Course title: Building Energy Management and Green Building			
Course code: DSE 113	**No. of credits:** 3	L-T-P:39-6-0	**Learning hours:** 45
Pre-requisite course code and title (if any): N.A.			
Department: Sustainable Engineering			
Course coordinator: Dr. Ramkishore Singh		**Course instructor(s):** Dr. Ramkishore Singh	
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Course type: Core		**Course offered in:** Semester 2	

Course description:

This course has been designed to make the students versed about building energy consumption nationally and globally, its impact on the climate change and vice-versa, passive and active energy reducing strategies and systems, building energy management smart solutions. Further, students will learn about Energy conservation building codes and its recommendation for improving energy efficiency of the buildings, Green Buildings rating tools and procedure for developing green buildings

Course objectives:

1. To get students learn and remember about the energy consumption in different process in the buildings.
2. To learn, understand the passive and active strategies and system as well as be able to apply for lowering building energy use in buildings.
3. To evaluate the impact of embodied energy of construction materials on the overall building energy consumption and indoor thermal comfort.
4. To learn and understand the procedure for applying to quantify energy savings in buildings.

5. To understand green building rating tools and to implement strategies for creating/achieving the green building status.

Evaluation criteria

Assignment1: 10% (after Module 1-4)
Assignment 2: 10% (after Modules 5-7)
Minor test 1: 15% (after Module 3)
Minor test 2: 15% (after Module 6)
Major test: 50% (after all module)

Learning outcomes:

This course inculcates the skills that shall make the students to:

1. be able to understand, analyse the buildings energy consumption and impact on climate change.
2. learn and remember about the factors that affect human comforts and ensuring indoor comfort conditions.
3. be able to evaluate energy and heat transfer from different components of buildings.
4. be able to understand and create/implement the passive and active techniques for reducing energy consumption in buildings.
5. be able to evaluate and quantify the energy saving potential in buildings.
6. learn recommendations and mandatory requirement for energy conservation through energy conservation codes and their implementation
7. learn about green rating tools and their implementation procedure and creating green buildings.