PVP 19

DESIGN THINKING LAB

Course Code	19ES1352	Year	II	Semester	I
Course Category	Engineering Sciences	Branch	ME	Course Type	Practical
Credits	1	L – T – P	0 – 0 – 2	Prerequisites	NIL
Continuous Internal Evaluation	25	Semester End Evaluation	50	Total Marks	75

Course Outcomes	Levels
After successful completion of the course, the student will be able to	
CO1 Develop a mind map for design thinking process	L3
CO2 Prepare empathy maps and journey maps for problems.	L3
CO3 Construct mock-up models through ideation and innovation techniques	L5

Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations (3-High, 2: Medium, 1: Low)														
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1			2	2					3				1	2
CO2			2	2					3				1	2
CO3			2	2					3				1	2

Note: Any <u>TWELVE</u> From Below

	Syllabus	
Expt. No	Contents	Mapped COs
1.	Design a mind map of design thinking	CO1
2.	Thirty circle Exercise ---ideation	CO3
3.	Prepare a toothpick bridge (mock-up model)	CO1, CO3
4.	Prepare 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-1	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

Learning Recourse(s)
Text Book(s)
1. Change by design, Tim Brown, 2009, Harper Collins 2. Engineering design, George E Dieter,4th Revised edition, 2009 McGraw Hill.
Reference Book(s)
1. Design Thinking for Strategic Innovation, Idris Mootee, 2013, John Wiley & Sons 2. Design Thinking-The Guidebook – Facilitated by the Royal Civil service Commission, Bhutan 3. Design Methods: A Structured Approach for Driving Innovation in Your Organization, Vijay Kumar, First Edition, 2012, Wiley 4. Human-Centered Design Toolkit: An Open-Source 5. Toolkit to Inspire New Solutions in the Developing World, IDEO, Second Edition, 2011, IDEO
e-Resources & other digital material
1. https://www.interaction- desiqn.ora/literature/topics/desiqn-thinkinq 2. https://www.interaction- desiqn.prq/literature/article/how-tq-<eve'op-an-empath\capproach-in-design-thinking