[22MEPS11]

Applied Design Thinking

LTPC

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Objectives:

- The course enables product innovators and early-stage startup founders to learn the customer development process.
- To familiarize with the tools & techniques & validate the inherent risks by linking their progress to customer- motivation, customer-commitment & customer- acceptance.
- To learn the system thinking concepts by reverse engineering technique.

Unit I Design Thinking Principles

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Exploring Human-centered Design - Understanding the Innovation process, discovering areas of opportunity, Interviewing & empathy-building techniques, Mitigate validation risk with FIR [Forge Innovation rubric] - Case studies

Unit II Customer-Centric Innovation

8

Importance of customer-centric innovation - Problem Validation and Customer Discovery - Understanding problem significance and problem incidence - Customer Validation. Target user, User persona & user stories. Activity: Customer development process - Customer interviews and field visit

Unit III Applied Design Thinking Tools

8

Concept of Minimum Usable Prototype [MUP] - MUP challenge brief - Designing & Crafting the value proposition - Designing and Testing Value Proposition; Design a compelling value proposition; Process, tools and techniques of Value Proposition Design

Unit IV Concept Generation

7

Solution Exploration, Concepts Generation and MUP design- Conceptualize the solution concept; explore, iterate and learn; build the right prototype; Assess capability, usability and feasibility. Systematic concept generation; evaluation technology alternatives and the solution concepts

Unit V System Thinking & Reverse Engineering

15

System Thinking, Understanding Systems, Examples and Understandings, Complex Systems, Reverse Engineering Methodology, Identify building blocks/Components - Re-Engineering a complex system

TOTAL: 45 PERIODS

Course Outcomes

At the end of the course, learners will be able to:

- Define & test various hypotheses to mitigate the inherent risks in product innovations.
- Design the solution concept based on the proposed value by exploring various alternate solutions to achieve value-price fit.
- Develop skills in empathizing, critical thinking, analyzing, storytelling & pitching
- Apply system thinking to reverse engineer a product/prototype and understand its internal correlations

Text Books

- Steve Blank, (2013), The four steps to epiphany: Successful strategies for products that win, Wiley.
- Alexander Osterwalder, Yves Pigneur, Gregory Bernarda, Alan Smith, Trish Papadakos, (2014), Value
- 3. Proposition Design: How to Create Products and Services Customers Want, Wiley
- 4. Donella H. Meadows, (2015), "Thinking in Systems -A Primer", Sustainability Institute.
- 5. Tim Brown,(2012) "Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation", Harper Business.

References

- 1. https://www.ideou.com/pages/design-thinking#process
- 2. https://blog.forgeforward.in/valuation-risk-versus-validation-risk-in-product-innovations-49f253ca8624
- 3. https://blog.forgeforward.in/product-innovation-rubric-adf5ebdfd356
- 4. https://blog.forgeforward.in/evaluating-product-innovations-e8178e58b86e
- 5. https://blog.forgeforward.in/user-guide-for-product-innovation-rubric-857181b253dd
- 6. https://blog.forgeforward.in/startup-failure-is-like-true-lie-7812cdfe9b85