K L UNIVERSITY
GREEN BUILDINGS (11 - CE 330)

Pre – requisite: NIL

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3	0	0	3

SYLLABUS

Green Buildings, Green Building Principles, Benefits of green building Global warming, requirement of Green Building, Rating Systems – IGBC, GRIHA, USGBC, LEED, BREEAM, CASBEE, GBTool, HK–Beam, Requisites for Constructing a Green Building, sustainable construction focus point: site, water, energy, material, indoor air quality, construction procedures. **Rating systems in India**, IGBC green home rating system, Benefits of IGBC, procedure to get IGBC certification, procedure to become IGBC certified engineering professional, GRIHA ratings, procedure to get GRIHA certification. **Site issues**: site analysis and design, site development and layout, Building and Site Requirements, Transportation, Plant Materials and Management. **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 and green paints. **Passive solar design**, Day lighting, Building envelope, Renewable energy, Significance, design principle, ventilation control, occupant activity control, significance of acoustics. **Environmental construction guidelines**, building operations and maintenance. **Economics of green buildings**, Selecting environmentally and economically balanced building materials, Project cost, Income and expenses.

TEXT BOOKS:

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

REFERENCE BOOKS:

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, Bradley Nies, Willy publishing Inc.