Semester:	I	**Course Type:**	SDC		
Course Title: Innovation and Design Thinking Lab (IDEA Lab)					
Course Code:	**25IDTS01**			**Credits:**	01
Teaching Hours/Week (L:T:P:S)			0:0:2:1	**Total Hours:**	25
CIE Marks:	50	**SEE Marks:**	50	**Total Marks:**	100
SEE Type:	Practical/Presentation/Seminar			**Exam Hours:**	2

I. Course Objectives

This course will enable students:

- Familiarize students with the fundamentals of innovation, creativity, and design thinking approaches.
- Enable students to identify real-world problems and apply systematic design methodologies to develop feasible solutions.
- Encourage critical thinking, collaboration, and interdisciplinary teamwork in problem-solving.
- Provide hands-on exposure to idea generation, prototyping, and user-centered design processes.
- Develop the ability to analyze, test, and refine solutions through iterative design cycles.
- Foster an entrepreneurial mindset by connecting innovative ideas to potential applications, products, or services.
- Build communication and presentation skills to effectively articulate and demonstrate innovative solutions.

II. Teaching-Learning Process

- Activity Based Learning
- Group discussion, Presentations.
- One faculty member shall be assigned to group of 60 students or one division.
- Each group shall contain Min. 4 and Max. 6 students.
- Nature of the group shall be multidisciplinary.

III. COURSE CONTENT

Week 1, 2 & 3: Orientation and Team Formation

Week -1&2: Introduction to Social Entrepreneurship**,** Innovation and Design Thinking

Group discussion on What is **Innovation** vs **Invention**. Why **Design Thinking** is important. Brief about **5 stages**: Empathize – Define – Ideate – Prototype – Test.

Week -3: Innovation warm-up activities, forming interdisciplinary teams, Instructions about Next week activities

RBT Levels:

Week 4–5: Empathy and Field Exploration

Week-4&5: Field (any public places of student's interest Eg- Village, Government Office, Industry. R&D institute, NGO etc) visits, stakeholder interviews and interaction. Recording all interaction through handwritten in activity book prescribed by the University.

RBT Levels:

Week 6, 7 and 8: Problem Definition

Week-6: Documentation, categorization and Group discussion on interactions and problems/challenges.

Week-7&8: Problem framing using "How Might We" approach, Identification of social problems and user insights through affinity Clustering and Problem Tree. Mention of clearly defined challenge statements.

RBT Levels:

Week 9, 10 &11: Ideation Sprint

Week-9&10: Presentation by teams on Defined Problems, Brainstorming interactions and Mind Mapping.

Week-10: Idea Filtering - Shortlist of creative, eco -friendly and feasible ideas. Selection of one Suitable IDEA for next process, Designing/Structuring of Prototype model.

RBT Levels:

Week 12, 13 &14: Rapid Prototyping using Atal Idea Lab/Makers Space

Week-12&13: Building low-fidelity and working models using tools like Arduino, 3D printers,: Digital fabrication, electronics kits and recycled materials

Week-14: User testing, Feedback collection, Iteration - Observation Notes, Feedback Forms (Designing a business model for impact and scalability, if possible) Preparation of Draft of social venture plan

RBT Levels:

Week 15 &16: Final Demo and Social Pitch

Innovation showcase, Poster display, Project pitching to jury
Presentation of the project with impact with assessment, prototype, and sustainability plan

IV. COURSE OUTCOMES

At the end of the course students will be able to

CO1	Empathize with community problems and define meaningful challenges.
CO2	Apply design thinking principles and multidisciplinary skills to develop user-centric solutions.
CO3	Build and test basic prototypes using tools available in the Idea/Tinkering Lab or Makers Space.
CO4	Pitch socially relevant ideas with scalable models.
CO5	Collaborate effectively in diverse teams.

V. CO-PO-PSO MAPPING (H=3; M=2; L=1)

PO/ PSO	1	2	3	4	5	6	7	8	9	10	11	S1	S2	S 3
CO1						2								
CO2	2													
CO3	2					2		3						
CO4								3	3					
CO5								3	3					

Assessment Structure:

The assessment in each course is divided equally between Continuous Internal Evaluation (CIE) and the Semester End Examination (SEE), with each carrying 50% weightage.

- To qualify and become eligible to appear for SEE, in the **CIE**, a student must score at least **40% of 50 marks**, i.e., **20 marks**.
- To pass the **SEE**, a student must score at least **35% of 50 marks**, i.e., **18 marks**.

A student is considered to have **passed the course,** provided the combined total of **CIE and SEE is**

at least 40 out of 100 marks.

Continuous Internal Evaluation (CIE) –

CIE Marks allocation Parameters for Social Entrepreneurship, Innovation & Design Thinking using Idea/Tinkering Lab or Maker Space

CIE Parameters (50 Marks)

Sl. No.	CIE Component/Week	Marks	Description
1	Orientation Activities & Communication Skills	5	Participation in Week 1–3 orientation, communication and teamwork skill-building exercises.
2	Empathy & Field Exploration Documentation	10	Quality and completeness of field visit reflections, stakeholder interviews, and activity book.
3	Problem Definition and Framing	10	Clarity of challenge statements, use of "How Might We", Affinity Mapping, Problem Trees.
4	Ideation & Mind Mapping	5	Participation in brainstorming, mind mapping, idea filtering sessions.
5	Prototype Development & Iteration	10	Quality and creativity of prototype/model, user testing, feedback collection, iterations.
6	Final Presentation & Pitch	5	Project pitching, poster presentation, storytelling and scalability model.
7	Teamwork, Journal, and Engagement	5	Peer and mentor evaluation of participation, teamwork, journal updates.
8	Total CIE marks	50	Final CIE marks to be considered

***Minimum to Qualify for SEE: 20 out of 50 in CIE**

Semester End Examination (SEE) –

SEE to be conducted in batches where the students will exhibit their projects along with the presentation and Viva -voce. – 100 Marks

"SEE shall be conducted by one Internal and one External Examiner

Sl. No.	Evaluation Parameter	Marks	Details
1	Prototype / Solution Demonstration	30	Working functionality, creativity, use of lab tools, relevance to the problem.
2	Final Presentation / Social Pitch	20	Clarity, storytelling, problem-solution fit, communication, visual aids.
3	Business Model or Sustainability Plan	10	Feasibility, cost-effectiveness, scalability, and alignment with SDGs.
4	Viva Voce	20	Individual understanding, contribution, tools used, learning outcomes.
5	Documentation Report / Portfolio	20	Project report, reflection, team activity log, stakeholder input summaries.

Submission Requirements:

- Handwritten activity book with CIE marks and Final project report (Typed or Handwritten).
- Final presentation ppt/pdf (hard and soft copy).
- Prototype or working model [physical or conceptual (shall be drawn/sketched clearly on card sheet paper)].
- Peer/team feedback and reflection entries (if applicable).