

**K L UNIVERSITY**  
**GREEN BUILDINGS (CE C612)**

**SYLLABUS**

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**UNIT – 1: Introduction**

What is Green Building, Why to go for Green Building, Benefits of Green Buildings, Green Building Materials and Equipment in India, What are key Requisites for Constructing a Green Building, Important Sustainable features for Green Building,

**UNIT – 2: Green Building Concepts And Practices**

Indian Green Building Council, Green Building Moment in India, Benefits Experienced in Green Buildings, Launch of Green Building Rating Systems, Residential Sector, Market Transformation; **Green Building Opportunities And Benefits:** Opportunities of Green Building, Green Building Features, Material and Resources, Water Efficiency, Optimum Energy Efficiency, Typical Energy Saving Approach in Buildings, LEED India Rating System and Energy Efficiency,

**UNIT-3: Green Building Design**

Introduction, Reduction in Energy Demand, Onsite Sources and Sinks, Maximise System Efficiency, Steps to Reduce Energy Demand and Use Onsite Sources and Sinks, Use of Renewable Energy Sources. Ecofriendly captive power generation for factory, Building requirement,

**UNIT- 4: Air Conditioning**

Introduction,CII Godrej Green business centre,Design philosophy,Design interventions,Energy modeling, HVAC System design,Chiller selection,pump selection,Selection of cooling towers,Selection of air handing units,Precooling of fresh air,Interior lighting system,Key feature of the building. Eco-friendly captive power generation for factory,Building requirement.

**UNIT –5: Material Conservation**

Handling of non process waste, waste reduction during construction,materials with recycled content,local materials,material reuse,certified wood ,Rapidly renewable building materials and furniture; **Indoor Environment Quality And Occupational Health:** Air conditioning, Indore air quality, Sick building syndrome, Tobacco smoke control, Minimum fresh air requirements avoid use of asbestos in the building, improved fresh air ventilation, Measure of IAQ, Reasons for poor IAQ, Measures to achieve Acceptable IAQ levels,

**Text Books:**

1. Handbook on Green Practices published by Indian Society of Heating Refrigerating and Air conditioning Engineers, 2009.
2. Green Building Hand Book by Tomwoolley and Samkimings, 2009.

**Recommended References:**

1. Complete Guide to Green Buildings by Trish riley
2. Standard for the design for High Performance Green Buildings by Kent Peterson, 2009