

EAR763 **A) GREEN ARCHITECTURE**

Objectives: To familiarize the students with the understanding of recent concepts in building technology and environmental design pertaining to sustainability.

Module-1

1. Ecological building: concept.
2. Green architecture: concept, technologies, (site efficiency, energy efficiency, water efficiency, material efficiency, indoor environmental quality enhancement, water reduction), energy rating of building materials, rainwater harvesting.
3. Sustainable consulting LEED & energy star for homes.

Module-2

1. Energy classification, sources, utilization.
2. Principles of energy conservation, non-conventional energy and its utility

Module-3

1. Passive solar architecture:
 - a. Passive solar heating: distribution of energy in building.
 - b. Passive solar cooling: principles, standard, technologies.
 - c. Site specific consideration during design.
 - d. Passive solar lighting.
 - e. Photovoltaic module: application in buildings.
2. Low energy house: concept, technology- passive solar building design.