

Discipline:	Semester:-	Name of the Teaching Faculty:-	
Electrical Engg.	4 TH	Pratik Mohanty	
Subject:- Electrical Estimation and Contracting [TH-5(B)]	No of Days/per Week Class Allotted: 03	Semester-4 TH	From:22.12.2025 To:18.04.2026 No of Weeks:-15
Week	Class/Day	Theory Topics	
1 st	1 st	Electric Installation and Safety 1.1 Scope and features of National electric code 201	
	2 nd	1.2 Types of electrical installation	
	3 rd	1.2 Types of electrical installation	
2 nd	1 st	1.3 Fundamental principles for electrical installation	
	2 nd	1.4 Permit to work, safety instructions and safety practices	
	3 rd	1.4 Permit to work, safety instructions and safety practices	
3 rd	1 st	1.5 Purpose of estimating and costing	
	2 nd	1.5 Purpose of estimating and costing	
	3 rd	Estimation and Costing 2.1 Meaning and purpose of- Rough estimate 2.2 Detailed estimate 2.3 Supplementary estimate	
4 th	1 st	2.4 Annual maintenance estimate and revised estimate 2.5 Factors to be considered while preparation of detailed estimate and economical execution of work	
	2 nd	2.6 Contracts 2.6.1 Concepts of contracts	
	3 rd	2.6.2 Types of contracts	
5 th	1 st	2.6.3 Contractor 2.6.4 Role of contractor	
	2 nd	2.7 Tenders and Quotations 2.7.1 Type of tender 2.7.2 Tender notice	
	3 rd	2.7.3 Preparation of tender document, and method of opening of tender 2.7.4 Quotation	
6 th	1 st	2.7.5 Quotation format 2.7.6 comparison between tender and quotation	
	2 nd	2.8 Comparative statement 2.8.1 Format comparative statement 2.8.2 Order format 2.8.3 Placing of purchasing order	
	3 rd	2.9 Principles of execution of works, planning, organizing and completion of work, Billing of work	
7 th	1 st	Non-Industrial Installations 3.1 Types of Non-industrial installations-Office buildings, shopping and commercial centre, residential installation, Electric service and supply 3.2 Design consideration of electrical installation in commercial buildings 3.3 Design procedure of installation- steps involved in detail 3.4 Estimating and costing of unit 3.5 Earthing of commercial installation 3.6 Design electrical installation scheme of commercial complex. 3.7 Erection, Inspection and testing of installation as per NEC	
	2 nd	3.2 Design consideration of electrical installation in commercial building	
	3 rd	3.3 Design procedure of installation- steps involved in detail	

8th	1st	3.4 Estimating and costing of unit
	2nd	3.5 Earthing of commercial installation
	3rd	3.6 Design electrical installation scheme of commercial complex.
9th	1st	3.6 Design electrical installation scheme of commercial complex.
	2nd	3.7 Erection, Inspection and testing of installation as per NEC
	3rd	3.7 Erection, Inspection and testing of installation as per NEC
10th	1st	Industrial Installation 4.1 Classification of industrial buildings based on power consumption
	2nd	4.2 Drawing of wiring diagram and single line diagram for single phase and three phase Motors.
	3rd	4.2 Drawing of wiring diagram and single line diagram for single phase and three phase Motors.
11th	1st	4.3 Design consideration in industrial installations
	2nd	4.4 Design procedure of installation-detailed steps
	3rd	4.5 Design electrical installation scheme of factory/ small industrial unit
12th	1st	4.5 Design electrical installation scheme of factory/ small industrial unit
	2nd	4.6 Preparation of material schedule and detailed estimation
	3rd	4.7 Installation and estimation of agricultural pump and flourmill
13th	1st	Public Lighting Installation 5.1 Classification of outdoor installations streetlight/ public lighting installation
	2nd	5.2 Street light pole structures
	3rd	5.2.1 Selection of equipment
14th	1st	5.2.2 Sources used in street light installations.
	2nd	5.3 Cables
	3rd	5.3.1 Recommended types and sizes of cable
15th	1st	5.3.2 Control of street light installation
	2nd	5.4 Design, estimation and costing of streetlight
	3rd	5.4 Design, estimation and costing of streetlight

Pratik Mohanty
Sign. of faculty 23/12/25

~~23/12/25~~
Sign. of sr. lecturer

~~23/12/25~~
Sign. of principal

Head of Dept. (HOD)
Electrical & ETC F.