Amrita Vishwa Vidyapeetham
Live-in-Labs® I (15LIV390)
B.Tech. Semester V Course Syllabus

Course Objectives

1. Understand the principles of Sustainable Development, Human Centered Design, Participatory Rural Appraisal, Sustainable Change Agents, Ethnographic Action Research and User Need Assessment.
2. Learn the various tools, techniques and templates used in the mentioned concepts to identify the challenges in the villages.
3. Design a sustainable technological intervention for the identified challenge.

Course Outcome

On the successful completion of the Course, the student will be able to –
CO1: Understand the basic concepts and principles of sustainable development
CO2: Learn ethnographic research and utilise the methodologies to enhance participatory engagement
CO3: Prioritize challenges and derive constraints using Participatory Rural Appraisal
CO4: Identify and formulate the research challenges in rural communities
CO5: Design solutions using human centered approach

CO-PO Mapping

PO/PSO / CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO11	PO12
CO1			3								3	3
CO2		3		3		1	1		3	3		3
CO3		3						3	3	3		
CO4		3					1		3	3		3
CO5	3		3				3	3	3	3		3

1 – Substantial; 2 – Moderate; 3 - Strong

Syllabus

Unit 1
Sustainable Development I
Introduction and History. Basic Concepts, Strategies and Measurement. United Nations Initiatives and Sustainable Development Goals.

Unit 2
Participatory Rural Appraisal (PRA)
Concept, Principles and Philosophy of PRA. Scope and Dimensions of PRA. Important Tools for PRA. Application of PRA.

Unit 3
Human Centered Design I (HCD)
Fundamentals of Human Centered Design. Design Process. User Experience. User Research. Data Analysis. Ideation.

Unit 4

Sustainable Social Change
Case Study. Introduction. Understanding and identifying the Community Communication Channels

Text Book(s)
There are no required textbooks for this course; all articles, reports and research papers assigned as required reading will be shared with the students by Live-in-Labs® faculties.

Reference(s)

1. *Ramesh, Maneesha Vinodini, Renjith Mohan, and Soumya Menon. "Live-in-Labs: Rapid translational research and implementation-based program for rural development in India." In 2016 IEEE Global Humanitarian Technology Conference (GHTC), pp. 164-171. IEEE, 2016.*
2. *Kadiveti, Hemasagar, Sahithi Eleshwaram, Renjith Mohan, S. Ariprasath, Krishna Nandanan, SG Divya Sharma, and B. Siddharth. "Water Management Through Integrated Technologies, a Sustainable Approach for Village Pandori, India." In 2019 IEEE R10 Humanitarian Technology Conference (R10-HTC)(47129), pp. 180-185. IEEE, 2019.*
3. *Akella, Devi. "Learning together: Kolb's experiential theory and its application." Journal of Management & Organization 16, no. 1 (2010): 100-112.*
4. *Harith, J., Sreeram Kongeseri, Balu M. Menon, J. V. Sivaprasad, P. Aswathi, and Rao R. Bhavani. "Exploring Digital Tool for Participatory Rural Appraisal." International Journal of Pure and Applied Mathematics 119, no. 12 (2018): 2787-2810.*
5. *Vechakul, Jessica, "Human-Centered Design for Social Impact: Case Studies of IDEO.org and the International Development Design Summit." UC Berkeley Electronic Theses and Dissertations*
6. *Sustainable Development Strategies: A Resource Book. Organization for Economic Co-operation and Development, Paris and United Nations Development Program, New York.*
7. *Field Guide to Human-Centered Design. By IDEO.org. 1st Edition © 2015. ISBN: 978-0-9914063-1-9*

Evaluation Pattern

Assessment	**Marks**
Workshop (Group Participation)	15
Village Visit Assignments & Reports	15
Problem Identification and Assessment	15
Ideation: Defining the Needs, Proposed Designs & Review	20
Poster Presentation	10
Research Paper Submission	25
Total	**100**
Attendance (To be added separately)	5
Grand Total	**105**