

SARDAR PATEL UNIVERSITY
Vallabh Vidyanagar, Gujarat
(Reaccredited with 'A' Grade by NAAC (CGPA 3.11))
Syllabus with effect from the Academic Year 2024-2025

DEPARTMENT OF ELECTRONICS

Skill Development Course

Eligibility Criteria : Any Individual

CourseCode		Titleofthe Course	Understanding Repair and Maintenance of Home Appliances
TotalCredits oftheCourse	2	Total Hours	Minimum 30
CourseObjec-tives:	<ol style="list-style-type: none"> 1. To get knowledge of Power Generation,Transmission and Distribution. 2. Understand Domestic Wiring and Layout. 3. To Understand key elements of Electrical and Electronics appliances. 4. Understand key elements of AC and Refrigerators. 5. To get hands on Practice / Experience . 		
CourseContent			
Unit	Description		Weightage* (%)
1.	Introduction : Power Generation, Transmission, Distribution, Concept of Single and Three Phase, Electrical Wiring : Color Code - Phase, Neutral, Earth as per International Standards, Measurement Aspects, Load connection, Safety devices : MCB, ELCB, Conceptof Fuse, Series Connection Board, Switches, Switch Board, Importance of Earthing, Types and Methods of Earthing, Understanding of Working Principle, Preventive Maintenance and Repair of : Gas Stove, Pressure Cooker, Electric Geyser, Gas Geyser , Types and Standard Products : Technical Specifications, Selection of Jets		50
2.	Operating Principle and Preventive maintenance ofHeating elements : Iron, Steam Iron, Hot Plate, Room Heater, Immersion Heater, Sandwich Toaster, Bread Toaster, RO Water Purifier System , Mixer and Blender, Air Conditioner : Indoor and Outdoor Unit,Refrigerator : Principle and working, Maintenance of Freeze (Compressor, Relay,Capacitor), Gas Charging, Microwave Oven : Concept of Magnetron, High Voltage Power Supply, Washing Machine Types : Front & Top Load, Induction Cooker, Tube light, LED Tube Light, LEDBulb, Fan :Operation, Circuit Diagram, Preventive Maintenance.		50

SARDAR PATEL UNIVERSITY
Vallabh Vidyanagar, Gujarat
(Reaccredited with 'A' Grade by NAAC (CGPA 3.11))
Syllabus with effect from the Academic Year 2024-2025

Teaching-Learning Methodology	Lectures, tutorials, Independent study, Hands On Practical Training and Practice ,Fieldtrips,Problem-based/ Enquiry-basedlearning.
--------------------------------------	--

Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Written/Practical Examination	40
2.	Continuous Assessment in the form of Hands on Problem Solving, Attendance	10

Course Outcomes: Having completed this course, the learner will be able to	
1.	Identify the Importance of Earthing and Electrical Wiring color code.
2.	Acquire necessary skills/hand on experience/ working knowledge on Measuring Instruments : Analog and Digital Multimeters, Clip – On Meter, Motors, Transformers, Single phase and Three phase connections.
2.	Know Various Protective Devices.
3.	Understand the working principles of different household domestic appliances.
3.	Repair basic electrical and electronics appliances.
4.	Identify the problems and Repair of Split AC and Refrigerators.

Suggested References:	
Sr.No.	References
1.	Consumer Electronics, S.P.Bali, Pearson
2.	Domestic Appliances Servicing K.P.Anwer, Scholar Institute Publications
3.	Handbook of Repair & Maintenance of Domestic Electronics Appliances BPB Publications
4.	Performance and design of AC machines M.G.Say, ELBSEdn.
5.	A Text book on Electrical Technology B.L.Theraja, S.Chand & Co

SARDAR PATEL UNIVERSITY
Vallabh Vidyanagar, Gujarat
(Reaccredited with 'A' Grade by NAAC (CGPA 3.11))
Syllabus with effect from the Academic Year 2024-2025

On-lineResources

https://courseware.cutm.ac.in/courses/repair-and-maintenance-of-home-appliances/

https://www.nielit.gov.in/sites/default/files/ESDM_Courses_Syllabi64_020715.pdf

https://eskillindia.org/Course/course_detail/repair-of-appliances-hin
