



**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**Syllabus for Bachelor of Vocation (B.Voc.), 2<sup>nd</sup> Semester**  
**Branch: Solar & Renewable Energy**  
**Subject Name: Fundamental of Electrical Engineering-2 Lab**  
**Subject Code: 1120706**

**Type of course:** Core

**Prerequisite:** None

**Teaching and Examination Scheme:**

Teaching Scheme			Credits	Examination Marks				Total Marks
L	T	P	C	Theory Marks		Practical		
				ESE (E)	PA(M)	ESE (V)	PA (I)	
0	0	4	2	0	0	30	20	50

L- Lectures; T- Tutorial/Teacher Guided Student Activity; P- Practical; C- Credit; ESE- End Semester Examination; PA- Progressive Assessment

**Contents:**

Sr. No.	Practical / Hands on Exercise	Teaching Hrs.
1	To demonstrate usage of Digital Voltmeter, Digital Ammeter and Digital multi meter.	2
2	To demonstrate usage of DSO for Periodic waveforms, Square waveforms produced by a function generator.	2
3	To study the Sinusoidal Waveform with it's different Parameters.	2
4	To demonstrate the different rating Resistors, Inductors and Capacitors.	2
5	To study the measurement of Real Power, Reactive Power and Apparent Power.	2
6	To study Purely Resistive Circuit with its Waveform.	2
7	To Obtain Response of Purely inductive Circuit and Impedance Calculation.	4
8	To Understand the Phenomena of Resonance.	4
9	To verify Phase and Line relationship of Voltage and Currents in 3 phase Star and Delta Connection	4
10	To Study and Understand Series and Parallel RLC circuit.	4
	<b>Total</b>	<b>28</b>



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**Course Outcome:**

Sr.No.	CO statement	Marks% weightage
CO1	Describe Different Electrical Equipments and its Usage.	25
CO2	Analyze Single Phase Series Circuits with demonstration.	25
CO3	Evaluate Different A.C Series Circuits useful in Electrical Components.	25
CO4	Understand the 3phase Circuits with wave form and hands on practice.	25
	Total	100

**Major Equipment:**

1. Resistive Load Bank
2. A.C supply Variac (1 phase and 3 phase)
3. Multimeter
4. D.S.O. and C.R.O

**List of Open Source Software/learning website:**

1. [www.nptel.ac.in](http://www.nptel.ac.in)
2. <http://www.vlab.co.in/>