

DISCIPLINE SPECIFIC ELECTIVE
DSE HH 5E2: Design Thinking and Innovation

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES 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		
Design Thinking and Innovation	4	2	0	2	XII Pass	Appeared in Fundamentals of Resource Management

Learning Objectives

- To comprehend the Design Thinking concept for fostering innovation
- To understand concept and role of innovation in present day context
- To apply design thinking solutions individually and in team for maximizing business growth
- To instill a culture of design thinking to enhance innovation within an organization

Learning Outcomes

The students would be able to:

- Overcome cognitive fixedness and develop new mindset that integrates design thinking for innovation.
- Empathize and apply human centered design for seeking innovative solutions.
- Create the optimal environment and team dynamics to steer innovation and collaboration.
- Develop the capacity to design and test cutting-edge for customer-focused prototypes

SYLLABUS OF HH 5E1

THEORY
(Credits 2; Hours 30)

UNIT I: Innovation

10 Hours

This unit will help students to understand the concept of innovation and types and its dimensions

- Innovation: Concept, significance, types and process
- Innovation diffusion theory
- Innovation in organizations: Drivers and barriers, bottom up and top down approach, horizontal versus vertical approach
- Dimensions of innovation: Innovation eco-system in India, social Innovation, grassroots innovation, frugal innovation and global Innovation-global innovation index framework (GII)

UNIT II: Design thinking approaches and processes

12 Hours

The focus of this unit would be on developing the basic concepts of design thinking, business use of design thinking, mindset, approaches and processes.

- Design thinking : Concept, discipline, role and mindset
- Design Thinking Approaches: Empathy, Ethnography, Divergent thinking, convergent thinking, Visual thinking, Assumption testing, Prototyping and Time for learning and validation
- Design thinking resources: people, place, materials and organizational fit
- Design thinking processes: Double diamond process, Stanford d. school 5 stage process

UNIT III: Design thinking in practice

8 Hours

This unit will help students to gain insights about design thinking tools, methods and its application.

- Stages of designing for growth
- Design thinking tools and methods: visualization, journey mapping, value chain analysis, mind mapping, brain storming, concept development, assumption testing, customer co creation, rapid prototyping, launching
- Design thinking applications in organizations

PRACTICAL (Credits 2; Hours 60)

1. The foundation for innovation: Define users' needs and problems, identify and reframe the most game changing part of the problem and analyze the contextual environment for viable solution.
2. Ideate: Develop user focus ideas to identify new problems, and apply tools for innovative solutions, ideation through design thinking approaches and refine innovative ideas.
3. Develop an experimentation mindset: Combine ideas into complex innovation concepts, critique and strengthen concepts, guide prototyping by creating critical questions related to concept's desirability, feasibility and viability.
4. Implement: Assess developer and user perspectives for bias that may affect implementation, apply framework to strengthen communications about an innovation's value and reflect on management skills for sustaining a culture of innovation

Essential Readings:

- Soni, Pwan. (2020). Design your thinking: The Mindsets, toolsets and skillsets for creative problem solving
- Kahneman, Daniel. (2011). Thinking fast and slow
- Drucker, P. F. (2006). Innovation and entrepreneurship: Practice and principles. USA: Elsevier.70
- Roy, R. (2008) Entrepreneurship. New Delhi: Oxford University Press

Suggested Readings:

- Chesbrough, H. (2006). Open business model: How to thrive in the new innovation landscape. Harvard Business School Press.
- CS Prasad (2012), Small and Medium Enterprises in Global Perspective, New Century Publications, New Delhi

- Fagerberg, J., Mowery, D. C., & Nelson, R. R. (Ed.). (2006). The Oxford Handbook of Innovation. New Delhi: Oxford University Press.
- Kaplan, J. M. (.2006). Patterns of entrepreneurship. John Wiley & Son.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.