

# IEEM 5551 TRIZ Systematic Innovation Methods (萃智系統化創新方法)

## Course Schedule

Instructor: D. Daniel Sheu 許棟樑

Class meeting time: W/R 6:30PM-9:20PM. Room: 701, Engr. I

W	Topics	Reference
1	Course Overview & Logistics/SI and TRIZ overview; Problem Statement (課程/系統化創新概觀; 專題選題組隊說明)	Handout S 上 01
2	Function Analysis & SAS (功能/屬性分析 & 加換減)	S 上 02 M.06
3	Function Analysis (功能分析) & SAS (功能/屬性分析)	S 上 02 M.06
4	Problem Statement Rev.(專案題目討論) Levels of innovation (創新層次)	
5	Cause Effect Contradiction Chain Analysis (因果矛盾鏈分析)	S 上 03 M.16
6	CECCA (Cont'd) 演練	S 上 03 M.16
7	Contradiction Matrix & Inv. P. (矛盾矩陣與發明原則)	S 上 05 M.18
8	Physical Contra. & Separation P. (物理衝突與分離原則)	S 上 04 M.11
9	Parameter Manipulation 參數操作: 物理衝突的整合解法	S 上 06
10	Parameter Manipulation 參數操作: 物理衝突的整合解法	S 上 06
11	Parameter Manipulation 參數操作: 物理衝突的整合解法	S 上 06
12	Patent & Function-oriented Search & Knowledge Eff DB	S 上 07 M.12
13	Device Trimming (裝置修剪)[brief]	S 上 08 M.22
14	S-field Analysis & Inventive standards (物場分析與標準解簡述)	S 中 M.13
15	Project review	
16	Summary & Project review	
17	Project final review (專題檢討)	
18	Conference Report @SSI Conf.	

S 上 xx: 許棟樑, “萃智創新工具精通: 上冊”, 第 xx 章. (Sheu's book Part I, Ch. Xx)

M. xx: Darrell Mann, Hands-on Systematic Innovation, 第 xx 章. Chapter xx

- Guideline for forming a team: at least one full time and one part time student in a team. Must have weekly common time for discussions. (2 hours) 組隊原則: 每組都至少有一位 在職生和一位一般生. 每週要有共同討論時間.

Text:

- [1] Class Handout (講義) (Handout printing: NT 300) (Required) [> 600 pg]
- [2] D. D. Sheu, Mastering TRIZ Innovation tools, Book 1 (In Chinese) ISBN 978-986-85795-2-1.  
許棟樑, “萃智創新工具精通: 上冊”, 亞卓國際顧問股份有限公司. 2017/9 五版. (NT 750->600) TA to handle the materials.

Optional References:

- D. D. Sheu, Mastering TRIZ Innovation tools, Book 2 (In Chinese). 許棟樑, “萃智創新工具精通: 中冊”, 亞卓國際顧問股份有限公司, 2013/12, ISBN: 978-986-85795-6-9.
  - Darrell Mann, Hands-on Systematic Innovation, International Student Edition, , IFR Press, ISBN 90-77071-02-4, 2007(Technical version NOT “For business” version.) 原價 NT 1600. 本課程協議特惠價 NT 1,200.
- ✓ All: All teams to report project. (~20 min.)