

ABOUT THE COURSE

The Internet of Things (IoT) and smart connected devices have radically changed the way our world works and how companies operate and create new businesses. In this course, we provide an overview of the underlying IoT technologies and their business applications. This course is an introduction to IoT and explains why it is a continuously evolving concept with many industrial applications. You will learn the fundamental building blocks of IoT and the fast-changing trends to combine them suitably for a precise industrial application. You'll learn an Overview of what is Internet of Things (IoT) and how to develop a business model canvas. Description of typical IoT components and edge computing concept. Communication standards and Big data cloud infrastructure partners to choose in the case of IoT businesses. Security requirements and techniques in IoT systems. Different types of artificial intelligence (AI) technologies and edge AI systems in the context of IoT. Design thinking concept and how-to setup the business model and revenues in IoT.

COURSE OBJECTIVES

Students will be explored to the interconnection and integration of the physical world and the cyber space. They are also able to design & develop IOT Devices. This course focuses on the latest microcontrollers with application development, product design and prototyping. The Internet of Things (IOT) is the next wave, world is going to witness. Today we live in an era of connected devices (mobile phones, computers etc.), the future is of connected things (Eg: home appliances, vehicles, lamp-posts, personal accessories, industrial equipments and everything which you use in day-to-day life). Internet of Things is a term given to the attempt of connecting objects to the internet and also to each other - allowing people and objects themselves to analyze data from various sources in real-time and take necessary actions in an intelligent fashion. This course will describe the market around the Internet of Things (IoT), the technology used to build these kinds of devices, how they communicate, how they store data, and the kinds of distributed systems needed to support them. Divided into four modules, we will learn by doing to start with simple

examples and integrate the techniques. And we will learn into a class project in which we design and build an actual IoT system.

EXPECTED OUTCOMES

To understand the fundamental application areas of IOT. Able to realize the revolution of the Internet in Mobile Devices, Cloud & Sensor Networks. Able to understand the building blocks of the Internet of Things and its characteristics. After the completion of the course, the students will be able to design some IOT-based prototypes. Understand the definition and significance of the Internet of Things, Discuss the architecture, operation, and business benefits of an IoT solution, Examine the potential business opportunities that IoT can uncover, Explore the relationship between IoT, cloud computing, and big data, identify how IoT differs from traditional data collection systems. It provides advanced data collection, connectivity, and analysis of information collected by computers everywhere taking the concepts of Machine-to-Machine communication further than ever before. This course gives a foundation in the Internet of Things, including the components, tools, and analysis by teaching the concepts behind the IoT and a look at real-world solutions.



Resource Person:

Mr. P. Rajendra Prasad,
Assistant Professor,
Department of CSE.

Co-ordinator:

Mr. M. Uday Kumar,
Assistant Professor,
Department of CSE,

Contact No: +91 8555066121

LAST DATE FOR REGISTRATION: 12TH DECEMBER, 2020

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ADD-ON COURSE ON

**"DESIGN OF
IOT APPLICATIONS"**

14TH TO 19TH DEC, 2020

Duration of the Course : **36 Hrs**

<https://meet.google.com/njdy-hrws-jnk>

ORGANIZED BY:

**DEPARTMENT OF COMPUTER SCIENCE
AND ENGINEERING**

PRINCIPAL

Vignan's Institute of Management & Technology for Women
Kondapur (V), Ghatkesar (M), Medchal-Malkajgiri (Dt.)-501301
Telangana State

