Course Structure

- **Module -I** (3 lectures, 6 contact hours)
  - Principle of Conservation of Energy → Demonstration of concept through a few practical systems. (1 lecture, 2 contact hours)
  - General Philosophy of Energy Systems (Components and System Architecture) (2 lectures, 4 contact hours)

- **Module -II** (4 lectures, 8 contact hours)
  - Advances in Nuclear Energy Systems (1 lecture, 2 contact hours)
  - High Efficiency Conventional Energy Conversion Systems, viz. Ultra Supercritical and Advanced Ultra-Supercritical Thermal Power Plants, Integrated Gasification Combined Cycle (IGCC) etc. (3 lectures, 6 contact hours)

- **Seminar Week –I (Evaluation of Students)** (1 Lecture, 2 hours)

- **Module -III** (4 lectures, 8 contact hours)
  - Hybrid Energy Systems (Focus on Renewable Sources)

- **Seminar Week –II (Evaluation of Students)** (1 Lecture, 2 hours)

- **Module -IV** (2 lectures, 4 contact hours)
  - Economics and Implications of Advanced Energy Systems
  - Brief introduction to carbon sequestration and efficient carbon-capture technologies.