DESIGN THINKING LAB

Course code	19ES1352	Year	II	Semester	I
Course category	Engineering science	Branch	Common to all	Course Type	Lab
Credits	2	L-T-P	0-0-2	Prerequisites	Nil
Continuous Internal Evaluation	25	Semester End Evaluation	50	Total marks	75

Course outcomes
Upon successful completion of the course the student will able to
CO1	Develop a mind maps for design thinking process
CO2	Prepare empathy maps and journey maps for problems.
CO3	Construct mock-up models through ideation and innovation techniques
CO4	Use software for design thinking problems

Contribution of course outcomes towards achievement of program outcomes & strength of correlation
1: Slight (low), 2: Moderate (medium)   3: Substantial (High)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1			2	2					3					2
CO2			2	2					3					2
CO3			2	2					3					2
CO4			2	2					3					2

Any 12 of the following:

Syllabus		
Exp No	List of Experiments	Mapped CO
1	Design a mind map of design thinking	CO1
2	Thirty circle Exercise ---ideation	CO3
3	Prepared a toothpick bridge (mock-up model)	CO1,CO3
4	Prepared a marble maze (mock up model)	CO1,CO3
5	Build a wind power car (mock up model)	CO1,CO3
6	Make a hydraulic elevator (mock up models)	CO1,CO3
7	Construct empathy maps for a given case study-1	CO2
8	Develop customer journey map for a given case	CO2
9	Construct empathy maps for a given case study-2	CO2
10	Develop customer journey map for a given case -2	CO2

11	Make a paper prototype for user testing (mock-up model)	CO2
12	Design and development of cell phone wallet (mock-up model)	CO1,CO2,CO3
13	Design thinking using sprintbase software	CO4
14	Design thinking using sprintbase software	CO4

Learning Resources
Text Books:
1. Idris Mootee, "Design Thinking for Strategic Innovation", John Wiley & Sons (2013).
2. "Change by design", Tim Brown, Harper Collins, 2009
3. "Design Thinking- The Guide Book" – Facilitated by the Royal Civil service Commission, Bhutan
4. Engineering design by George E Dieter
Reference Books
1. 101 Design Methods: A Structured Approach for Driving Innovation in Your Organization by Vijay Kumar.
2. Human-Centered Design Toolkit: An Open-Source Toolkit To Inspire New Solutions in the Developing World by IDEO
Additional Learning Resources
https://www.interaction-desiqn.ora/literature/topics/desiqn-th/nkinq
https://www.interaction-desiqn.prq/literature/article/how-tq-<eve'op-an-empath\capproach-in-design-thinking