Course Code	18DCC001J	Course Name	Design Thinking and Methodology	Course Category	C	Minor	L	T	P	C
							2	0	4	4

Pre-requisite Courses	Nil	Co-requisite Courses	Nil	Progressive Courses	Nil
Course Offering Department		SRM Innovation and Design Center	Data Book / Codes/Standards	Nil	

Course Learning Rationale (CLR):	The purpose of learning this course is to:	Learning		
		1	2	3
		LevelofThinking (Bloom)	ExpectedProficiency (%)	ExpectedAttainment(%)
CLR-1 :	Designed to explores mindset, skill set and toolset associated with design			
CLR-2 :	Designed to work with guided applications to framing and solving problems from the perspectives of both business and engineering writing			
CLR-3 :	Exposing students diverging to generate solutions and converging to select among them			
CLR-4 :	Design methods to create concept generation methods, concept selection methods, imagining alternative futures			
CLR-5 :	*Understand the basics of Satellite Communication*			
Course Learning Outcomes (CLO):	*At the end of this course, learners will be able to:*			
CLO-1 :	Students will be able to learn and understand technology design concepts	*1*	*80*	*85*
CLO-2 :	Students will be able to learning mindset, skillset and toolset associated with design	*2*	*75*	*80*
CLO-3 :	Students will be able to identify the best solutions and converging to select among them.	*2*	*85*	*80*
CLO-4 :	Students will be able to understand concept generation methods, concept selection methods, imagining alternative futures	*2*	*80*	*75*

Program Learning Outcomes (PLO)														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
EngineeringKnowledge	ProblemAnalysis	Design&Development	Analysis,Design, Research	ModernTool Usage	Society&Culture	Environment& Sustainability	Ethics	Individual & TeamWork	Communication	ProjectMgt.&Finance	LifeLongLearning	PSO-1	PSO-2	PSO– 3
H	-	-	-	-	-	-	*H*	-	-	-	-	-	-	-
H	*H*	-	-	*H*	-	-	*H*	-	-	*H*	-	-	-	-
H	-	-	*H*	-	-	-	*H*	-	-	-	-	-	-	-
H	*H*	-	-	*H*	-	-	-	-	-	-	-	-	-	-

Duration (hour)		6	6	6	6	6
S-1	SLO-1	**Introduction to Design Methodology**	**Prototyping**	**User Assessment**	**Value Proposition Design**	**Business Model**
	SLO-2					
S-2	SLO-1	Design Frameworks	Prototyping Planning	Usability Test	Value Proposition Design and Mapping,	Business Model Canvas
	SLO-2					
S-3	SLO-1	Engineering Design Problem Solving	Concept Refinement and Storyboard	Understanding Users	Prototyping & Competitor Study	Business pitch
	SLO-2					
S-4	SLO-1	Developing Design Solutions	Envisioning Future	Learning about Customer	Competitors / Complementors's Map	*Pitching strategies*
	SLO-2					
S-5	SLO-1	Making Design Solutions	Conceptual design	Clustering & Abstract Laddering	Design Methodologies	IP and Partnerships
	SLO-2					
S-6	SLO-1	Evaluating Design Solutions	Creative Matrix, Morphological Synthesis, Concept Poster	User Testing	Capital Budgeting: Risk Analysis with Scenarios	Forecasting Financial Statements
	SLO-2					
S-7	SLO-1	Project Introduction and Team formation	Basic Presentation	Project Discussion with Teaching Team	Project Discussion with Teaching Team	Project Discussion with Teaching Team
	SLO-2					
S-8	SLO-1	Stakeholder Map	Project Discussion with Teaching Team	Project Discussion with Teaching Team	Project Mini-showcase	Final Project Presentation
	SLO-2					
S-9	SLO-1	Brainstorming	Usability Test Demo	Project Discussion with Teaching Team	Project Discussion with Teaching Team	Design Showcase
	SLO-2					

Learning Resources	1. Foundations of Engineering & Technology, 7th Edition by Dr. R. Thomas Wright, Dr. Greg J. Strimel, and Dr. Michael E. Grubbs	2. Innovation Engineering; a practical guide to creating anything new by Ikhlaqsidhu

	Bloom's Level of Thinking	Continuous Learning Assessment (100% weightage)							
		CLA – 1 (25%)		CLA – 2 (25%)		CLA – 3 (20%)		CLA – 4 (30%)	
		Theory	Practice	Theory	Practice	Theory	Practice	Theory	Practice
Level 1	Remember Understand	*20 %*	-	*20 %*	-	-	*20 %*	-	*20 %*
Level 2	Apply Analyze	*40 %*	-	*40 %*	-	-	*40 %*	-	*40 %*
Level 3	Evaluate Create	*40 %*	-	*40 %*	-	-	*40 %*	-	*40 %*
	Total	100 %		100 %		100 %		100 %	