

Course Title	Electrical Technology			Course Code	BST 22233		
Year	2	Semester	2	Credits	03	Theory (hr)	30
						Practical (hr)	30
						Independent Learning (hr)	30

Aim of the Course:

To provide understanding on electrical systems and hands-on experience in using electrical measuring instruments and test equipment.

Intended Learning Outcomes:

After completion of this course, the learner should be able to:

- Use the electrical measuring instruments and test the equipment.
- Adopt the safety measures use in electrical operations.
- Interpret the electrical symbols, circuit diagrams and wiring diagrams.
- Explain the nature of domestic and industrial power supplies and electrical machines.
- Perform a circuit analysis and power calculation.

Course Capsule:

Theory
Conductors and insulators, Voltage and current sources, Series and parallel DC circuits, Basic circuit laws; Electric power and energy: units, power gain, dB; AC theory: Alternating currents and voltages, single phase AC circuits; Power in AC circuits, power factor, power calculations; Three phase systems, Transformers; DC and AC machines; Electrical safety regulations and practices; Electrical test equipment: Digital and Analog MM, Oscilloscope, Logic Probe; Circuit trouble shooting; Circuit diagrams and wiring diagrams; Electrical wiring and Installations

Practical
Analog and Digital electrical instruments and measurements; Investigation of magnetic fields (Induction coil and Hall probe magnetometers); Measurement of voltage, frequency and phase of AC waveforms; Power and energy measurements of DC circuits; AC power measurements (three voltmeter, two wattmeter, three phase wattmeter methods); Circuit troubleshooting; Single phase wiring (domestic); DC and AC motors

Assessment:

Continuous assessment: 30%
 End semester assessment: 70%