

## **Design Thinking & Product Development**

### **Introduction**

Organizations have become increasingly dependent on new product development as a source of innovation and profitability. This course facilitates learning of the product development process and the factors that influence success and failure at each stage of the process. Moreover, the course examines the strategic planning, development and launch of new products in companies from a marketing perspective. The course covers strategy, analysis and organizational issues in new product development and innovation. An emphasis is placed on both quantitative and qualitative techniques in product development and design.

### **Course Objectives**

This course will help students:

1. Develop competence with a set of concepts, tools and methods for product design and development.
2. Understand the new product development process.
3. Understand the importance of new product development to firm performance.
4. Learn methods of generating, evaluating and testing product ideas/concepts.
5. Improve their ability to think creatively in the product/service innovation context.
6. Learn the application of design thinking concepts within the product development framework.
7. Plan a successful product launch using a variety of management techniques.

### **Course Learning Outcomes**

Upon successful completion of the course, students should be able to:

1. Discover the importance of innovation and why it should be a key strategic initiative in an organization.
2. Determine why new products fail or succeed and illustrate examples of each.
3. Understand and discuss key concepts and principles concerning the range of tools and methods that are used to manage new product development.
4. Recognize the steps involved in the development of the new products and services innovation within the organization
5. Learn how to integrate the customer and end-consumer into this process.

### **Content**

1. Types of new products

2. Reasons for NPD Failure
3. The Product Development Process and the stage gate process
4. Diffusion of Innovations Model
5. Design Thinking Model
6. Empathic Research
7. Lead users, Crowdsourcing
8. Open Innovation
9. The New Product Concept
10. Personas
11. How might we statement
12. Synthesis of insights
13. Hill Statements and Prioritization grids
14. Concept Generation with Conjoint Analysis
15. Paper Prototyping
16. Storyboarding Scenarios
17. Perceptual Mapping
18. Concept Testing and Concept Evaluation
19. Sales Forecasting

#### **Text Book and References**

1. Crawford, C.M. and DiBenedetto, A. (2008). **New Products Management**. 12th Edition. Irwin/McGraw-Hill. **ISBN:** 0071332650, 9780071332651
2. Ulrich, K. and Eppinger, S. (2011) **Product Design and Development**. 5<sup>th</sup> Edition. McGraw-Hill. ISBN: 0073404772 / 978007340477