ADVANCE ELECTRONICS

COURSE OUTLINE

WHAT STUDENTS WILL LEARN AT THE END OF THIS COURSE?

1. Understanding and review of Basic Electronics.
2. Understanding all the quantities and components of circuits.
3. Complete interface of Proteus Simulation software and Tinkercad Simulation website.
    - Series & parallel circuits and their combinations.
    - Diode, transistors, capacitors, ICs and their combinational circuits.
    - Interfacing Ammeter, Voltmeter, Oscilloscope, Function generator.
4. Getting familiar with breadboard including hands-on circuits practice on it.
5. Getting familiar with different types of sensors.
6. Creating Hands-on Advance Electronics Projects.

HANDS-ON ADVANCE ELECTRONICS PROJECTS:

1. Led Blinking
2. Traffic Light Module
3. Relay Module
4. Fan Dimmer
5. Thermometer
6. 555 timer (Clock generator)
7. Mobile charger (Power supply)
8. PIR motion sensor
9. FM modulation / transmitter circuit.
10. Electronic Ludo Game
11. Digital Stop Watch
12. Street Light circuit
13. Clap Switch
14. Flame detector
15. IR sensor
16. Ultrasonic Ranger
17. Variable voltage detection.
18. 1-bit counter
19. BCD counter

SOFTWARES AND KITS:

1. Proteus Simulation Software
2. Tinkercad Simulation Website
3. Advance Electronics Kits for students

COURSE INSTRUCTORS

1. Miss Wardah Arshad
2. Sir Mehmood Ameer