

SYLLABUS :-

Definitions and Classification of Systems, Concept of Wholeness, Organisation, Hierarchy, Methodology and use of systems approach. Systems Thinking, Learning Organizations, System Archetypes and their use. System dynamics: Causal-loop and flow diagramming, Modelling non-linearity, simulation, policy analysis and design. Consensus Methodologies: Measurement of Consensus, Arrow's Conditions, Group Decision Processes, Interpretive Structural Modelling, Analytic Hierarchy Process. Statistical investigations into causal relationships. Principal component analysis, Factor analysis, Discriminant analysis, Cluster analysis. Books 1. Business Dynamics: Systems Thinking and Modeling for a Complex World, John Sterman, McGraw-Hill, 2001. 2. Introduction to Systems Dynamics Modelling, P K J Mohapatra, P Mandal and M C Bora, University press, Orient Longman, India, 1994. 3. Methodology for Large-Scale Systems, A.P. Sage, McGraw Hill, 1977.