國立清華大學工業工程與工程管理學系

NATIONAL TSING HUA UNIVERSITY, DEPARTMENT OF INDUSTRIAL ENGINEERING AND ENGINEERING MANAGEMENT

第四十四期 推廣教育碩士學分班

(107.2-107.6)

課程簡介

課程編號	IEM1060205		必/選修 (本系碩士在職專班)		■必修 □選修	
課程名稱	創新與研		學分數	3		
授課教師	姓名	邱銘傳 教授	學 歷	美國賓州州立大學工業工程博士		
	專長	產品設計與供應鏈設計整合、周全設計、服務創新				
	姓名	朱詣尹 教授	學 歷 美國伊利諾大學工業工程博士			
	專長	科技管理、專案管理、同步工程管理				
上課時段	每週五 晚上 6:30~9:20			上課教室	-	工程一館 901
先修課程	■否	□建議□	必備	人數上限		30 位
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一、 課程目的

This course is intended to introduce the concept and principle for effective management of innovation and R&D that is becoming the prime opportunities and the competitive advantages for the technology-based business. The class will review and discuss the key issues and related cases with a view to bridge the engineering and business considerations, along with the presentation of selected approaches, methods and tools to enable effective management of product, process, service, and business model innovation and development.

二、 課程進度

Theme	Reading (text chapter)			
I. New Product Development Process Product Strategy & Planning	Introduction (Ch. 1) Development Processes (Ch. 2)			
Product Planning	Product Planning (Ch. 3)			
Product Specification	Identify Customer Needs (Ch. 4) Product Specifications (Ch. 5)			
System Design and Function Decomposition	Concept Generation (Ch. 6)			
Product Architecture	Product Architecture (Ch. 9)			
II. Designing Technology Strategy & Process	Organizing for Innovation (Ch. 10)			
Organization & System for Technology Development	Managing New Product Development Process (Ch.11)			
Structure & Management for Development	Managing New Product Development Team (Ch. 12)			
Technology Strategy	Crafting Deployment Strategy (Ch. 13)			
Service Innovation	R&D Comes to Services			
III. Managing Global Value Network	Source of Technology Innovation and Technology Roadmap (Ch. 2 & 3)			
Technology Leadership & Strategy	Standard Battle & Design Dominance and Entry Timing (Ch. 4 & 5)			
Core Competence & Strategic Intent	Defining Strategic Direction and Choosing Innovation Projects (Ch. 6 & 7)			
Value Creation & Protection	Collaboration Strategies & Protecting Innovation (Ch. 8 & 9)			
	Review (or mid-term/final presentation @ class #9/ #15)			

課程大綱