

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Winter Training Programme on "Embedded Systems and IOT"

COURSE SYLLABUS

Theory section

Day 1	Introduction to embedded systems and IOT
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Theory and practical sections

Day 2	Introduction to different IDEs and practical implementation of LEDs and Switches
Day 3	Analog signals and hands on analog signal
Day 4	Different communication protocols and practical implementation of UART
Day 5	Different methods of implementing Temperature sensor, LDR and touch sensor
Day 6	Different methods of measuring distance and implementation of IR distance sensor
Day 7	Essence of power amplification in IOT devices and practical implementation of transistors ,Relays and motor drivers
Day 8	Hands on Three axis accelerometer and moisture sensor
Day 9	Hands on Steam sensor, magnetic sensor and flame sensor
Day 10	Hands on Tilt sensor, vibration sensor, and sound sensor
Day 11	Essence of good programming and different methods of debugging and bug fixing
Day 12	IOT in robotics Hands on fire bird robot
Day 13	Programming of fire bird robot for solving different problems
Day 14	Implementation of Joystick module and gsm shield
Day 15	Different methods of Connecting to the network for remote operations
Day 16	Interconnection of different sensors and actuators

Projects

Day 17	Smart lighting system project
Day 18	Smart fan project
Day 19	Smart gas regulator project
Day 20	Home automation system