

**Course Title: Electronic Devices and Circuits****Course Code: EEA 186****Course Background / Summary:**

This course introduces students to the basic electronic device's structure, configuration, and construction. The course will cover the fundamentals of electronic devices involving diodes, bipolar junction transistors, and field-effect transistors. The contents encompass devices' structure, operation, and characteristics for certain application circuits.

**Course Objectives:**

- Describe the basic concepts of solid-state principles from the Atomic Theory to electronic devices structure and construction.
- Interpret the function and application of diodes, bipolar junction transistor, field effect transistor and operational amplifier in electronic circuits.
- Analyse on various types of transistor configuration circuit and amplifiers circuits with revision on basic electrical and electronic laws.
- Discuss the environmental impact of disposing electronic devices into the environment without any precaution.

**Target Audience:**

- Industrial workers from technicians to engineers, etc.
- Teaching staff (vocational & technical teachers), lecturers, etc.

**Course Duration: 4 Days****Course Contents****1.0 Solid-State Principles****2.0 Semiconductor Diode****3.0 Diode Circuit Applications****4.0 Bipolar Junction Transistors (BJT)****5.0 Field Effect Transistors (FET)****6.0 Operational Amplifiers (Op-Amp)**