

GURU GOBIND SINGH COLLEGE FOR WOMEN

SECTOR-26, CHANDIGARH

INTERNET OF THINGS

(A Value Added Course Offered by Department of Computer Science and Applications)

Course: Internet of Things

Duration: 72 hrs

Semester of offering: Even

Offered to: Students of BCA, B.Sc. (Computer sc.), B.A. (Computer sc.)

Course Description and Objectives:

This value added course aims to teach Internet of Things (IoT) concepts to students and they will practice the same with DIY kits. It includes Introduction to IoT, Elements of IoT, Data Analysis and IoT platforms. This exposure to IOT will provide the students with better career opportunities in IT industry.

Course Objectives:

1. To understand what Internet of Things is.
2. To identify the various elements of an IoT System.
3. To understand the various means of communication from Node/ Gateway to Cloud Platforms.
4. To understand Cloud Computing & its relevance in IoT
5. To identify types of data analytics and data visualization tools
6. To make students aware of security concerns and challenges while implementing IoT solutions.

Course Contents:

I. Introduction to IoT and Elements of IoT

Definition of IoT, Evolution of IoT, IoT related terms, Business Scope, Introduction to Elements of IoT, Basic Architecture of an IoT, Application Sensors & Actuators, Edge Networking (WSN), Gateways, WPAN & LPWA

II. Communication and Connectivity Technologies

Cloud Computing in IoT, IoT Communication Model, Cloud Connectivity

III. Data Analytics and IoT Platforms

Big Data Analytics, Data Visualization, IoT Platforms

IV. Concerns, Future Trends and Hands-On Projects

Different Players of IoT, Security Concerns and Challenges, Future Trends, Standards, DIY kits, IFTTT and other apps

Is the course theoretical/ practical or both? : Both

Course Planner: Ms. Maninder Kaur