



Course Syllabus

Course Code	Course Title	ECTS Credits
ENMA-515	Strategic Management of Innovation and Technology	7.5
Prerequisites	Department	Semester
None	Management & MIS	Fall/Spring/Summer
Type of Course	Field	Language of Instruction
Required	Engineering Management	English
Level of Course	Lecturer(s)	Year of Study
2 nd Cycle	Dr. Despo Ktoridou	1 st
Mode of Delivery	Work Placement	Corequisites
Face to Face	N/A	None

Course Objectives:

The main objectives of the course are to:

- Identify ways to assess the Industry Dynamics of Technological Innovation
- Define and evaluate technology strategy
- Provide an understanding to the process of formulating technology innovation strategy
- Apply the acquired knowledge to implement Technology Innovation Strategy

Learning Outcomes:

After completion of the course students are expected to be able to:

1. **recognise the various ways to assess the Industry Dynamics of Technological Innovation** (students should understand how technology evolves over time, the various sources, types and patterns of innovations, meet the standards battles and design dominance as well as make the right decision when is the right time to introduce a product into the market)
2. **understand the importance and role of technology strategy;** (students will acquire the necessary knowledge and understanding on what is technology strategy its importance as well as how is different from a business strategy)
3. **use the core information to formulate** technological innovation strategy (students will acquire skills to formulate technological innovation strategy by: selecting innovation projects, implementing collaboration strategies using the various protection tools to secure innovations (*patens, trade secrets, trademarks, and copyrights*)).

4. **design, develop and discuss a Technological Innovation Strategy** (students will acquire the necessary knowledge and understanding to organize for Innovation, manage the New Product Development Process as well as the human resources)

Course Content:

Introduction

Part I – Industry Dynamics of Technological Innovation

- Sources of Innovation
- Types and Patterns of Innovation
- Standards Battles and Design Dominance
- Timing of Entry

Part II – Formulating Technological Innovation Strategy

- Defining the Organization's Strategic Direction
- Choosing Innovation Projects
- Collaboration Strategies
- Protecting Innovation

Part III – Implementing Technological Innovation Strategy

- Organizing for Innovation
- Managing the New Product Development Process
- Managing New Product Development Teams
- Crafting a Deployment Strategy

Learning Activities and Teaching Methods:

Power Point and Articulate Presentations; Individual and Group work; Case Study Analysis; Additional Suggested Readings (Scientific papers, journal Articles)

Assessment Methods:

Assignments; Participation/Attendance; Projects; Final Exam

Required Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
Strategic Management of Technological Innovation 5 th Ed.	Melissa A. Schilling	McGraw Hill	2017	10: 1259539067

Recommended Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
Innovation Management and New Product Development, 6th Ed.	Paul Trott	Pearson	2017	13: 9781292133423
Future of Technology Management and the Business Environment, The: Lessons on Innovation, Disruption, and Strategy Execution	Alfred A. Marcus	Prentice Hall	2016	10: 0133996131
Technology Strategy for Managers and Entrepreneurs: Pearson New International Edition 1 st Ed.	Scott A. Shane	Prentice Hall	2014	10: 1292040327
Managing Engineering and Technology, International Edition, 6 th Ed.	Lucy C. Morse	Prentice Hall	2015	10: 0273793225