

GUJARAT TECHNOLOGICAL UNIVERSITY
M. E. Construction Management (Branch Code - 49)

Year – II (Semester – III) (W.E.F. June 2013)

Subject: Eco Friendly Construction (734904)

Sr. No.	Course Content	hours
1	Eco-friendly Planning Energy Efficient Shelters, Housing Options Today, Site Planning and Use of On-Site Resources, Smaller Houses that Utilize Space and Materials More Efficiently, Working With Nature, Balancing Energy and Aesthetic Needs	16
2	Eco-friendly Materials Construction materials –locally available building materials- Soil, Fly ash, Ferrocement, Lime, Fibers, Stone Dust, Red mud, Gypsum, Alternate Wood, Polymer-ADOBE, Cob Rammed Earthlight Clay, Straw-Bale, Bamboo, Agro-Industrial Waste, Structural Properties Of Alternate Building Materials, Innovative Materials of CBRI,	16
3	Cost Effective Construction Equipments Equipments-Brick moulding machine, Stabilized soil block making machine and plants for the manufacturing of concrete blocks, M.C.R. tile making machine, Ferrocement wall panel & Roofing channel making machine, R.C.C. Chaukhat making machine.	12
4	Cost Effective Construction Techniques Construction Techniques-Innovative Techniques developed by CBRI, SERC for foundation, superstructure, roofing, pre-fabricated construction techniques, advantage of pre-fabrication areas where pre-fabrication can be introduced, modular contained earth, earth bag construction	12

Tutorials:-

1. Assignment work is based on above subject contents.

References:

1. Lynne, Cassandra Adams “*Alternative Construction: Contemporary Natural Building Methods*”, Soft cover, Wiley & Sons Australia, Limited, John,2005
2. Eugene Eccli- “*Low Cost, Energy efficient shelter for owner & builder*”, Rodale Press, 1976
3. Givoni, “*Man, Climate, Architecture*”, Van Nostrand, New York, 1976.
4. Charles J. Kibert, *Sustainable Construction: Green Building Design and Delivery*, John Wiley &
5. Sons,2005