EE-405 (Energy Audit and Management)

L-T-P: 2-0-0

Unit 1: Energy scenario

Global energy scenario, energy scenario in India, gap between demand &supply, strategies for minimization of energy gap

Unit 2: Energy Efficiency

Distribution and transformer losses, and strategies for minimization of losses, Power factor improvement and its benefit, Selection and location of capacitors, Performance assessment of PF capacitors

Unit 3: Concept of Energy Management

Concept of energy management, strategies for energy management industrial, commercial and domestic sector

Unit 4: Energy Audit

Energy audit aim, Energy flow diagram, Strategy of Energy audit, elements, Measurements, Energy economic analysis, Evaluation of energy conserving opportunities, case studies for industrial and commercial units

Unit 5: Energy Efficient Technology

Energy efficient machine, transmission, equipment and accessories, case studies of use of energy efficient technology and the befit- cost analysis, Electricity billing, Electrical load management and maximum demand control

Text Books:

1. Clive B., "Energy: Management, Supply and Conservation", Elsevier Ltd. 2009
2. Michael F. H., "New Technologies for Energy Efficiency", Taylor & Francis 2005

Reference Book:

1. Albert T., William J. Y., Terry N., "Handbook of Energy Audits", The FairmountPress, 2009

2. Krentz, J. H.: Energy Conservation and Utilisation , Allyn and Bacur Inc., 1976.

3. Amlan Chakrabarti: Energy Engineering and Management, PHI, Eastern Economy Edition, 2012.