

NIRMA UNIVERSITY
COMMUNICATION DESIGN PROGRAMME
Bachelor of Design, Department of Design
Year IV, Semester VII

L	T	P	C
2			2

Course Code	CDTH 411
Course Title	Systems Thinking

Course Learning Outcomes (CLO):

At the end of the course the students will:

1. Understand systems thinking as a method of mapping complex ecosystems
2. Depict causal relationships between systems elements
3. Learn giga-mapping techniques to display complexity
4. Identify and sort design intervention opportunities for the system studied

Syllabus:

Total Teaching hours: 30

Unit 1: Understanding systems

Teaching hours: 10

- 1.1 Understand the importance of systems thinking and how it is different from the conventional design process based approach
- 1.2 System archetypes
- 1.3 Roles and functions of system elements

*The material selected may be a product/scrap that has already served its purpose

Unit 2: Giga-mapping:

Teaching hours: 10

- 2.1 Qualitative and quantitative research to establish points-of-view
- 2.2 Systems modeling frameworks
- 2.3 Information design for representation of relationships

Unit 3: Opportunity identification & causal loops:

Teaching hours: 10

- 3.1 Causal loops and relationship mapping
- 3.2 Inflection points and impacts in the system
- 3.3 Understanding time as an influencer

Suggested Readings:

- 1 *Meadows, D. H., & Wright, D. (2015). Thinking in systems: a primer. White River Junction, VT: Chelsea Green Publishing.*
- 2 *The systems bible: the beginner's guide to systems large and small John Gall - General Systemantics Press - 2006*

w.e.f. Academic year _2020 and onwards

Key: L= Lecture, T= Tutorial, P= Practical, C= Credit