



**SOLAR PROCESSING TECHNOLOGIES**  
(GE Inter-Departmental/Inter-Disciplinary)

**Credits : 2**

**Subject Code : G18CT1T**

**Semester: III**

**No. of lecture hours: 30**

**Objective:** To impart knowledge regarding importance of saving conventional energy, benefits of solar energy, its applications.

**Outcome:** Students will be able to

- Identify different forms of energies, Describe transformation of energy
- Identify the need for energy conservation. Describe significance of solar energy
- Describe harnessing of solar energy
- Describe applications of solar energy
- Identify ISO standards for solar applications

**UNIT-I**

**6Hrs**

- Definition of energy, Forms of energy (2)
- Transformations of energy, Energy conservation (4)

**UNIT-II**

**6Hrs**

- Need for Non-conservational energy, Types of Non-conservational energy (4)
- Significance of solar energy, Concept of green energy (2)

**UNIT-III**

**6Hrs**

- Energy from sun, harnessing solar energy (2)
- Flat plate collector; focusing type of collector, Applications of solar energy (4)

**UNIT-IV**

**6Hrs**

- Solar water heating, solar lighting, solar cooking (4)
- Solar water treatment, Solar drying (2)

**UNIT-V**

**6Hrs**

- Solar vehicles, solar applications in Agriculture & Horticulture (2)
- ISO standards for solar applications (4)

**ESSENTIAL READING:**

1. Rai G D. 2011. **Non-Conventional Sources of Energy**. 5<sup>th</sup> ed. New Delhi: Khanna Publishers.

**SUGGESTED READING:**

1. Giri N K. 2010. **Alternate Energy Sources and Applications**. 2<sup>nd</sup> ed. New Delhi: Khanna Publishers.
2. Rao S. and Parulekar. 2010. **Energy Technology - Non-Conventional, Renewable and Conventional**. 2<sup>nd</sup> ed. New Delhi: Khanna Publishers.
3. Rai G D. 2011. **Solar Energy Utilization**. 5<sup>th</sup> ed. New Delhi: Khanna Publishers.