AIM
The purpose of this course is two-fold. First, to develop the theoretical and knowledge foundation on the fundamentals of ecology and the principles of Participatory Rural Appraisal (PRA) and Human-centered Design (HCD)

Second, the students should be able to apply the mentioned concepts in the rural communities based on which ethnographic research, community ecosystem analyzation, rural community appraisal, and community challenge identification can be confirmed. This will enable students to solidify their research problem and devise methodologies to co-develop interventions in the next phase of their research.

1. **Course Learning Outcome:**
   Upon successful completion of the course, the student should be able to:
   - Identify, survey, map, and understand resources available in rural communities from an ecological sustainability perspective
   - Implement ethnographic research in rural communities to understand challenges prevalent in the communities, understand the inter-relationships between various factors and drivers of the ecosystem, experience and embrace the values, culture, traditions, and systems prevalent on the communities.
   - Develop community specific participatory engagement models.
   - Ability to identify and analyze community challenges
   - Identify and interpret community experiences using HCD approach
   - Identify and formulate the research challenges in rural communities
   - Develop measures to resolve conflicts and trade-offs
   - Monitor and evaluate local resources through community participation
   - Plan and empower the community to derive at decisions

2. **Learning Outcomes**
   - **Knowledge and Understanding**
     - i. Understand the basics of ecological sustainability, PRA, and HCD.
     - ii. Fundamentals of mapping and hand-on with GIS tools
     - iii. In depth learning and analysis of methods that help identify the challenges of rural communities.
     - iv. Develop an encompassing understanding of community resources.
     - v. Understand the cultural and traditional practices of the community and their relation with ecological sustainability.
     - vi. Ability to understand the livelihood opportunities of rural communities through participatory methods.
     - vii. Ability to live within the rural communities and adopt their routine.
   - **Competence and Skills**
     - i. Develop user personas based on effective understanding of user goals, tasks, and pain points.
     - ii. Develop Spatial thinking to support sustainable development goals
     - iii. Understand and capture temporal perspectives in sustainable development
     - iv. Develop a detailed user scenario based on the in-depth understanding of user pain points and pitfall moments.
     - v. To enhance critical thinking skills and evaluation of information sources
vi. To be able to identify relevant stakeholders that are directly associated with community challenges and develop ways of engagement with the community.

vii. Ability to analyze the cultural and traditional practices of the community

viii. Become critical and proactive thinkers and, with this, successful leaders in the field

3. Syllabus

Ecosystem & Trade-offs to Sustainable Development: Types of ecosystems & interrelationships, factors and trade-offs influencing sustainability of ecosystems. Case study discussion on sustainability & its factors, requirements for sustainability: food security and agriculture, renewable resources - water and energy, non-renewable resources.

Participatory Rural Appraisal (PRA) - Concept; Principles and Philosophy of PRA, Scope and Dimensions of PRA. Important Tools for PRA - Resource Map, Transect Walk, Seasonal Calendar, Income Expenditure Matrix, Inflow-outflow, Venn Diagram, Problem Tree, and Brainstorming. Application of PRA.


4. Text Books/Reference Material