

## Lesson Plan

**Name of faculty:** Sanjay Charaya

**Discipline:** ECE

**Semester:** 4th

**Subject:** Energy Studies (Only Theory Subject)

Lesson Plan Duration: 15 weeks (from January, 2018 to April, 2018)

Week	Theory	
	Lecture day	Topic(Including assignment/ test)
1 <sup>st</sup>	1.	<b>Chapter 1 : Introduction:</b> Types of energy, Conversion of various forms of energy
	2.	Conventional Sources
	3.	Non-conventional Sources
2 <sup>nd</sup>	4.	Need for Non-Conventional Energy based power generation.
	5.	<b>Chapter 2: Energy Management:</b> General Principles of Energy Management
	6.	Energy Management Strategy
3 <sup>rd</sup>	7.	Energy Management Strategy
	8.	<b>Chapter 3 :Energy Audit:</b> Need
	9.	Types
4 <sup>th</sup>	10.	Methodology and Approach
	11.	<b>Chapter 4 :Conventional Energy sources:</b> Selection of site advantages-disadvantages
	12.	Working & Schematic Diagram of Thermal Power Plant
5 <sup>th</sup>	13.	Working & Schematic Diagram of Hydro power Plant
	14.	Working & Schematic Diagram of Nuclear power Plant
	15.	Working & Schematic Diagram of Diesel power Plant
6 <sup>th</sup>	16.	Comparison of various Power plants
	17.	Advantages & Disadvantages of Thermal power Plant
	18.	Advantages & Disadvantages of Hydro power Plant
7 <sup>th</sup>	19.	Advantages & Disadvantages of Nuclear power Plant

	20.	Advantages & Disadvantages of Diesel power Plant
	21.	<b>Chapter 5 : Non-Conventional Energy sources: Basicprinciple</b>
8 <sup>th</sup>	22.	Site selection of Solar energy power plant
	23.	Photovoltaic technologies
	24.	PV Systems and their components
9 <sup>th</sup>	25.	Bio Energy Plants
	26.	Geothermal Energy plants
	27.	Wind Energy power plant
10 <sup>th</sup>	28.	Tidal energy plants
	29.	MHD
	30.	Advantages & Disadvantages of Bio Energy Plant
11 <sup>th</sup>	31.	Advantages & Disadvantages of Geothermal Energy Plant
	32.	Advantages & Disadvantages of Wind Energy Plant
	33.	Advantages & Disadvantages of Tidal Energy Plant
12 <sup>th</sup>	34.	<b>Chapter 6 : Energy Scenario: Lay out of power system</b>
	35.	Role of Energy in Economic development
	36.	Energy demand
13 <sup>th</sup>	37.	Availability and consumption
	38.	Commercial and Non-commercial energy
	39.	Commercial and Non-commercial energy
14 <sup>th</sup>	40.	Commercial and Non-commercial energy
	41.	Indian energy scenario
	42.	Long term energy scenario
15 <sup>th</sup>	43.	Energy pricing
	44.	Energy sector reforms in India,
	45.	Energy strategy for the future