

**EE 542 Electrical Power Stations**

**COURSE INFORMATION**

Prerequisites	Academic Year & Level		Teaching Methods			Credit Hrs.
	Year	Semester	Lecture	Tutorial	Lab.	
EE 442	5	9 or 10	2	2	0	3

**COURSE AIM**

To provide the fundamental Knowledge required for the understanding of construction of power stations & power substations. To show the students the economies of power generation. To enable students to know the procedures of power stations selection & be aware of different stations types. To enable the students to get acquainted with major electrical equipments in power plants.

**COURSE WEEKLY CONTENTS**

- 1 Introduction to Power Station
- 2 Variable Load Problem-Demand Problem
- 3 Economics of power station
- 4 Thermal Steam Power Station
- 5 Thermal Steam Power Station
- 6 Gas and Combined Cycle Power Station
- 7 Earthing of Power & Substation + Midterm Exam
- 8 Hydro Power Station
- 9 Nuclear Power Station
- 10 Renewable Based Power Plants ( Photo-voltaic Power Plant)
- 11 Renewable Based Power Plants (Concentrated Solar Power Plant)
- 12 Battery “Emergency System for Power Station +12th week Assessment
- 13 Renewable Based Power Plants (Wind Power Plant)
- 14 Renewable Based Power Plants (Wind Power Plant)
- 15 Revision

**STUDENT GRADING & ASSESSMENT**

Weeks	Exams	Assign.	Quizzes	Reports	Present.	Lab.	Total
1 to 7	20 Midterm	←	10	MARKS		→	30
To be freely distributed among possible assessments							
8 to 12	←		20	MARKS		→	20
13 to 15	←		10	MARKS		→	10
16 or 17	40 Final						40
Total	Exams	Assign.	Quizzes	Reports	Present.	Lab.	100

**REFERENCES**

Textbook	A.K. Raja “Power Plant Engineering” New Age International.
Other	Dr. S. L. Uppal, “Electrical Power”, Khanna Publisher, Delhi-G. ABB Switchgear Manual, 9th edition.