

Department of Civil Engineering	
Govt. Polytechnic for Women Rehahn	
Distt. – Kangra (H.P.) – 176022	
<b>LESSON PLAN</b>	
Program Name	Civil Engineering
Subject Name	Green Building and Energy Conservation
Subject Code	CEPE303
Semester	<b>5th Semester</b>
Subject Teacher Name	Er. Amish Rehania

Sr. No.	Subject Name	Study scheme (Hrs/Week)		Marks in Evaluation Scheme					
		Th	DCS	Internal Assessment			External Assessment		
				Th	Pr	Total	Th	Pr	Total
1	Green Building and Energy Conservation	2	1	40	-	40	60	-	60

Reference Books

O.P. Gupta, Energy Technology, Khanna Publishing House, New Delhi

Chauhan, D S Sreevasthava, S K., Non-conventional Energy Resources, New Age International Publishers, New Delhi

- CO – 1 Identify various requirements for green building.
- CO – 2 Use different steps in environmental impact assessment.
- CO – 3 Relate the construction of green building with prevailing energy conservation policy and regulations
- CO – 4 Focus on criteria related to particular rating system for assessment of particular Green building.

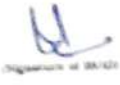
	Name of Topic	Proposed Date	Actual Date	Remarks	
1	Definition of Green Building, Benefits of Green building	12-08-2024			
2	Components/features of Green Building, Site selection,	14-08-2024			
3	Unit I: Introduction to Green Building and Design Features	17-08-2024			
4					Site selection, Energy Efficiency, Water efficiency
5					Material Efficiency, Indoor Air Quality.
6					Site selection strategies Landscaping, building form, orientation
7					Advanced passive heating and cooling techniques
8					Waste reduction during construction
9					Energy Audit: Meaning,
10	Unit-II Energy Audit and Environmental Impact Assessment (EIA)	31-08-2024			
11					Necessity, Procedures,
12					Types, Energy Management Programs
13					Environmental Impact Assessment (EIA):
14					Introduction, EIA regulations
15					Steps in environmental impact assessment process,
16					<i>Class test -I</i>
17					Benefits of EIA, Limitations of EIA
18					Environmental clearance for the civil engineering projects.
19					Renewable Energy Resources: Solar Energy, Wind Energy, Ocean Energy, Hydro Energy, Biomass Energy.
20	Non-renewable Energy Resources: Coal, Petroleum, Natural Gas, Nuclear Energy, Chemical Sources of Energy, Fuel Cells, Hydrogen, Bio fuels.	25-09-2024			
		28-09-2024			

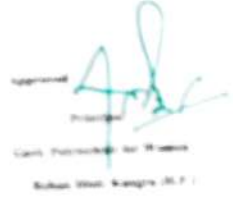
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1	Unit: III Energy and Energy conservation	Energy conservation Introduction, Specific objectives, present scenario	30-09-2024	
2		Need of energy conservation	05-10-2024	
3		Need of energy conservation	07-10-2024	
4		LEED India Rating System and Energy Efficiency	09-10-2024	
5		LEED India Rating System and Energy Efficiency	14-10-2024	
6	Unit: IV Green Building	Class test 2	16-10-2024	
7		Principles: Principles and planning of Green building	19-10-2024	
8		Features: Salient features of Green Building	21-10-2024	
9		Environmental design (ED) strategies for building construction	23-10-2024	
10		Process: Improvement in environmental quality in civil structure Civil Engineering Curriculum Structure 118	26-10-2024	
11			02-11-2024	
12		Materials: Green building materials and products- Bamboo, Rice husk ash concrete	04-11-2024	
13		Rice husk ash concrete, plastic bricks, Bagasse (Sugar cane) particle board,	06-11-2024	
14		Insulated concrete forms. Reuse of waste materials -Plastic, rubber, Newspaper wood, Nontoxic paint, Green roofing	11-11-2024	
15		House test	12-14(-11-2024)	
16	Unit V Rating System	Introduction to (LEED) criteria,	16-11-2024	
17		Indian Green Building council (IGBC) Green rating	18-11-2024	
18		Green Rating for Integrated Habitat Assessment (GRHA) criteria	20-11-2024	
19		Heating Ventilation Air Conditioning (HVAC) unit in green Building	23-11-2024	
20		Functions of Government organization working for Energy conservation and Audit(ECA)-	25-11-2024	
21		National Productivity council(NPC)	27-11-2024	
22		Ministry of New and Renewable Energy (MNRE)	30-11-2024	
23		Bureau of Energy efficiency (BEE)	02-12-2024	

Sl. No. of Unit	Syllabus for Term	Proposed Date	Actual Date	Remarks
Class Test - I	Unit - I	11-09-2024		
Class Test - II	Unit 2 and 3 (not done)	19-10-2024		
House Test - I	unit - 4	12-11-2024		

  
Head of Institution

  
Signature of BMS

Approved  
  
Chairperson  
Sulabha Devi, Bangalore (M.P.)