

B.Sc. IV Semester Skill Enhancement Course Syllabus: 2026-27

Paper: Domestic wiring skills and Consumer Electronics

Course Code		Course Title	Domestic wiring skills and Consumer Electronics
Course Credits	02	Hour of Teaching/week	02
Total Contact Hours	32	Formative Assessment Marks	10
Exam Marks	40	Exam Duration	2 Hours

UNIT-I

16Hrs

Electrical wiring -Definition, Electrical components-resistors, capacitors, inductors, transformers, switches, dc voltage and current, ac voltage and current (Definition, types, symbols and functions). **Wires and cables**-types. general rules for wiring, requirements of electrical installation.

Electrical connections: Basic circuits (series and parallel connections). Socket outlet wiring, single bulb controlled by one-way switch, multiple bulb controlled by one-way switch, junction box wiring diagram. Electrical switch board wiring (with 3pin socket, 2pin socket along with fuse and indicators). Electrical wiring diagram for bulb and fan with individual switches. Electrical panel wiring diagram. Single bedroom electrical wiring diagram.

Electrical safety measures: Measures and procedures, earthing system: concept of earthing, requirement of earthing, types of earthing (rod, pipe and plate earthing), earthing of electrical installation and checking of earthing system.

UNIT -II Consumer Electronics

16Hrs

Audio Systems: PA system, Microphones, Amplifier, Loudspeakers, Radio Receivers, AM/FM, Audio Recording, and reproduction, Cassettes, CD and MP3. TV and Video Systems: Television standards, BW/Colour, CRT/HDTV, video system, VCR/VCD/DVD players, MP4, players, set top box, CATV and Dish TV, LCD, Plasma and LED TV, Projectors: DLP, Home Theatres, Remote controls.

Reference Books

1. Electric wiring, Sateesh Kumar, Ane Books pvt ltd
2. Complete book to Electrical wiring, Eleanor G Young.
3. PCB Design and Layout Fundamentals, Christopher T. Robertson, 3rd Edition, Newnes (Elsevier).
4. High-Speed Digital Design: A Handbook of Black Magic by Howard Johnson & Martin Graham, 2nd Edition, Prentice Hall
5. R.P. Bali, Consumer Electronics, Pearson Education (2008)
6. R.G. Gupta, Audio and Video systems, Tata McGraw Hill (2004)