



MASTER IN BUSINESS ADMINISTRATION

C O U R S E S Y L L A B U S

SYSTEMS THINKING

Course Code:	ST
Faculty :	Prof. Fernando Y. Roxas & Antonio M. Perez
Class:	MBA 2008
Sessions:	Second Trimester – 20 sessions

Course Objectives:

Systems Thinking promotes gaining insights into the whole by understanding the linkages and interactions between the elements that comprise the whole "system." This discipline recognizes that all human activities are open systems; therefore, they are affected by the environment in which they exist. This means that instead of isolating smaller and smaller parts of the system being studied, as in traditional forms of analysis, systems thinking works by expanding its view to take into account larger and larger numbers of interactions as an issue is being studied. Systems thinking offers a holistic perspective to problems that are dynamically complex or have a great deal of feedback from other sources, internal or external.

Merging systems thinking with system dynamics creates a powerful learning environment to engage students to understand, model and resolve complex business issues. The course introduces the tools of system dynamics for conceptualizing, modeling and analyzing a business organization as a set of feedback loop structures that create complex dynamic behaviors.

Focus will be on whole brain thinking; the use of system archetypes; construction of causal loop diagrams in analyzing problems and cases, stock and flow diagrams, and simulation models in analyzing problems and cases.

Requirement:

The course does include formulating computer models (stock and flow diagrams), which require mathematical formulations for computer simulations. The aim of the course is to develop your intuition and conceptual understanding of complex systems. Accordingly, because this is an introductory course, you will build simple computer models using VENSIM shareware with a minimum of mathematical expertise. You need not have a strong mathematics and computer programming background. In short, fear not.

Keep an open mind.

Course Outline:

Session	Topic/Activity	Faculty	Date
1	Class Management/Introduction	FYR	Oct 08, Mon, 11 – 12:20 p.m.
2	Whole Brain / Systems Thinking	FYR	Oct 11, Wed, 11 – 12:20 p.m.
3	Exercises: Causal Loop Diagrams	FYR	Oct 15, Mon, 11 – 12:20 p.m.
4	Using System Archetypes	AMP	Oct 17, Wed, 11 – 12:20 p.m.
5	Exercises: System Archetypes	AMP	Oct 22, Mon, 11 – 12:20 p.m.
6	Case: Singapore Containers	FYR	Oct 24, Wed, 11 – 12:20 p.m.
7	Case: Pacific Dunlop A	FYR	Oct 29, Mon, 11 – 12:20 p.m.
8	Case: Apparel Exports and the Indian Economy	FYR	Oct 31, Wed, 11 – 12:20 p.m.
9	Case: Barilla SPA (A)	FYR	Nov 05, Mon, 11 – 12:20 p.m.
10	Case: Au Bon Pain	FYR	Nov 07, Wed, 11 – 12:20 p.m.
11	Introduction: Management Flight Simulator & The Balanced Score Card	AMP	Nov 12, Mon, 11 – 12:20 p.m.
12-13	People's Express Simulation Game	FYR	Nov 14, Wed, 11 – 12:20 p.m.
14	Converting Causal Loops to Stock & Flow Diagrams	AMP	Nov 19, Mon, 11 – 12:20 p.m.
15	Introduction: Using Vensim Shareware	AMP	Nov 21, Wed, 11 – 12:20 p.m.
16	Exercises: Dynamic Modelling Examples	AMP	Nov 26, Mon, 11 – 12:20 p.m.
17	Group Presentations	FYR/AMP	Nov 28, Wed, 11 – 12:20 p.m.
18	Group Presentations	FYR/AMP	Dec 03, Mon, 11 – 12:20 p.m.
19	Group Presentations	FYR/AMP	Dec 05, Wed, 11 – 12:20 p.m.
20	Group Presentations	FYR/AMP	Dec 10, Mon, 11 – 12:20 p.m.