

**Lecture Plan**  
**Solar Engineering (OE-14)**

<b>Units</b>	<b>Lecture</b>	<b>Topics Covered</b>
<b>Unit 1</b>		
	Lecture 1	Solar Radiation
	Lecture 2	Solar Measurement
	Lecture 3	Solar Insulation
	Lecture 4	Extraterrestrial Solar Radiation
	Lecture 5	Solar Constant
	Lecture 6	Spectral Distribution Variation
	Lecture 7	Solar Radiation at Earth surface
	Lecture 8	Direct and Diffusion Radiation
<b>Unit 2</b>		
	Lecture 1	Solar Electric(Direct) Conversion
	Lecture 2	Solar Electric(Direct) Conversion Continue....
	Lecture 3	Optical Properties of semiconductor
	Lecture 4	Optical Properties of semiconductor Continue....
	Lecture 5	Theory of photovoltaic diode
	Lecture 6	Heterogeneous Junction
	Lecture 7	Heterogeneous Junction Continue....
	Lecture 8	Schottky Diode
<b>Unit 3</b>		
	Lecture 1	Silicon Solar cell
	Lecture 2	Thin film solar cell and its fabrication
	Lecture 3	Screen printed solar cell and its fabrication
	Lecture 4	Life and Efficiency of solar cell
	Lecture 5	Transparent solar cell,
	Lecture 6	Solar cell electrodes
	Lecture 7	MIS Solar cell
	Lecture 8	MIS Solar cell continue.....
<b>Unit 4</b>		
	Lecture 1	Solar module
	Lecture 2	Silicon Solar modules
	Lecture 3	Solar Panel
	Lecture 4	Concentrating system
	Lecture 5	Concentrating system continue....
	Lecture 6	Agriculture and Domestic Application
	Lecture 7	Industrial Application
	Lecture 8	Telecommunication Application

**References:**

1. Hore/Solar Cell
2. Solar Cell/Charles E.Backes(ED)/ IEEE Press
3. Solar Cell/Array Design Handbook
4. Solar Energy: S.P. Sukhatme, Tata McGraw Hill.

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