

Rajagiri College of Social Sciences(Autonomous)

IOT Training(Value Added Course)

Internet of Things (36 hours)

Course Outcome:

After completing this course students shall be able to understand the basic concepts of Internet of Things including FOSS and Python Programming

Course Outline:

Module 1

- ✓ Basics of IoT
- ✓ IoT Stages: SUR(Sense, Understand & Respond)
- ✓ Choosing the Right Platform
- ✓ Introduction to Raspberry Pi 3 (Model B) Board
- ✓ Demo Projects – Raspberry Pi
 - LED Blinking
- ✓ Introduction to FOSS and Python Programming

Module 2

- ✓ IoT Project Life Cycle
- ✓ Group Discussion - IoT Scenarios
- ✓ Do-It-Yourself Projects - Raspberry Pi
- ✓ Familiarizing Thingspeak
- ✓ Introduction to cloud
- ✓ Demo Projects – IoT (Raspberry Pi + Thingspeak)
 - Uploading sensor data to cloud
 - Downloading data to actuate

Module 3

- ✓ Familiarizing Ubibots
 - ✓ Demo Projects – IoT (Raspberry Pi + Ubibots)
 - Uploading sensor data to cloud
 - Data Visualization
 - ✓ Group Projects
-

Prerequisites:

- ✓ *Basic Programming Knowledge*
 - ✓ *Basic Electronics Concepts*
-

IoT Kit specifications

- ✓ Raspberry Pi 3 Model B (with official case)
- ✓ USB Port Adapter
- ✓ Micro SD Card with Noobs (16 GB)
- ✓ Sensor Modules (Infrared, Ultrasonic, Temperature etc.)
- ✓ LCD Display
- ✓ Breadboard
- ✓ Other components

