	Introduction to Renewable Energy		3 Credit Hours
Prerequisites	**Physics II and Chemistry**	**Co - Requisites**	
Goal	To understand the importance of renewable energy resources and its utilization for the thermal and electrical energy needs and also the environmental aspects of these resources.		

Objectives	Outcomes
The course should enable the students to : 1. Understand the various forms of conventional energy resources. 2. Learn the present energy scenario and the need for energy conservation 3. Explain the concept of various forms of renewable energy 4. Outline division aspects and utilization of renewable energy sources for both domestics and industrial application 5. Analyse the environmental aspects of renewable energy resources.	Upon completion of the course, the student will be able to: 1. Describe the environmental aspects of non-conventional energy resources. In Comparison with various conventional energy systems, their prospects and limitations. 2. Know the need of renewable energy resources, historical and latest developments. 3. Describe the use of solar energy and the various components used in the energy production with respect to applications like - heating, cooling, desalination, power generation, drying, cooking etc. 4. Appreciate the need of Wind Energy and the various components used in energy generation and know the classifications. 5. Understand the concept of Biomass energy resources and their classification, types of biogas Plants- applications 6. Compare Solar, Wind and bio energy systems, their prospects, Advantages and limitations. 7. Acquire the knowledge of fuel cells, wave power, tidal power and geothermal principles and applications.