

GUJARAT TECHNOLOGICAL UNIVERSITY
Syllabus for M. Arch - 2019
FIRST SEMESTER
Subject: Ecological Planning

Course Code: X16103

Credits: 2

Course Objective: Understanding ecology and environmental issues for sustainable planning and ecological restoration

Course Contents:

This Module concentrates on Ecological Planning, 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.) Introduction to watersheds and ground water management. Relationship between site features and design requirements. Understanding contours and their characteristics. 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, Rehabilitation of degraded sites. Development of sites/ land in accordance to their environmental properties. Plant Material and its importance in Eco System preservation

References:

1. Gray, O., Robinette, "Landscape Planning for Energy Conservation", Van Nostrand Reinhold, New York, 1984.
2. Geiger, R. The Climate near the Ground Harvard University Press, Cambridge, 1965.
3. McPherson, E. G. "Energy Conserving site Design" American Society of Landscape Architects, 1984.
4. Mesh, W. M., "Landscape Planning Environmental Applications", John Wiley & Sons Inc., New York, 1991.
5. Robers D. Brown, Terry J. Gillespie, "Microclimatic Landscape Design", John Wiley & Sons, Inc., New York.
6. Living Systems | Innovative Materials and Technologies for Landscape Architecture, Authors: Liat Margolis, Alexander Robinson, Publisher: Birkhäuser Architecture, Date of publication: June 2007, ISBN 978-3764377007