

4. Teaching and learning methods

Lectures: 34h

In class discussion & practice: 10h

Individual reading: 1h

5. Prerequisites

Principles of marketing; Strategic marketing

6. Learning Outcomes

On successful completion of this unit a student will:

1. Understand the overview of new product development
2. Understand how to manage the new product development
3. Understand the overview of innovation in business context
4. Understand how to manage innovation within firms
5. Understand the role of operations and its management for improvement in new product development
6. Understand the relationship between new technology and the market is examined within the diffusion of innovations and market adoption

7. Assessment Criteria

Learning outcomes <i>On successful completion of this unit a student will:</i>	Assessment criteria for pass <i>The student can:</i>
LO1. Understand the overview of new product development: an overview	<ul style="list-style-type: none">- Explain definitions of new product from marketing perspective- Understand the nature and role of new product development from a strategic marketing and management perspectives- Explain why new product development is considered as a strategy for growth- Understand the overview of new product management theories- Market research and its influence on new product development
LO2. Understand how to manage the new product development	<ul style="list-style-type: none">- Examine the key activities of the new product development process- Explain that a product concept differs significantly from a product idea or business opportunity- Explain new product development across different industries- Explain how organizational structures and cross-functional teams affect the new product development- Explain challenges for the new product development
LO3. Understand the overview of innovation in business context	<ul style="list-style-type: none">- Explain definition of innovation and describe the changing view of innovation over time- Understand the importance of innovation in today business context- Explain the relationship of innovation and R&D and new product development- Explain different models of innovation- Recognize the need to view innovation as a management

Learning outcomes <i>On successful completion of this unit a student will:</i>	Assessment criteria for pass <i>The student can:</i>
	process
LO4. Understand how to manage innovation within firms	<ul style="list-style-type: none"> - Identify the factors organizations have to manage to achieve success in innovation - Explain the dilemma facing all organizations concerning the need for creativity and stability; - Recognize the difficulties of managing uncertainty; - Identify the activities performed by key individuals in the management of innovation; - Recognize the relationship between the activities performed and the organizational environment in promoting innovation.
LO5. Understand the role of operations and its management for improvement in new product development	<ul style="list-style-type: none"> - Recognize the importance of innovation in operations management - Recognize the importance of sales volume in product design - Recognize the importance of design in the process of making and delivering a product or service - Appreciate the different relationships between product and process innovation - Recognize that much innovation is not patentable - Provide an understanding of a number of approaches to design and process management.
LO6. Understand the relationship between new technology and the market is examined within the diffusion of innovations and market adoption	<ul style="list-style-type: none"> - Illustrate how the diffusion of innovation theory influences consumer adoption of products and services - Identify and discuss the technical, financial and organizational obstacles that have to be overcome to bring an invention to the market - Explain innovation and diffusion as ongoing processes with a range of factors affecting success at each stage - Recognize the role marketing plays in the early stages of product innovation - Explain how market vision helps the innovation process - Understand how the pattern of consumption influences the likely success or failure of a new product.

8. Outlines

Chapter 1. Overview of the new product development

1.1. Definition

1.2. New product development from a strategic marketing and management perspectives

1.3. New product development as a strategy for growth

1.4. New product management theories

1.5. Market research and its influence on new product development

Chapter 2. Managing new product development process

2.1. Key activities of new product development process

2.2. New products as project

2.3. New product development across different industries

2.4. Organizational structures and cross-functional teams

2.5. Challenges for the new product development

Chapter 3. Innovation in business context

3.1. Definition of innovation

3.2. Importance of innovation in today business context

3.3. Innovation, R&D and new product development

3.4. Models of innovation

3.5. Innovation as a management process

Chapter 4. Managing innovation within firms

4.1. Organizations and innovation

4.2. The dilemma of innovation management

4.3. Dynamic capabilities and managing uncertainty

4.4. Managing innovation projects

4.5. Organizational structures and innovation

4.6. Management tools for innovation

Chapter 5. Operations and process innovation

5.1. Operations management and importance in for improvement in new product development

5.2. The nature of design and innovation in the context of operations

5.3. Process design

5.4. Process design and innovation

5.5. Innovation in the management of the operations process

5.6. Design of the organization and its suppliers: supply chain management

Chapter 6. Market adoption and technology diffusion

6.1. Time lag between innovation and useable product

- 6.2. Innovation and the market
- 6.3. Crowdsourcing for new product ideas
- 6.4. Frugal innovation and ideas from everywhere
- 6.5. Innovation diffusion theories

9. Required Textbook

Trott, P. (2021), *Innovation Management and New Product Development*, 7th edition, Pearson

10. Suggested Textbooks

Staler, M.S (2014). *Marketing of High-Technology Products and Innovations*, 3th Edition. Pearson

11. Schedule

Slot	Main contents	Specific contents and activities	Student's tasks
1	Chapter 1. Overview of the new product development	<ul style="list-style-type: none"> • <i>Course Introduction</i>: outline and schedule, assessment overview, course materials and guide on assignments, assessment criteria • Definition • New product development from a strategic marketing and management perspectives <u>Activity</u> <ul style="list-style-type: none"> • Answer students' questions about the course's overview 	Before class: <ul style="list-style-type: none"> • Reading the course's syllabus • Reading <i>the required textbook</i>, pp. 416-451
2	Chapter 1. Overview of the new product development (cont.)	<ul style="list-style-type: none"> • New product management theories <u>Activity</u> <ul style="list-style-type: none"> - Discuss the practice of new product development in Vietnamese firms 	Before class: <ul style="list-style-type: none"> • Reading <i>the required textbook</i>, pp. 416-451
3	Chapter 1. Overview of the new product development (cont.) Group Assignment Coaching	<ul style="list-style-type: none"> • Market research and its influence on new product development • Group assignment coaching • Review of contents of group assignment • Answer students' questions on group assignment 	Before class: <ul style="list-style-type: none"> • Reading <i>the required textbook</i>, pp. 454-475

Slot	Main contents	Specific contents and activities	Student's tasks
4	Chapter 2. Managing new product development process	<ul style="list-style-type: none"> Key activities of new product development process <u>Activity</u> <ul style="list-style-type: none"> Discussing possible gaps in new product development process 	Before class: <ul style="list-style-type: none"> Reading <i>the required textbook</i>, pp. 416-451
5	Chapter 2. Managing new product development process (cont)	<ul style="list-style-type: none"> New products as project New product development across different industries <u>Activity</u> <ul style="list-style-type: none"> Discussing high attrition rate of new products 	Before class: <ul style="list-style-type: none"> Reading <i>the required textbook</i>, pp. 416-451
6	Chapter 2. Managing new product development process (cont.)	<ul style="list-style-type: none"> Organizational structures and cross-functional teams Challenges for the new product development <u>Activity</u> <ul style="list-style-type: none"> - Discussing challenges for the new product development in Vietnamese context 	Before class: <ul style="list-style-type: none"> Reading <i>the required textbook</i>, pp. 416-451
7	Chapter 3. Innovation in business context	<ul style="list-style-type: none"> Definition of innovation Importance of innovation in today business context <u>Activity</u> <ul style="list-style-type: none"> Discussing different perspectives of defining innovation and related concepts 	Before class: <ul style="list-style-type: none"> Reading <i>the required textbook</i>, pp.2-46
8	Chapter 3. Innovation in business context (cont.)	<ul style="list-style-type: none"> Innovation, R&D and new product development Models of innovation <u>Activity</u> <ul style="list-style-type: none"> Discussing the practice of innovation in Vietnamese context 	Before class: <ul style="list-style-type: none"> Reading <i>the required textbook</i>, pp.2-46
9	Chapter 3. Innovation in business context (cont.)	<ul style="list-style-type: none"> Innovation as a management process <u>Activity</u> <ul style="list-style-type: none"> Discussing new skills for managing innovation 	Before class: <ul style="list-style-type: none"> Reading <i>the required textbook</i>, pp.2-46

Slot	Main contents	Specific contents and activities	Student's tasks
10	Chapter 4. Managing innovation within firms	<ul style="list-style-type: none"> Organizations and innovation The dilemma of innovation management Dynamic capabilities and managing uncertainty <u>Activity</u> <ul style="list-style-type: none"> Discussing innovation dilemma in low technology sectors 	Before class: <ul style="list-style-type: none"> Reading <i>the required textbook</i>, pp.104-142
11	Chapter 4. Managing innovation within firms (cont.)	<ul style="list-style-type: none"> Managing innovation projects Organizational structures and innovation <u>Activity</u> <ul style="list-style-type: none"> - Discussing the role of the individual in the innovation process 	Before class: <ul style="list-style-type: none"> Reading <i>the required textbook</i>, pp.104-142
12	Middle exam Group assignment tutorial	<ul style="list-style-type: none"> Middle exam Answer students' questions related to the group assignment 	
13	Chapter 4. Managing innovation within firms (cont.)	<ul style="list-style-type: none"> Management tools for innovation <u>Activity</u> <ul style="list-style-type: none"> - Discussing the impact of IT systems for innovation 	Before class: <ul style="list-style-type: none"> Reading <i>the required textbook</i>, pp.104-142
14	Chapter 5. Operations and process innovation	<ul style="list-style-type: none"> Operations management and importance in for improvement in new product development The nature of design and innovation in the context of operations <u>Activity</u> <ul style="list-style-type: none"> - Discussing: What do you understand by innovation within the education sector? 	Before class: <ul style="list-style-type: none"> Reading <i>the required textbook</i>, pp.142-176
15	Chapter 5. Operations and process innovation (cont.)	<ul style="list-style-type: none"> Process design Process design and innovation <u>Activity</u> <ul style="list-style-type: none"> - 'Technology changes. The laws of economics do not.' Discuss the implications and validity of this statement 	Before class: <ul style="list-style-type: none"> Reading <i>the required textbook</i>, pp.142-176
16	Chapter 5. Operations and process innovation	<ul style="list-style-type: none"> Innovation in the management of the operations process Design of the organization and its suppliers: supply chain management 	Before class: <ul style="list-style-type: none"> Reading <i>the required textbook</i>, pp.142-176

Slot	Main contents	Specific contents and activities	Student's tasks
	(cont.)	<u>Activity</u> - Discussing : Can you think of any circumstances in which the philosophy of 'keeping things simple' would not apply?	
17	Chapter 6. Market adoption and technology diffusion	<ul style="list-style-type: none"> Time lag between innovation and useable product Innovation and the market Crowdsourcing for new product ideas <u>Activity</u> - Discussing the merits and limitations of lead users as a source of innovations	Before class: <ul style="list-style-type: none"> Reading <i>the required textbook</i>, pp.388-416
18	Chapter 6. Market adoption and technology diffusion (cont.)	<ul style="list-style-type: none"> Frugal innovation and ideas from everywhere Innovation diffusion theories <u>Activity</u> - Discussing : How does the pattern of consumption influence the likely success or failure of a new product?	Before class: <ul style="list-style-type: none"> Reading <i>the required textbook</i>, pp.388-416
19	Oral presentations of group assignment	<ul style="list-style-type: none"> Oral presentation of group research project by groups of students Q&A on each research project Each oral presentation must not be longer than 15 minutes 	Before class: <ul style="list-style-type: none"> Submitting research project report Preparing and submitting slides for oral presentation
20	Oral presentations of group assignment	<ul style="list-style-type: none"> Oral presentation of group research project by groups of students Q&A on each research project Each oral presentation must not be longer than 15 minutes 	Before class: <ul style="list-style-type: none"> Submitting research project report Preparing and submitting slides for oral presentation
21	Feedback on the group Assignment	<ul style="list-style-type: none"> Give comments on the group assignment 	
22	General review and discussion	<ul style="list-style-type: none"> Give a general review of the course's contents and discussion 	

12. Grading Policy

	Assignment	Importance
1	Class participation/In class activities	10%

2	Midterm exam (individual)	10%
3	Group assignment	30%
4	Final exam (individual)	50%

Class participation

Note: Punctual and regular attendance is a minimum expectation for this course. The students must not be absent more than 20% of total scheduled learning slots.

Midterm exam

In the 12th slot, students will be given a case study/scenario with some relevance to topics being discussed in the course, and be asked to discuss or explain their point of view in a limited amount of class time

Group Assignment

This group assignment encourages students to apply knowledge and develop skills in new product development and innovation. It requires student to work with other members in an assigned group and to stipulate the firm that is developing a new product idea/concept, spell out an appropriate product innovation charter (new product development strategy) under which this type of concept might have arisen, conduct a small-scale concept test, present the testing results and follow up recommendations.

The project is to assess students' competence level to apply the learnt new product development concepts and methods to a real business situation. As a result of the group project, each group must deliver a report and present it. The oral presentation of each group must be no longer than 15 minutes.

Final exam

The final exam consists of from two to three essay questions that might be related to any topic discussed in the course.