

DESIGN THINKING LAB

Course Code	20ES1353	Year	II	Semester	I
Course Category	Engineering Science	Branch	ME	Course Type	Lab
Credits	1.5	L-T-P	0-0-3	Prerequisites	NIL
Continuous Internal Evaluation	15	Semester End Evaluation	35	Total Marks	50

Course Outcomes: Upon successful completion of the course, the student will be able to

CO	Statement	Skill	BTL	Experiment
CO1	Understand the stages of Design Thinking Process	Understand	L2	1,2,3,4
CO2	Apply Empathy, Ideation, and Art of Pitching tools for defined problems.	Apply	L3	5,6,7,8,9,10
CO3	Take apart to solve client problems	Analyze	L4	11,12

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	3		3			3			3			3	3	
CO2	3		3			3			3			3	3	
CO3	3		3			3			3			3	3	

Expt. No	Name of Experiment	COs
	Introduction to Design Thinking	
1	LRI Assessment An Individual activity	CO1
2	Reflection - The Marshmallow Challenge	CO1
3	Round-Robin Brainstorming - Mind Tools	CO1
4	The Wallet Challenge -Team Activity	CO1
	Ideation Tools & Exercises	
5	Exercise - Thirty circle - Story Telling	CO2
6	Exercise - Framing the Design Challenge with mind mapping	CO2
	Analysis & Drawing Inferences - User research	
7	Exercise - Persona Creation & User Research	CO2
8	Exercise - Creating Empathy maps	CO2
9	Exercise - Creating Customer Journey maps	CO2
	The art of the pitch	
10	Exercise - Make a paper prototype for user testing (mock-up model)	CO2
11	Exercise - Develop & Present a 3-Minute Pitch (Sample Pitches)	CO3
12	The Design Challenge – Testing Documentation and Pitching	CO3

Learning Resources

Text Books

1. Change by design, Tim Brown, 2009, Harper Collins
2. Engineering design, George E Dieter, 4th Revised edition, 2009 McGraw Hill

Reference Books

1. Design Thinking for Strategic Innovation, Idris Mootee, 2013, John Wiley & Son
2. Design Methods: A Structured Approach for Driving Innovation in Your Organization, Vijay Kumar, First Edition, 2012, Wiley
3. Human-Centered Design Toolkit: An Open-Source Toolkit to Inspire New Solutions in the

Developing World, IDEO, Second Edition, 2011, IDEO

E-Resources & other digital Material

1. <https://www.interactiondesign.org/literature/topics/design-thinking>
2. <https://www.interactiondesign.org/literature/article/how-to-choose-an-approach-in-design-thinking>