

CE/BOS/CE E31/0210

K L UNIVERSITY
GREEN BUILDINGS (09 - CE E31)

SYLLABUS

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UNIT – 1 Introduction to Green Buildings

Green Buildings, Global warming, requirement of Green Building, Benefits of Green Buildings, Requisites for Constructing a Green Building, sustainable construction focus point: site, water, energy, material, indoor air quality, construction procedures

UNIT – 2 Indian Green Building Council

Introduction to IGBC green homes, Benefits of IGBC, IGBC green home rating system, introduction to USGBC, LEED rating system, procedure to get IGBC certification

UNIT – 3 Green Building Design:

Site Issues: site analysis and design, site development and layout

Water Issues: watershed protection, drainage of concentrated Runoff, water efficiency and conservation, rain water harvesting, water reclamation

Sustainable Materials: Reduce / Reuse / Recycle, Natural Sources, concrete, masonry, metals, wood and plastic, finishes

UNIT – 4 Passive Solar Design

Passive solar design, Day lighting, Building envelope, Renewable energy,

Construction Process and Maintenance of Green Building: Environmental construction guidelines, building operations and maintenance

UNIT – 5 Indoor Environmental Quality

Significance, design principle, ventilation control, occupant activity control, significance of acoustics.

Economics of Green Homes: Economics of green buildings, Selecting environmentally and economically balanced building materials, Project cost, Income and expenses.

TEXT BOOKS:

1. Sustainable building technical manual- Green building design, constructions and operation; Produced by Public Technology Inc., US Green Building Council.
2. Green homes by R.K .Gautham, BS publications.
3. IGBC Green homes rating system Version 1.0 – A bridged reference guide

REFERENCES:

1. Green Building A Basic Guide to Building and Remodeling Sustainably; Tree Hugger Consulting.
2. Green Building Handbook, Volume 1, Tom Woolley, Sam Kimmins, Paul Harrison and Rob Harrison; E & FN Spon, an imprint of Thomson Science & Professional

3. Green BIM: Successful Sustainable Design with Building Information Modeling, Eddy Krygiel BradleyNies, Willy publishing inc.