創新與研發管理 Innovation and R&D Management
課程大綱 Course Outline

Time：Fabc (18:30-21:30)　　Place： Eng-I 工一館_ 904

Instructor：邱銘傳　Ming-Chuan Chiu mcchiu@ie.nthu.edu.tw, Phone : (57)42699

　　　　　Office: 923 (Hour: Wed.10-12 & Fri.10-12, email appointment preferred)

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　　　　　Office: 925 (Hour: Fri. 5-6 pm before the class, email appointment preferred)

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Objective 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.

Textbook 指定用書

1. **S**chilling, M.A. *Strategic Management of Technological Innovation,* 4th or 5th ed., McGraw-Hill, 2013 or 2017. (李亭林譯 科技創新管理，華泰文化，2013)
2. Selected cases and readings

Reference 參考書籍

1. Ulrich, K.T. and Eppinger, S.D. *Product Design and Development*, 6th ed., McGraw Hill, 2016. (張書文譯 產品設計與開發，華泰文化，2016)
2. Thomke, S. Managing Product and Service Development: Text and Cases, McGraw-Hill, 2007
3. Burgelman, R.A., Christensen, C.M. & Wheelwright, S.C. Strategic Management of Technology & Innovation, McGraw-Hill, 2009
4. Silverstein, D., Samuel, S., and DeCar, N. Innovator's Toolkit: 10 Practical Strategies to Help You Develop and Implement Innovation, Harvard Business School Press, 2009.
5. Skarzynski, P. and Gibson, R. Innovation to the Core: A Blueprint for Transforming the Way Your Company Innovates, Harvard Business School Press, 2008.
6. Chesbrough, H.W. Open Innovation, Harvard Business School Press, 2003.
7. Dyer, J., Gregersen, H. and Christensen, C.M. Innovator's DNA: Mastering the Five Skills of Disruptive Innovators, Harvard Business School Press, 2011.

Class Organization 教學方式

Lecture and discussion on case and reading (with case-base participative learning)
Class discussion, homework and term project in groups
Course material site: iLMS

Evaluation成績考核

To pursue the course objective effectively, the following are required:
1. Prepare and discuss readings and case (40-45%)
2. Plan, perform and present term project (35-40%)
3. Homework Q&A (20%)

Schedule 教學進度 (暫定 Tentative 2016/09/13)

Date	Theme	Reading (text chapter)	Instructor & Activity
1. 09/23	**Course Overview**: Introduction -- Business Logic of Technology Innovation Management		
2. 09/30	**I. Executing & Building Technology Innovation**	Organizing for Innovation (Ch. 10)	*Confirm Group*
3. 10/07	Organization & Process for Technology Development	Managing New Product Development Process (Ch.11)	
4. 10/14	Structure & Team for Development	Managing New Product Development Team (Ch. 12)	
5. 10/21	**II. Designing & Planning Innovation Strategy**	Entry Timing (Ch. 5)	*Homework 1*
6. 10/28	Strategic Intent, Core Competence &Technology Leadership	Defining Strategic Direction (Ch. 6)	
7. 11/04	Creating Project Plan, Portfolio & Dynamics	Choosing Innovation Projects (Ch. 7)	
8. 11/11	**III. Exploring Innovation Dynamics**	Source of Technology Innovation (Ch. 2)	*Mid-term[+] project draft*
9. 11/18	Innovation Roadmap & Pattern	Type & Pattern of Innovation (Ch. 3)	*Homework 2*
10. 11/25	*Project Proposal/Background*	(5~10-minute presentation)	
11. 12/02	Technology standard & dominance	*Standard Battle & Design Dominance (Ch. 4)*	*Quiz?*
12. 12/09	**III. Managing Innovation Value Network**	Collaboration Strategies (Ch. 8)	
13. 12/16	Collaboration & Protection	Protecting Innovation (Ch. 9)	
14. 12/23	Value Creation & deployment Strategy	Crafting Deployment Strategy (Ch. 13)	*Homework 3*
15. 12/30	Service Innovation	R&D Comes to Services	
16. 1/06	**Term-project/ Final review**	Final presentation[++]	*Final project. draft++*
17. 1/13	**Term-project/ Final review**	Final presentation[++]	*Final project. draft++*

[+] Need to *submit (week 8) and present (week 10) on case/ topic **background, issues & expected results** to be explored till final presentation (week 16 & 17).*

[++] *Final revision of PowerPoint presentation files due 2016/01/03 via e-mail or upload.*