

(081-E&E-03-02) RENEWABLE ENERGY

Significance of the Program

Energy security is key to economic and social development for emerging economies like India. However, the challenges with fossil-fuel based energy resources are causing climate changes leading to extreme weather conditions causing ill-health. Renewable Energy Sources, like solar and wind will not emit pollutants and, are clean and affordable leading to sustainable development. This program is designed to give a comprehensive view of various renewable energy technologies including their techno-economic performance measures. With an employment potential of one million jobs in renewable energy sector in India by 2030 (based on a combined study by the Council on Energy, Environment and Water, National Research Development Corporation and Skill Council for Green Jobs) , this program should be able to help country get skilled manpower in this sector.

Career Options

- Solar System Design Engineer
- Solar Installer
- Wind farm Design Engineer
- Sustainability Development Engineer

Program Objectives

- To provide skilled manpower in the area of renewable energy
- To contribute to the national goal of achieving a net-zero economy.

Outcomes of the Program

At the end of the program, the students will be able to

- Summarize different renewable energy technologies
- Design Solar PV Systems and Wind Energy systems
- Evaluate performance of Solar PV and Wind Energy systems
- Illustrate the importance of energy storage systems
- Solve problems associated with energy transition.

Major Course Outline

- Energy and Environment
- Renewable Energy Technologies

- Energy Storage Technologies
- Energy Transition
- Green Economy