

GUJARAT TECHNOLOGICAL UNIVERSITY
BRANCH NAME: B. Arch
SUBJECT NAME: ECOLOGY AND ENVIRONMENT
SUBJECT CODE: 2X95012
5th Year: Semester-IX

Pre requisite: The aim of this course is to make the students understand the various environmental management systems

Rationale: To make the students understand the importance of land planning for sustainability, resource planning and allocation and protection of natural resources and their use for sustainability

Teaching and Assessment Scheme:

Teaching Scheme			Credits	Examination Marks				Total Marks	University Exam Type
Field work	Lectures	Studio	C	External Exam		Internal Exam		100	VIVA
1	2	1	04	(ESE) Theory	(ESE) Viva	(PA) Theory	(PA) Viva		
				00	50	00	50		

Content:

SR No	Content	Total Hours	Weight age
1	Introduction: This module concentrates on Ecosystems, Soil types and geology, Microclimate generation. Site planning for efficient drainage; understanding drainage pattern and watershed area, water conservation strategies (rain water harvesting, Percolation pits etc.)	12	20%
2	Introduction to watersheds and ground water management. Relationship between site features and design requirements. Understanding contours and their characteristics.	12	20%
3	Environmental management: Environmental resource management Development of environmental management systems with focus on ISO14000 Implementation of environmental management systems Energy management	12	20%
4	Ecological Land Planning: Preservation and protection of important sensitive areas Rehabilitation of degraded sites Development of sites/land in accordance to their environmental properties. Plant Material and its importance in Eco System preservation.	16	20%
5	Site engineering principles: grading, drainage, earthwork, and road alignment: their interaction with landscape architecture design. Planting design through the ages - a historic perspective, Surface Drainage: Site planning for efficient drainage, preservation and protection of important sensitive areas.	12	20%

*: indicative

References:

1. Cerver Francisco a: world of landscape architects: world of environmental design.
2. Ganduxer, Cerver Francisco Asensio: Environmental restoration landscape.
3. Cever Francisco a: Elements of landscape world of environment.
4. Mukherjee Pippa: Nature Guides Common Trees Of India.
5. Worldwide Fund For Nature Papanek Victor: Green Imperative Ecology Ethics in Design.
6. Thames and Hudson, Randhawa M S: Flowering Trees. India Environmental analysis for land use and site planning. By Marsh Williams M. (MC Grew hill (1978) Climate Change and Biodiversity-Edited by Thomas

Lovejoy and Lee Hannah-TERI publication.

7. Landscape Planning and Environmental Applications-By M.W.Marsh River Ecology-by Prakash Gole

List of Projects/Assignments*:

Lectures/Tutorial work shall consist of presentations on various topics of the subject. AV projects may be introduced to students for documenting best practices and advances through case studies. A group discussion or forum may be organized for discussion on various aspects of the subject.

*- this is suggestive for common purpose. Faculty may decide on this, considering student group and institution philosophy.