

RDL730 Technology Alternatives for Rural Development

Course Credits : 3-0-0

Course Slot & Timings : Slot B - Mondays & Thursdays 9:30 AM - 11:00 AM on MS Teams

Course Instructor : V M Chariar

Instructor Website : [https:// web.iitd.ac.in/~chariarv](https://web.iitd.ac.in/~chariarv)

Instructor Email : chariarv@rdat.iitd.ac.in

Course TA : Shivani

TA Email : shivani@rdat.iitd.ac.in

Course Objective : To introduce the paradigm of alternative and appropriate technologies to enable rural communities to creatively prosper in the framework of Samajikta (Social Cohesion), Parasparata (Complementarity), Samridhi (Natural Abundance) and Saundarya Drishti (Aesthetics & Beauty)

MODULE 1 : COURSE INTRO

Experiential Activity

Introduction to Desi, Vernacular, Local and Grassroots

Why are Appropriate Technologies (AT) relevant ?

Short Reading of Foundational Articles

Educational Documentary Film 1

Assignment 1 (4 Marks)

MODULE 2 : AT IN AGRICULTURE

Role of Agriculture in Development

Learnings from Green Revolution

Case Study 1 : System for Rice Intensification

Organic Farming, LEISA, Composting, Biofertilisers & Biopesticides

Educational Documentary Film 2

Assignment 2 (4 Marks)

MODULE 3 : AT IN ARTISANAL SECTOR

Role of Artisanal Sector in Development

Learnings from Handloom & Handicrafts Policy

Case Study 2 : Handloom Sector in India

Decentralised Innovations, Microspinning, Lean Manufacturing, Agri-Artisanal Linkages

Educational Documentary Film 3

Assignment 3 (4 Marks)

Minor 1 (20 Marks)

MODULE 4 : AT IN WATER AND SANITATION

Role of water sanitation in development

Domestic systems of water supply and conservation

Decentralized water & waste management

Educational Documentary Film 4

Assignment 4 (4 Marks)

MODULE 5 : AT IN HEALTH

Human Health
Livestock Health
Educational Documentary Film 5

Assignment 5 (4 Marks)

MODULE 6 : AT IN RURAL HOUSING

Role of Housing & Habitat in Rural Development
Innovations in Green Building Materials
Disaster Resilient Housing & Regenerative Housing Framework
Educational Documentary Film 6

MODULE 7 : ENTREPRENEURSHIP & RURAL DEVELOPMENT

Frugal Innovations
Creating your Vibrant Social Enterprise
Value & Wealth Generation at the Grassroots
Educational Documentary Film 7

Impact Hackathon

MODULE 8 : TERM PAPER RESEARCH LEVEL

Individual Knowledge Sharing by learner. Each learner submits a written Term Paper (7500 Words Original Article checked for originality on Turnitin) & makes a research presentation for 20 minutes on a topic.

Term Paper Research Level (20 Marks)

Module 9 : SUMMARY & CONCLUSIONS

Reminder of some complex challenges
Creative & Innovative Possibilities
New Questions & Paths

Major (40 Marks)

COURSE ASSESSMENTS

Minor 20 Marks
Assignments 20 Marks
7500 Words Research Level Term Paper 20 Marks
Major 40 Marks

Audit Pass : 40%

Minimum Performance for D Grade : 30 %

ATTENDANCE POLICY

Minimum Attendance of 75% of the classes to be held this semester is expected. Merely being logged on MS Teams will not be treated as participation. In each class, there would be 30 Minutes of discussion in which each learner who is present is encouraged to participate by asking questions, sharing perspective, etc.

REFERENCES & READING MATERIAL

1. Rachel Carson, Silent Spring, Other India Press
2. Vandana Shiva, Monocultures of the Mind, Third World Network
3. Vandana Shiva, Violence of the Green Revolution, Third World Network
4. Sunil Sahasrabudhey, Gandhi's Challenge to Modern Science, Other India Press
5. Anupam Mishra, Aaj bhi khare hain Talaab, Gandhi Peace Foundation, Delhi
6. P Sainath, Everybody loves a Good Drought, Penguin Books
7. Anil Gupta, Grassroot Innovations, Penguin Randomhouse
8. Ajit Kanitkar and Shambu Prasad, Farming Futures : Emerging Social Enterprises in India, Authors UpFront
9. Masanobu Fukuoka, One Straw Revolution, Other India Press
10. M P Ranjan & Aditi Ranjan, Handmade in India: A Geographic Encyclopedia of Indian Handicrafts, Abbeville Press