



GUJARAT TECHNOLOGICAL UNIVERSITY

Syllabus for Diploma in Vocation (D.Voc), 3rd Semester

Branch: Electrical Wiring

Subject Name: Electrical Safety & Work Practices

Subject Code: 1230805

Teaching and Examination Scheme:

Teaching Scheme			Credits	Examination Marks				Total Marks
L	P	OJT		Theory		Tutorial/ Practical		
			University exams (ESE)	Progressive Assessment (PA)	External Practical /viva Exam(ESE)	Internal evaluation Practical /viva Exam(PA)		
0	0	15	15	0	0	100	100	200

L- Lectures; P- Practical; OJT- On Job Training; C- Credit; ESE- End Semester Examination; PA- Progressive Assessment

Course Content: Theory

Unit No.	Content	No. of Hours	% of Weightage
1.	<p>Module–1: Introduction to Electrical Safety</p> <ul style="list-style-type: none"> a. Importance of electrical safety at workplace b. Common electrical hazards and risks c. Causes of electrical accidents d. Effects of electric shock on human body e. Safety responsibility of electrical workers 	25	10
2.	<p>Module–2: Electrical Hazards and Risk Identification</p> <ul style="list-style-type: none"> a. Shock hazards (direct and indirect contact) b. Short circuit and overload hazards c. Arc flash and arc blast hazards (basic awareness) d. Fire hazards due to faulty wiring e. Mechanical hazards related to electrical work f. Risk assessment before starting work 	30	20
3.	<p>Module–3: Personal Protective Equipment (PPE)</p> <ul style="list-style-type: none"> a. Types of PPE used in electrical work b. Insulated gloves and shoes c. Helmets, safety goggles, and face shields d. Flame-resistant clothing e. Correct selection, use, and maintenance of PPE f. Limitations of PPE 	40	15



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4.	Module–4: Safe Use of Electrical Tools & Equipment a. Insulated hand tools b. Portable electrical tools safety c. Use of ladders and platforms d. Safe use of extension cords e. Tool inspection before use f. Tagging of defective tools	45	15
5	Module–5: Electrical Safety Procedures a. Lockout and Tagout (LOTO) procedures b. Isolation of electrical supply c. Verification of absence of voltage d. Safe switching practices e. Permit-to-work system (basic introduction) f. Housekeeping and work area safety	40	15
Total		180	100

Suggested Specification table with Marks (OJT):

Distribution of Theory Marks				
R Level	U Level	A Level	N Level	E Level
50	45	50	35	20

Legends: R: Remembrance; U: Understanding; A: Application, N: Analyze and E: Evaluate and above Levels (Bloom’s Taxonomy)

References :

1. Electrical Appliances: The Complete Guide to Maintenance and Repair by Graham Dixon – covers domestic appliances basics and repair
2. Handbook of Repair & Maintenance of Domestic Electronics Appliances.
3. Troubleshooting, Repairing and Maintaining of Household Appliances by Karl M. Fischer – step-by-step practical tips.
4. <https://www.cstaricalcutta.gov.in/>

Open source software and website:

1. <https://nptel.ac.in/>

