

IOT- Internet of Things for Engineering Applications – Audit Course		
S. No.	TOPICS	Required time in Hours
1	Basics of IOT – Difference between IOT and IIOT – Overview of System Components of IOT.	2
2	Architecture – Importance, Advantages & Disadvantages	2
3	Sensors, Transducers, Special requirements for IIOT sensors, Actuators, Types of Sensors, Actuators.	2
4	Protocols - HART, MODBUS-Serial & Parallel, Ethernet, BACNet	2
5	Introduction to IIOT Cloud Platforms	2
6	Security Aspects – Importance and likely Risk Elements	1
7	Illustrative IIOT applications in Engineering Disciplines – Civil, Chemical, Electrical, E & TC, Mechanical and Metallurgical	6
8	Quiz, Case Studies and Student Presentations	3
	Total	20 Hours

Module Overview:

IOT as a game changer in several fields of applications and poised for phenomenal growth. This course introduces Students to IOT applications in various Engineering disciplines: Civil, Chemical, Electrical, E&TC, Mechanical and Metallurgical Engineering

This 20 hour course is aimed at covering various components involved in IOT, concepts, definitions and mainly Engineering Applications associated with IOT/IIOT

- Basics of IOT and IIOT.
- System Components
- Architecture and Importance of good architecture
- Protocols
- Introduction to Cloud platform
- Security

In short students get opportunity to learn importance of IOT – IIOT and stretch of applications in Engineering Field They also gets a chance to face Quizzes and present a case study.

References:

1. Internet of Things (A Hands-on-Approach) ISBN: 978-0996025515 - by [ArshdeepBahga](#) and Vijay Madiseti
 2. Inside the Internet of Things (IoT), Deloitte University Press
 3. Internet of Things- From Research and Innovation to Market Deployment; By Ovidiu& Peter; River Publishers Series
 4. Five thoughts from the Father of the Internet of Things; by By Phil Wainwright - Kevin Ashton, who coined the word IoT
 5. . "[Internet of Things for Smart Cities](#)".IEEE Internet of Things Journal, VOL. 1, NO. 1, FEBRUARY 2014.Zanella, Andrea; Bui, Nicola; Castellani, Angelo; Vangelista, Lorenzo &Zorzi, Michele
 6. How Protocol Conversion Addresses IIoT Challenges: White Paper By RedLion.
- B. Video's
1. Video: PranavMistry The thrilling potential of Sixth Sense technology
 2. Video: Jayraj Nair's views on 'Capturing value with enterprise IoT'
- C.Web-Links :
1. Smarter Cities : http://www.ibm.com/smarterplanet/ca/en/smarter_cities/overview/
 2. Internet of Things <http://www.ibm.com/internet-of-things/>
 3. Cognitive Solutions <http://www.ibm.com/cognitive/>