

National Taiwan University of Science and Technology

Department / Code	Graduate Institute of Technology Management/TM			
Course Code	TM6140701 / MA7901701			
Course Name	Social Network Analysis and Managerial Applications	Credit	Fall	Spring
				3
Course Objectives	<p>After successfully completing the course, students will:</p> <ol style="list-style-type: none"> 1. comprehend the basic concepts of social networks, 2. understand the basic theories and methods of social network analysis, 3. learn how to use software tools to analyze a social network, 4. be familiar with recent progresses in the ‘extended’ social network analysis research, 5. be able to identify and provide solutions to the connectivity problems in an organization, 6. be able to conduct social network analysis to various type of social networks, 7. be able to think creatively, 8. be able to prepare and deliver an oral and written presentation in a professional manner using appropriate technologies. 			
Prerequisites	Students are expected to feel comfortable with number crunching and basic concept of matrix operations.			
Course Outline	Week	Topic		
	1	Course introduction		
	2	Guest speaker		
	3	Networks everywhere, basic network terms, types of networks Activity: group discussion		
	4	Analysis tools, network representation, network visualization Activity: lab session 1		
	5	Basic network measures, centrality, centralization Activity: lab session 2		
	6	Network structure I Activity: lab session 3		
	7	Spring break		
	8	Network structure II Activity: management simulation – Lover Paradox Activity: lab session 4		
	9	Two-mode networks Activity: lab session 5		
	10	Guest speaker Activity: lab session 6		
	11	Midterm competition (at the computer lab) Activity: lab session 7		
	12	Managing social networks within an organization I Activity: lab session 8 and group discussion		
	13	Managing social networks within an organization II Activity: group discussion		
	14	Weak ties, social capital, structural holes, Small-world networks		
	15	Citation networks, Main path analysis		
	16	Term project presentation		
	17	Term project presentation		
18	Course review			