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**	**Blooms**	**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													
	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	

Course Content		
	Introduction to Design Thinking	
Exercise- 1	LRI Assessment An Individual activity	**CO1**
Exercise-2	Reflection - The Marshmallow Challenge	**CO1**
Exercise-3	Round-Robin Brainstorming - Mind Tools	**CO1**
Exercise-4	The Wallet Challenge -Team Activity	**CO1**
	Ideation Tools & Exercises	
Exercise-5	Exercise - Thirty circle - Story Telling	**CO2**
Exercise-6	Exercise - Framing the Design Challenge with mind mapping	**CO2**
	Analysis & Drawing Inferences - User research	
Exercise-7	Exercise - Persona Creation & User Research	**CO2**
Exercise-8	Exercise - Creating Empathy maps	**CO2**
Exercise-9	Exercise - Creating Customer Journey maps	**CO2**
	The art of the pitch	
Exercise-10	Exercise - Make a paper prototype for user testing (mock-up model)	**CO2**
Exercise-11	Exercise - Develop & Present a 3-Minute Pitch (Sample Pitches)	**CO3**
Exercise-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.interactiondesiqn.ora/literature/topics/desiqn-thinkinq 2.https://www.interactiondesiqn.prq/literature/article/how-tq-<eve'op anempath\capproach-in-design-thinking