

Lesson Plan

Name of Faculty:

Arvinder Singh

Discipline:

Electrical, GP Sirsa

Semester:

3rd

Subject :

NCES (NON-CONVENTIONAL ENERGY SOURCES)

Lesson Plan Duration:

15 Week

Week	Theory		Week	Theory	
	Lecture Day	Topic (Including Assignment and Monthly Test)		Lecture Day	Topic (Including Assignment and Monthly Test)
1st	1	Introduction about Subject and 1st unit	9th	1	hybrid cycles
	2	Various Energy sources		2	Introduction about Prime movers
	3	Importance of non conventional sources of energy		3	Prime movers for geo-thermal energy conversion
	4	present scenario, Future prospects and Economic criteria		4	Steam Generation and electricity generation
2nd	1	Assignment and Revision of Unit 1st	10th	1	Assignment and Revision of Unit 5th
	2	Introduction of Solar Energy (unit 2nd)		2	Introduction of MHD (unit 6th)
	3	Principle of conversion of solar radiation into heat		3	Types of Magneto Hydro Dynamic,
	4	photo-voltaic cell, electricity generation by solar system		4	Power Generation by MHD
3rd	1	application of solar energy like solar water heaters, solar furnaces	11th	1	Assignment of Unit 6th
	2	application of solar cookers, solar lighting,		2	Revision of Unit 6th
	3	application of solar pumping.		3	Introduction of Fuel Cells(unit 7th)
	4	solar pumping, Visit the Site of Solar Energy Plant Installed at Top of Boys hostel.		4	fuel cell
4th	1	Assignment and Revision of Unit 2nd	12th	1	types of fuel cell
	2	Introduction of Bio-energy (unit 3rd)		2	Design of a fuel cell
	3	Bio-mass conversion technologies- wet processes		3	operating principles of a fuel cell
	4	Bio-mass conversion technologies- wet and dry processes, Methods for obtaining energy from biomass.		4	conversion efficiency
5th	1	Introduction of gasifiers	13th	1	work output of fuel cells
	2	Power generation by using gasifiers		2	e.m.f of fuel cells,
	3	Assignment of Unit 3rd		3	applications of fuel cells
	4	Revision of Unit 3rd		4	Assignment of Unit 7th
6th	1	Introduction of Wind Energy (unit 4th)	14th	1	Revision of Unit 7th
	2	Wind energy conversion		2	Introduction of Hydro Energy (unit 8th)
	3	Introductions of windmills		3	Introductions Mini hydro plants
	4	electricity generation from wind		4	Introductions Micro hydro plants
7th	1	types of wind mills,	15th	1	Detail Study Mini hydro plants
	2	local control system		2	Detail Study Micro hydro plants
	3	energy storage		3	Assignment of Unit 8th
	4	Assignment and Revision of Unit 4th		4	Revision of Unit 8th
8th	1	Introduction of Geo-thermal and Tidal Energy (unit 5th)			
	2	Geo-thermal sources,			
	3	Ocean thermal electric conversion			
	4	open and closed cycle			