

## **GE (IV.4.2) Design Thinking, Innovation and Entrepreneurial Pathways General Elective**

### 1. Credit Distribution of the Course

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
<b>GE (IV.4.2)</b>						
<b>Design Thinking, Innovation, and Entrepreneurial Pathways</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>UG</b>	<b>NIL</b>

### 2. Learning Objectives

The course provides both theoretical understanding and practical foundation in innovation, entrepreneurship and the role of design thinking in this endeavor. Advent of newer technologies opens new pedagogic practices, which in turn opens possibilities to develop new applications, products and services useful in teaching and educational administration. The course imparts knowledge and skills to develop new applications and take them to a wider user base, either through commercial or non-commercial pathways.

### 3. Learning Outcomes

- Explaining Design thinking as a working framework for user research, product/process development and iterative improvement, user testing and user adoption.
- Differentiate between Innovation vs invention, and IPR.
- Classify types of innovation and entrepreneurship.
- Analyze the nature and limitations of student or teacher entrepreneurship.
- Apply theories and practices of innovation and entrepreneurship.

### 4. Syllabus

**[30 hours]**

**Unit 1 Design Thinking** - Key concepts of design. Models of design thinking (honeycomb vs double diamond vs synergy). Empathy research, identifying user needs and validation. User persona and design brief. Methods of ideation and building solution space. Rapid prototyping. User Testing and Pilot. Iterative improvement. UX/UI designing. **[8 hours]**

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**Unit 2 Innovation** - Innovation vs Invention. Aspects of innovation. Innovation matrix. Diffusion theory of innovation and technology adoption curve. Theories of Innovation. Principles of innovation. Types of innovation. **[7 hours]**

**Unit 3 Entrepreneurship** - Traits of an entrepreneur. Theories of entrepreneurship. Types of Entrepreneurships. Classification of Entrepreneurship. Barriers to entrepreneurship. Opportunity and scope for entrepreneurship. Market research and unmet customer needs. Customer segment and total accessible market (TAM). **[8 hours]**

**Unit 4 Model & Product** - Minimum viable product and Business model canvas. Product/service development and IPR. Branding and product launch plan. Types of business enterprises and their legal compliances. Business pitch and funding. Resource allocation, growth and valley of death. **[7 hours]**

**5. Practicals** **[60 hours]**

- Case study of a design using DFV model (Desirability, Feasibility, Viability)
- Search a user problem using a synergy model.
- Draw empathy map and stakeholder map of the problem space.
- Ideate an exhaustive list of innovative solutions.
- Case study of Doblin's 10 types of innovation in the Indian market.
- Reconstruction of UX/UI of a successful e-commerce portal/app.
- Market research in search for an unmet consumer need and assess TAM.
- Project: Build a dummy startup: company documents, product brochure, branding document, business model canvas, business pitch.

## 6. Essential Readings

- Brown, T. (2020). *HBR's 10 must reads on Design Thinking*. Harvard Business Review Press.
- Drucker, P.F. (2013). *HBR's 10 must reads on Innovation*. Harvard Business Review Press.
- Drucker, P.F. (1985). *Innovation and Entrepreneurship*. Harper Business.
- Blank, S. & Dorf, B. (2020). *The Startup Owner's Manual: The step-by-step guide for building a great company*. Wiley

## 7. Suggestive Readings

- Christensen, C.M. (1997). *The Innovator's Dilemma*. Harvard Business Review Press.
- Thiel, P. & Masters, B. (2014). *Zero to One: Notes on Start Ups or How to build the Future*. Random House.
- Ries, E. (2011). *The Lean Startup*. Random House.