

Certificate course on
Basic Electronics
Organized and conducted by
Department of Physics

Course duration: 36 hrs

Requirements: Basic electronic components

Number of seats: 15

Target group: UG students with basic knowledge in physics

Learning Outcomes:

By the end of this course, students will be able to:

- Identify different electronics components
- Make simple circuits out of these components

Syllabus

Module 1: Identification of basic electronics and electrical components

Resistors, capacitors, diodes, chips, transistors, bread board, batteries, ICs

Module 2: Applications of the components

Use of resistors and capacitors in circuits, use of transistors, use of diodes, Zener diode as voltage regulator

Module 3: Basic introduction to Cathode Ray Oscilloscope (CRO)

Circuit diagram, components of CRO, basic applications of CRO

Module 4: Logic gates and their applications

Basic Logic gates, Universal Gates, Design of logic circuits, K-maps

Module 5: Skill development

Design of full wave and half wave rectifier, design of universal gates using bread board

Books for reference:

1. Fundamentals of Digital Circuits by A. Anand Kumar
2. Electronic devices and circuits by J.B. Gupta

Evaluation: Oral and demonstration

Course Coordinator: Dr. Swati Nawami Aideo