

FACULTY OF COMPUTER APPLICATIONS
B.Sc.(IT) (Animation, Vfx and Game Design)

- **Sem** : 5
- **Subject Code** : 05BA0502
- **Subject** : Design Thinking

- **Course Objectives** : Students will be able:
 1. To introduce students to the core principles and methodologies of Design Thinking.
 2. To enable students to apply Design Thinking tools and techniques to identify and solve real-world problems.
 3. To foster a human-centered approach to innovation and problem-solving.
 4. To develop students' creative thinking, collaboration, and communication skills.
 5. To encourage students to embrace experimentation and iterative design processes.

- **Prerequisites** : NA.

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Unit No	Topics Covered	No of lectures required
1	<p>Introduction to Design Thinking</p> <ul style="list-style-type: none"> ▪ Definition, history, and key principles of Design Thinking. ▪ The Design Thinking Process: Empathize, Define, Ideate, Prototype, Test. ▪ Understanding User Needs: Empathy mapping, user interviews, and persona development. ▪ Problem Framing: Defining the problem statement and identifying key challenges. ▪ Ideation Techniques: Brainstorming, SCAMPER, and mind mapping. ▪ Examples of successful Design Thinking applications. 	15
2	<p>Prototyping</p> <ul style="list-style-type: none"> ▪ Creating low-fidelity prototypes and testing with users. ▪ User Testing and Feedback: Gathering and analyzing user feedback to iterate on designs. ▪ Design Thinking Tools and Techniques: Journey mapping, service blueprinting, and value proposition canvas. ▪ Design Thinking in Different Contexts: Applying Design Thinking to product development, service design, and social innovation. ▪ Case Studies: Analyzing real-world examples of Design Thinking in action 	15

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3	<p>Collaboration and Implementation</p> <ul style="list-style-type: none"> ▪ Cross-functional teamwork and communication strategies. ▪ Managing creative teams and idea ownership. ▪ Agile and iterative workflows in Design Thinking. ▪ From idea to execution: turning concepts into deliverables. ▪ Storytelling and presentation of design solutions. 	15
4	<p>Design Thinking for Media and Entertainment</p> <ul style="list-style-type: none"> ▪ Role of Design Thinking in animation, games, and VFX production. ▪ User-centered design for interactive media. ▪ Immersive experiences and audience empathy. ▪ Case studies from the creative industry. ▪ Group project: Apply the design thinking process to a media-based challenge. 	15

Course Outcomes:

1. Students will be able to define Design Thinking and explain its core principles and methodologies.
2. Students will be able to apply Design Thinking tools and techniques to identify and understand user needs.
3. Students will be able to generate creative solutions to complex problems using ideation techniques.
4. Students will be able to create and test prototypes to validate design ideas.
5. Students will be able to effectively communicate design solutions and collaborate in multidisciplinary teams.

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Course Outcomes – Program Outcomes Mapping Table:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	H	-	L	M	-	-	H	-	L	M	-
CO2	-	L	-	H	-	M	-	L	-	H	M
CO3	M	-	H	-	L	-	-	H	M	-	L
CO4	-	H	M	-	-	L	-	-	H	L	-
CO5	L	-	-	M	H	-	-	L	-	M	H

Text Book:

1. "Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation" by Tim Brown 2009 by Harper Business.

Reference Books:

1. " The Design of Everyday Things" by Don Norman 2013 by Basic Books
2. "Creative Confidence: Unleashing the Creative Potential Within Us All" by Tom Kelley and David Kelley 2013 by Crown Business.

Web Reference

1. Interaction Design Foundation: <https://www.interaction-design.org/>
2. Nielsen Norman Group: <https://www.nngroup.com/>

App Reference:

1. Mural
2. Miro

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Syllabus Coverage from text /reference book & web/app reference:

Unit	Chapter Numbers
1	Book 1 – Relevant chapters covering the basics of Design Thinking principles, the Design Thinking process,
2	Book 1 – Relevant chapters covering prototyping methodologies, user testing and feedback analysis,
3	Book 1 - user research methods, problem framing techniques, and ideation strategies.
4	Book 1 - Design Thinking tools and techniques, and case studies of Design Thinking in various fields.