

ATMIYA UNIVERSITY
Faculty of Engineering & Technology

Core enrichment 1: Concept to Practice		
For the students admitted from A.Y. 2021-2022 & onwards		
Offering Department:		
Semester - III		
Course Code	Course Title	Course Credit and Hours
	Orientation to design thinking	1 hrs/wk(T)

Course Description:

Design thinking is a systematic method of solving problems and is different from traditional scientific or marketing focused approaches. Today industries, innovators, social entrepreneurs and leading universities across the globe are speaking and writing a lot about design thinking. It has taken a canter stage in many organizations which are trying to rapidly adopt a user-entered approach and a culture in order to be more innovative. Design thinking is enabling individual and organizations to be more creative in developing new solutions that are unique in the market there by creating a large impact on the market and life of individuals.

This is an introductory course that will help to understand the notions of Design Thinking along with some of the related tools, techniques and methods. Through interesting examples, case-studies and exercises the course will help to develop critical thinking and problem-solving abilities.

Course Purpose:

The main purpose of this course is to describe design thinking and its use, variety of approaches within the design thinking discipline and the explanation of basic elements & importance practices in design thinking. It also explain the use of various tools and methods in alignment to a specific design thinking approach, the role of project management within design thinking with application of design thinking for problem solving.

Course Outcomes: Upon completion of this course, the learner will be able to

CO No.	CO Statement	Blooms taxonomy Level (K ₁ to K ₆)
CO ₁		K2
CO ₂		K3
CO ₃		K3

CO ₄		K2
CO ₅		K3

Course Content	Hours
Unit-I : Introduction to Design Thinking	2 hrs
<ul style="list-style-type: none"> About Course – Objective and bird view of course content How this subject links in the entire curriculum? Definition of Design Thinking, its context and evolution Definition of Design Thinking, its context and evolution Variety of approaches in Design Thinking discipline 	
Unit-II: Basic elements & practices in Design Thinking	3 hrs
<ul style="list-style-type: none"> Understanding essential elements in Design Thinking – Empathy, Ethnography, Divergent & Convergent Thinking, Visual Thinking, Prototyping, Validation, etc. Popular approaches in Design Thinking - Study of any 4 - 5 approaches like Double diamond approach, 5D approach, boot camp bootlag, Designing for growth, etc 	
Unit- III: Tools and Methods in Design Thinking approach based on Designing for growth approach	4 hrs
<ul style="list-style-type: none"> About Designing for growth approach Tools and Methods used in various stages of Designing for growth approach with Examples 	
Unit- IV: Fundamentals of Project Management	3 hrs
<ul style="list-style-type: none"> What is a Project What is Project Management and its importance Project Life Cycle and Phases Project Planning & Overview of Project Scheduling Tools Project Execution & Performance Monitoring 	
Unit- V: Design Thinking – Case studies & Success Stories	3 hrs
<ul style="list-style-type: none"> Healthcare Agriculture IT industry Manufacturing Environment Social innovation 	

Text books:

1. Betancur, J. (2017). The Art of Design Thinking: Make more of your Design Thinking workshops. *Colombia: Brick Startup*.

Reference books:

1. Liedtka, J., & Ogilvie, T. (2011). *Designing for growth: A design thinking tool kit for managers*. Columbia University Press.
2. Liedtka, J., & Ogilvie, T. (2011). *Designing for growth: A design thinking tool kit for managers*. Columbia University Press.

Pedagogic tools:

- Power point presentation
- Videos

Methods of Assessment & Tools:

Components of CIE: 100 marks

Sr. No.	Component	Marks	Sub Total
A	Assignment 1 MCQ	20	20
B	Assignment 2 MCQ	20	20
C	Assignment 3 MCQ	20	20
D	Assignment 4 MCQ	20	20
E	Assignment 5 case study submission	20	20
Grand Total			100