

COURSE CODE: 1152EE110	COURSE TITLE: LOAD DISPATCHING	L	T	P	C
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COURSE CATEGORY:

Program Elective

PREAMBLE :

To understand the different methods of power generation and its construction working principle of power plants

PREREQUISITE COURSES:

- Basic Electrical Engineering

COURSE EDUCATIONAL OBJECTIVES :

The objectives of the course are to make the students,

- To understand the thermal and hydro power plant full performance
- To explain the function of nuclear power stations
- To understand gas, diesel power plants and non-conventional plants

COURSE OUTCOMES :

Upon the successful completion of the course, students will be able to:

CO Nos.	Course Outcomes	Knowledge Level (Based on revised Bloom's Taxonomy)
C01	Understand about structure and working thermal power plants	K2
C02	Explain about construction and working hydro power plant	K2
C03	Understand working of nuclear power plants	K2
C04	Explain about gas power plain working	K2
C05	Understand about non conventional power plant	K2

CORRELATION OF COs AND POs

Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	H				L	L				L	M	
CO2	L					L	H			L	M	
CO3	M									L		
CO4	M		M		H		L				L	
CO5	H		M		H	M					L	

COURSE CONTENT:

UNIT I	INTRODUCTION	9
Development of integrated Power Systems- Benefits of operation of integrated power systems- Reduction in generating capacity due to the diversity of load demands- Reduction in standby capacity- increase in the size of generating sets.		
UNIT II	OBJECTIVES, FUNCTION AND LOCATION OF LOAD	9

	DISPATCH CENTRES	
Objectives- Load dispatch centres and control centres- Function of the modern control centre – Operational Planning of a power systems – Aspects of the operational planning of systems		
UNIT III	FACILITIES AT LOAD DISPATCH CENTRES	9
Equipment and General arrangement-Building, Control room- Mosaic Diagram-Mimic Board- Designing of control room and facilities of control room		
UNIT IV	TELECOMMUNICATIONS IN POWER SYSTEM OPERATION	9
General-Telecommunications in power system operation – Various power system- communication media- PLCC, Radio Circuits, Leased Telephone Circuits, Fibre Optics and Satellite Communication- Communication systems.		
UNIT V	DETERMINATION OF OPERATING RESERVE	9
General of operating Reserve- Contingencies of operating reserve-General practice regarding the maintenance- Problems of operating reserves.		
TOTAL: 45 PERIODS		
TEXT BOOKS:		
<ol style="list-style-type: none"> 1. Power System Network Reduction Techniques – Dr.C.Radha Krishnan. 2. Power system stability- Kundur. 		
REFERENCE BOOKS:		
<ol style="list-style-type: none"> 1. Power system engineering – Rajput. 2. Understanding the principles of power system harmonics- Arillaga, CRC publications 3. Advanced load dispatch for power systems- Mariani.E, Murthy.S.S 		