

Course Number: 28602
Course Name: Energy and Environment

Course Type: Theory
Prerequisite: Thermodynamic
Level: Graduate
Group: Energy and Marine Industrial

Type & Max Unit: 3
Corequisite : Nothing
First Presentation:
Last Edition:

Objectives:

The main goal of this course is to present global and national issued related to the environmental aspects of energy resources, demand, consumption and sustainable planning.

Topics:

- A review on studies of global energy demand and consumption and its situation in Iran
- The concept of sustainable development and sustainable development in energy sector
- sustainable energy development planning in Iran
- The environmental pollution of energy consumption
- Climate change, its relation to energy sector, and related global conventions
- Thermal power plant and environment
- Hydroelectric plant and environment
- Nuclear plant and environment
- Wind energy and environment
- Geothermal energy and environment
- Other renewable sources of energy and environment
- The electric grid network and its impacts on human and environment

References:

- 1- Abbaspour Madjid. (2007). "Energy, Environment and Sustainable Development". Sharif University of Technology Publication, (Vols. I and II).
- 2 - Abbaspour Madjid. (2014). "Hydropower plant". Sharif University of Technology Publication, (Vols. I and II).
- 3- Abbaspour Madjid.(2013). "Electricity generating power plants". Sharif University of Technology Publication.
- 4- Abbaspour Madjid. (2010). "Environmental Engineering". Islamic Azad University Publication. 8th Ed.
- 5- Abbaspour Madjid. (2001). "Air pollution modeling". Sharif University of Technology Publication.