RCETEEAC04–ENERGY AUDITING

Objectives:

- To facilitate the students to achieve a clear conceptual understanding of technical and commercial aspects of energy conservation and energy auditing.
- To enable the students to develop managerial skills to assess feasibility of alternative approaches and drive strategies regarding energy conservation and energy auditing.
- To enable the students to exhibit the advocacy of strategic and policy recommendations on energy conservation and energy auditing.
- To impart basic knowledge to the students about current energy scenario, energy conservation, audit and management.

  To inculcate the student's systematic knowledge and skill about assessing the energy efficiency, energy auditing and energy management

Syllabus:

UNIT 1 Energy consumption – Energy reserves – Energy policies – Energy Auditing – Energy conservation schemes – Industrial energy use – Energy index – Cost index – Representation of energy consumption: Pie charts – Sankey diagrams – Load Profile- Energy auditing: General Auditing, Detailed Energy Audit.

UNIT 2 Digital Energy Meter – Data loggers – Thermo couples – Pyranometer – Lux meters – Tong testers – Power analyzers – Power factor – effects with non-linear loads – effect of harmonics on power factor – Power Factor Improvement – Capacitor rating – Effects of power factor improvements – Electric lighting – Types of lighting – Luminaries – Energy efficient lighting.

UNIT 3 Costing Techniques – break-even charts – sources of capital and hire charges – capital recovery – depreciation – budgeting and standard costing – charging energy – cash flow diagrams and activity charts, Financial appraisal and profitability - summary of investment appraisal techniques – Cost optimization.