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
	Concept to Practice	**1 hrs/wk(T)**

Course Description:

This Course on concept to practice is intended to introduce ideas, methodologies, principles, fundamentals and skills that comprise a common knowledge base important to all disciplines. These fundamentals will foster a multidisciplinary design experience among students and will prepare them to move to the next level. It will provide the students with foundation and fundamentals of skills in design. The course will benefit applicants who have little or no training or experience in art and design and who wish to begin formal education in this field.

Course Purpose:

Concept to practice enables organizations to create lasting value for consumers. The process is useful in any complex system it:

- Aims to solve concrete human needs.
- Tackles problems ambiguous or difficult to define
- Leads to more innovative solutions.

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	Understand problem identification, formulation and solution.	K2
CO_2	Design an engineering solution to complex problems.	K3
CO_3	Communicate with the community at large in written an oral forms.	K3
CO_4	Demonstrate a sound technical knowledge of their societal problems.	K2
CO_5	Demonstrate the knowledge, skills, values and attitudes of professional graduates.	K3

Course Content	Hours
Unit-I : Prototype 1(Fundamental) preparation	**2 hrs**
• From problems selected in semester 2, they will develop prototype 1 (rough) by visiting the solution provider. • Prototype 1 must be of fundamental type. • Evaluate the prototype 1 based on various parameters (e.g. ergonomics, technology, cost, aesthetics, eco friendly, usefulness, customer friendly etc.)	
Unit-II: Evaluation of Prototype 1	**3 hrs**
• Evaluation of Prototype based on ergonomics • Evaluation of Prototype based on technology • Evaluation of Prototype based on aesthetic	
Unit- III: Evaluation of Prototype 1	**4 hrs**
• Evaluation of Prototype based on eco friendly • Evaluation of Prototype based on usefulness • Evaluation of Prototype based on customer friendly	
Unit- IV: Internal presentation of prototype 1	**3 hrs**
• Evaluation of prototype 1 by internal and interdisciplinary faculty members by presentation / exhibition • Re evaluate the prototype 1 based on feedback from faculty members	
Unit- V: Reevaluation of prototype 1	**3 hrs**
• Visit the society • Identify difference between your solution & industries/ service provider • Comparison of both the solutions & resolve the shortfalls • Feedbacks of industries/ service provider	

Text books:

1. Von Thienen, J. P., Clancey, W. J., Corazza, G. E., & Meinel, C. (2018). Theoretical foundations of design thinking. In *Design thinking research* (pp. 13-40). Springer, Cham.

Reference books:

1. Lupica, L. R., Franklin, T. A., & Friedman, S. M. (2017). The Apps for Justice Project: Employing Design Thinking to Narrow the Access to Justice Gap. *Fordham Urb. LJ*, *44*, 1363.

2. Kummitha, R. K. R. (2019). Design thinking in social organizations: Understanding the role of user engagement. *Creativity and innovation management*, *28*(1), 101-112.

Pedagogic tools:

- Chalk and Talk
- Power point presentation
- Videos

Methods of Assessment & Tools:

Components of CIE: 20 marks

Sr. No.	Component	Marks	Sub Total
A	Prototype 1 preparation	4	4
B	Prototype evaluation based on ergonomics, technology, aesthetic	4	4
C	Prototype evaluation based on eco friendly, usefulness, customer friendly	4	4
D	Presentation of prototype 1	4	4
E	Comparison of prototype	4	4
		Grand Total	**20**