

第三十九期 推廣教育碩士學分班

(104.9.18-105.1.15)

課程簡介

課程編號	IEEM1040104		類別	<input checked="" type="checkbox"/> 必修 <input type="checkbox"/> 選修
課程名稱	創新與研發管理 Innovation and R&D Management		學分數	3
授課教師	姓名	朱詣尹 老師	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		
	姓名	瞿志行 老師	學歷	美國加州大學柏克萊分校機械工程博士
	專長	產品設計、互動設計、協同設計、擴增實境		
	姓名	邱銘傳 老師	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		
上課時段	每週五 晚上 6:30~9:20		上課教室	工程一館 701 室
先修課程	<input checked="" type="checkbox"/> 否 <input type="checkbox"/> 建議_____ <input type="checkbox"/> 必備_____		人數上限	30 位
課程目標	一、課程說明(Course Description)			
	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、教學進度 (Agenda)			
	Date	Theme		Reading (text chapter)
	09/18	I. New Product Development Process Product Strategy & Planning		Introduction (Ch. 1) Development Processes (Ch. 2)
	09/25	Product Planning		Product Planning (Ch. 3)
	10/2	Product Specification		Identify Customer Needs (Ch. 4) Product Specifications (Ch. 5)
	10/16	System Design and Function Decomposition		Concept Generation (Ch. 6)
	10/23	Product Architecture		Product Architecture (Ch. 9)
	10/30	II. Designing Technology Strategy & Process		Organizing for Innovation(Ch. 10)
11/06	Organization & System for Technology Development		Managing New Product Development Process (Ch.11)	

	<b>11/13</b>	Structure & Management for Development	Managing New Product Development Team (Ch. 12)
	<b>11/20</b>	Technology Strategy	Crafting Deployment Strategy (Ch. 13)
	<b>11/27</b>	Service Innovation	R&D Comes to Services
	<b>12/4</b>	<b>III. Managing Global Value Network</b>	Source of Technology Innovation and Technology Roadmap (Ch. 2 & 3)
	<b>12/11</b>	Technology Leadership & Strategy	Standard Battle & Design Dominance and Entry Timing (Ch. 4 & 5)
	<b>12/18</b>	Core Competence & Strategic Intent	Defining Strategic Direction and Choosing Innovation Projects (Ch. 6 & 7)
	<b>12/25</b>	Value Creation & Protection	Collaboration Strategies & Protecting Innovation (Ch. 8 & 9)
	<b>1/8</b>		Review (or mid-term/final presentation @ class #9/ #15)
	<b>1/15</b>	Term-project/ Final review/speech	

<b>課本及參考用書</b>	<p>指定用書：</p> <ol style="list-style-type: none"> <li>Schilling, M.A. <i>Strategic Management of Technological Innovation</i>, 4<sup>th</sup> ed., McGraw-Hill, 2013 (李亭林譯 科技創新管理, 華泰文化, 2013.)</li> <li>K.T. Ulrich and S.D. Eppinger, <i>Product Design and Development</i>, 5<sup>th</sup> ed, McGraw Hill, 2004.</li> </ol> <p>參考書籍：</p> <ol style="list-style-type: none"> <li>Thomke, S. <i>Managing Product and Service Development: Text and Cases</i>, McGraw-Hill, 2007</li> <li>Burgelman, R.A., Christensen, C.M. &amp; Wheelwright, S.C. <i>Strategic Management of Technology &amp; Innovation</i>, McGraw-Hill, 2009</li> <li>Silverstein, D., Samuel, S., and DeCar, N. <i>Innovator's Toolkit: 10 Practical Strategies to Help You Develop and Implement Innovation</i>, Harvard Business School Press, 2009.</li> <li>Skarzynski, P. and Gibson, R. <i>Innovation to the Core: A Blueprint for Transforming the Way Your Company Innovates</i>, Harvard Business School Press, 2008.</li> <li>Chesbrough, H.W. <i>Open Innovation</i>, Harvard Business School Press, 2003.</li> <li>Dyer, J., Gregersen, H. and Christensen, C.M. <i>Innovator's DNA: Mastering the Five Skills of Disruptive Innovators</i>, Harvard Business School Press, 2011.</li> <li>Clark, K.B. and Wheelwright, S.C. <i>Managing New Product and Process Development: Text and Cases</i>, Free Press, 1993.</li> <li>The PDMA handbook of new product development, Wiley, 1996.</li> </ol>
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<b>成績考核</b>	<p>To pursue the course objective effectively, the following are required:</p> <ol style="list-style-type: none"> <li>Prepare and discuss readings and case (40-45%)</li> <li>Plan, perform and present term project (35-40%)</li> <li>Homework Q&amp;A (20%)</li> </ol>
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