

**ACHARYA NAGARJUNA UNIVERSITY - UG SYLLABUS**  
**Group: B.Sc/B.Com Subject: Skill Development Year: I Sem: II**  
**Paper Title: SOLAR ENERGY**

**UNIT-I**

**Solar Radiation:**

Sun as a source of energy, Solar radiation, Solar radiation at the Earth's surface, Measurement of Solar radiation-Pyroheliometer, Pyranometer, Sunshine recorder, Prediction of available solar radiation, Solar energy-Importance, Storage of solar energy, Solar pond

**UNIT-II**

**Solar Thermal Systems:**

Principle of conversion of solar radiation into heat, Collectors used for solar thermal conversion: Flat plate collectors and Concentrating collectors, Solar Thermal Power Plant, Solar cookers, Solar hot water systems, Solar dryers, Solar Distillation, Solar greenhouses.

**UNIT-III**

**Solar Photovoltaic Systems:**

Conversion of Solar energy into Electricity -Photovoltaic Effect, Solar photovoltaic cell and its working principle, Different types of Solar cells, Series and parallel connections, Photovoltaic applications: Battery chargers, domestic lighting, street lighting and water pumping