

Semester 2
Skill Enhancement Course SEC-126T+P
(Elective Course – 2 Credits)

Semester: 2	Course No.: 126(T+P)	Course Code: : PHSEC 126(T+P) Course Title: Electrical and Electronics Skills.
Credits: 2		Course Category: Skill Enhancement course

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO111 T-1	REMEMBERING	A student will enable to become familiar and experience with various electrical and electronic tools .
CO111 T-2	UNDERSTANDING	A student will get understanding in the circuit designing subject through hands on mode.
CO111 T-3	APPLYING	A student will be trained in circuit designing by various electronic components and electrical & electronic tools through hands on mode.
CO111 T-4	ANALYSING	
CO101.5	EVALUATING	

Unit No.	Unit Contents	Sessions Allotted
1	Basics of soldering 1. Understanding of soldering tools and materials (solder, flux, etc.) 2. Practicing soldering and de-soldering with proper method. 3. Practicing soldering of electrical circuit having discrete components (R, L, C, diode, transistor etc.) on printed circuit board (PCB). Power Supply 4. Designing of center tapped full wave rectifier without and with C-filter. 5. Designing and testing of a 9-volt power supply with Zener diode.	15
2	Opto-electronic devices 1. Light emitting diode LED (study of characteristics) 2. Solar cell or photo-voltaic cell (study of characteristics). Logic gates 3. Design of half adder using AND gate and EX-OR gate. Verify truth table. 4. Design of full adder using AND gate and EX-OR gate. Verify truth table.	15

Reference Books

- 1.A textbook of applied electronics , Dr. R.S.Sedha , 14th Edition , 2019 , S.Chand and Company Ltd.
- 2.A text book of digital electronics , Dr.R.S. Sedha , 3rd Edition , 2020, S.Chand and Company Ltd.