PEHD5102 ENERGY CONSERVATION (3-0-0)

Module 1 - Concept of energy, Introduction to various forms of energy used in buildings (heat, light, sound, etc). Sources of energy, renewable sources, non-renewable sources, Electrical generators. Energy Production/convention, distribution, consumption, storage, waste and control.

Module 2 - Alternative sources of energy
Solar - [Solar photovoltaic power system, Solar thermal system], Wind, Bio-energy, Free energy from earth and water.
Introduction to Nuclear energy. Energy economics, energy management and intelligent building system

Module 3 - Evaluation of the effectiveness of energy utilization. Energy efficient building design in micro and macro level. Zero energy building.

Module 4 - Integrated energy systems for – Rural community
- Towns, suburbs and cities
- Tall buildings

References:

1. Energy Engineering and Management by William J Coad
2. MiliMajunder, Teri – Energy-Efficient Bldg in India – Thomson Press, New Delhi -2001
3. J K Nayak & others, Energy Systems Energy Group,- Isa Annal of Solar Architecture.
4. Arvind Krishnan & Others – Climate Responsive Architecture, Tata Mcgraw Hill New Delhi 2001
5. James D Ritchie - Successful Alternate Energy Methods – Structures Publishing Co. Michigan 1980
6. George Basid& Others - Energy Performance of Building – CRC Press, Florida 1984
7. Ralph M Lebens – Passive Solar Architecture in Europe – 2, Architecture Press, London 1983.
8. Bill Baker – How to beat the Energy Crisis and Still Live in Style – G P Putnarms Sons, New York 1979.