LESSON PLAN

ELECTRICAL ESTIMATION AND CONTRACTING

4th Semester Diploma in Electrical Engineering (SCTEVT Odisha)

Name of the Faculty-

SIBANANDAPATHY

Total Periods Assigned: 45 Periods (Theory)

22- Dec 2025 – 10- April 2026

(15 weeks)

DEPARTMENT OF ELECTRICAL ENGINEERING

VISION:

To produce Electrical Engineer professionals who can contribute for socio-economic and technological development to meet global needs.

MISSION:

M1 - To strengthen academic infrastructure leading to quality professional by using modern technical tools and technologies.

M2 - To impart innovative knowledge among the students and make more industry-institution programs to make them successful professionals for serving the society.

M3 - To provide a learning environment to improve problem solving abilities, leadership abilities, ethical responsibilities and lifelong learning.

PROGRAM EDUCATIONAL OBJECTIVES (PEOS)

PEO1: Apply electrical engineering knowledge and practical skills to solve well-defined engineering problems using modern tools and techniques.

PEO2: Perform effectively in industry and society as competent junior engineer, supervisors, or entrepreneurs with ethical and sustainable engineering practices.

PEO3: Demonstrate teamwork, communication, leadership, and project management skills in professional engineering activities.

PEO4: Engage in lifelong learning and adapt to emerging technologies for career growth and higher education.

PROGRAM SPECIFIC OUTCOMES

The electrical diploma engineers will be able to:

PSO1:-Apply the fundamentals of mathematics, science and engineering knowledge to identify, formulate, design and investigate engineering problems of electric circuits, analog and digital electronics, control system, electrical machines and power system.

PSO2:- Apply the appropriate techniques and modern engineering hardware and software tools in electrical engineering to engage in life-long learning and to successfully adapt in multidisciplinary environments.

PSO3:-Work professionally in power systems engineering, Electrical machinery and electrical circuit.

Total Period Distribution

Unit	Topic	Periods
I	Electric Installation and Safety	8
II	Estimation and Costing	10
III	Non-Industrial Installations	9
IV	Industrial Installations	9
V	Public Lighting Installation	9

Topic-wise Period Distribution Plan (45 Periods)

Class No.	Topics to be Covered
1	Introduction to Estimation
2	Electrical Symbols
3	IE Rules
4	Wiring Systems
5	Types of Wiring
6	Domestic Wiring Estimation
7	Residential Wiring Layout
8	Material Requirement Calculation
9	Cost Estimation
10	Internal Electrification
11	Service Connection
12	Commercial Installation
13	Industrial Installation
14	Estimation for Motors
15	Motor Installation Layout
16	Earthing Systems
17	Earthing Estimation
18	Substation Components
19	Distribution System
20	Overhead Lines
21	Pole Calculations
22	Conductor Estimation
23	Street Lighting Estimation

Class No.	Topics to be Covered
24	Tender Procedures
25	Contract Types
26	Contract Documents
27	Schedule of Rates
28	Measurement Book
29	Billing Procedures
30	Contractor Responsibilities
31	Electrical Safety Standards
32	Inspection Procedures
33	Estimation Software
34	Energy Efficient Installations
35	Case Study on Estimation
36	Industrial Estimation Problems
37	Tender Evaluation
38	Contract Management
39	Cost Analysis
40	Project Planning
41	Practical Estimation Examples
42	Numerical Practice
43	Numerical Practice
44	Revision
45	Revision

SIGNATURE BLOCK

Faculty Signature: _____ HOD Signature:_____