

Title- Electropedia

Course Coordinator- Dr. Sonia Bhandari

No. of students-

Syllabus

Unit 1: **5**
hours

Introduction to Basic Electronics and AU simulation software

Brief Idea of Active and Passive Devices, power supply (A.C and D.C), Diodes and its application, transistors.

Digital system and its application, operation of Cathode Ray Oscilloscope(CRO) and Digital Storage Oscilloscope 555Timers and its applications

Unit 2: **9**
hours

Explanation of Timers and its different states (Monostable.Bistable,Astable)

Op-Amp and Linear Integrated Circuits

Characteristics of Op-Amp such as Adder, Subtractor, Integrator, Differentiator, Comparator.

Lab:Hands On on Hardware for circuit making

Unit 3: **8**
hours

Transducers- Characteristics and Applications

Introduction of Transducers and its properties,Transducers such as: Thermocouple, Resistive temperature transducers, piezo electric Transducers, inductive Transducers.

Microprocessor and Microcontrollers

Unit 4: **8**
hours

Projects based on optoelectronics, OpAmps, 555 timer and sensors.

- ❖ ThermistorTemperature Sensing Alarm
- ❖ LED lampcircuit using USB port
- ❖ Rain Alarm cicuit
- ❖ Ultrasonic sensors

Future scope of Electronics and in Industries