Syllabus

Introduction of IoT

Duration: 30 hours

MODULE-1: INTRODUCTION TO IoT :

Introduction to IoT, Characteristics of IoT, History of IoT, Applications of IoT, Challenges in IoT, advantages & disadvantages.

MODULE-2: DESIGNING

Architecture of IoT, Physical design of IoT, Logical design of IoT, Functional blocks of IoT.

MODULE-3: MODELS

Communication models & APIs, M2M Machine to Machine, Difference between IoT and M2M, Software defines Network.

MODULE-4: NETWORK AND COMMUNICATION ASPECTS

Wireless medium access issues, MAC protocol survey, Survey routing protocols, Sensor deployment & Node discovery, Data aggregation & dissemination.

MODULE-5: IoT ENABLING TECHNOLOGIES
Web of Things vs. Internet of things, Wireless Sensor Network, Cloud of things: Cloud Computing, Big Data Analytics.

Schedule

BCA-IV-A

Session	Content	TIME	DATE
Duration: 30 hours			
1	Introduction	03:00-4:30	8-Mar-22
2	Characteristics of IoT	03:00-4:30	11-Mar-22
3	History of IoT	03:00-4:30	15-Mar-22
4	Applications of IoT	03:00-4:30	22-Mar-22
5	Challenges of IoT	03:00-4:30	25-Mar-22
6	Advantages & Disadvantages of IoT	03:00-4:30	29-Mar-22
7	Revision	03:00-4:30	1-Apr-22
8	Architecture of IoT	03:00-4:30	5-Apr-22
9	Physical design of IoT	03:00-4:30	8-Apr-22
10	Logical design of IoT	03:00-4:30	12-Apr-22
11	Functional blocks of IoT	03:00-4:30	15-Apr-22
12	Communication models & APIs	03:00-4:30	19-Apr-22
13	M2M Machine to Machine	03:00-4:30	22-Apr-22
14	Difference between IoT and M2M	03:00-4:30	26-Apr-22
15	Software define Network	03:00-4:30	29- Apr -22
16	Wireless medium access issues	03:00-4:30	6-May-22
17	MAC protocol survey	03:00-4:30	10-May-22
18	Survey routing protocols, Sensor deployment &Node discovery	03:00-4:30	27-May-22
19	Data aggregation &dissemination, Web of Things vs. Internet of things	03:00-4:30	31-May-22
20	Wireless Sensor Network, Cloud of things: Cloud Computing, Big Data Analytics	03:00-4:30	3-June-22

	Report
Name of Activity	Introduction of IoT
Date	8th March 2022 to 3rd June 2022
Venue	BCA Classroom
Organized by	Computer Application Department
Resource Person	Ms. Anshul , Assistant Professor, MIET
Beneficiaries	BCA 4th Semester Sec- B (24 Students)
Coordinator	Mr. Himanshu Rastogi , Assistant Professor, MIMT
Objective	The aim of this certification course is to: • This course focuses on the latest microcontrollers with application development, product design and prototyping. • As for the colleges, the greatest benefits would be increased energy efficiency and reduced operating costs. • Describe what IoT is and how it works today.
Content	With the initiative of IQAC, Mangalmay Institute of Management and Technology organized a add on certification course on "Internet of Things". Day1: The session started with the introduction Day 2: In this session, The characteristics of IoT was introduced. Day 3: In this interactive session, the resource person introduce the history of IoT Day 4: The resource persons started the session with Application of IoT Day 5: In this session, the student came to know the challenges of IoT Day 6: In this session the resource person taught the advantages and disadvantages of IoT. Day 7: This session was focused on the revision. Day 8: In this session, the resource persons discussed the architecture of IoT Day 9:Physical design of IoT was introduced. Day 10: The session was interesting as students came to know about the Logical design of IoT.

	Day 11: The function block of IoT was taught.
	Day 12: The student came to know about the communication models and APIs.
	Day 13: In this session, M2M i.e. Machine to Machine was introduced.
	Day 14: Resource person discussed the difference between IoT and M2M.
	Day 15: Software define network was taught in the classroom
	Day16: In this session, the resource person discusses the wireless medium access issues
	Day 17: MAC protocol survey taught in the classroom.
	Day 18: In this session, Survey routing protocol was taught, Sensor deployment and Node discovery.
	Day 19: In this session, data aggregation and dissemination was taught. This session was about web of things.
	Day 20: The discussion was on the wireless sensor network. The session was about the cloud of things. i.e Cloud Computing, Big Data Analytics.
Outcome of Activity	• Collect and analyze telemetry from connected sensors, devices, and equipment for real-time tracking, monitoring, management, and remote control. • Students will gain a greater understanding of how to exploit mature web technologies and protocols to connect all sorts of Things,

List of Beneficiary

BCA-IV-B

Sl. No.	Roll No.	Student Name
1	R200992106007	AFNAN RASHID
2	R200992106014	ANIKET SAHU
3	R200992106015	ANISH RAJ
4	R200992106018	ANKIT KUMAR
5	R200992106021	ANKUSH KUMAR
6	R200992106023	ASHISH KUMAR
7	R200992106025	AYUSHI RAJORIA
8	R200992106032	DEVENDRA KUMAR
9	R200992106033	DHIRENDRA KUMAR
10	R200992106067	NITIN KUMAR
11	R200992106071	PRASHANT SINGH
12	R200992106072	PRERNA VERMA
13	R200992106074	PUSHPENDRA SINGH PAL
14	R200992106081	ROHIT SHRIVASHTAVA
15	R200992106098	SHASHANK SINGH CHHONK
16	R200992106103	SHUBHAM KUMAR
17	R200992106104	SHWETANK KUMAR
18	R200992106106	SONI
19	R200992106108	SUFIYAN IQBAL
20	R200992106110	SUNIL KUMAR
21	R200992106118	UMDESH SINGH
22	R200992106125	VISHAL KUMAR
23	R200992106130	VIVEK KUMAR
24	R200992106133	YUVRAJ

Resource Person Profile

Name: Ms. Anshul, Assistant Professor

Organization: MIET, Greater Noida

Qualification: B.Tech, M.Tech (CSE)

Experience: 5 years

Research Area: Networking, database

Certificate Template

MANGALMAY
INSTITUTE OF MANAGEMENT TECHNOLOGY
Gr. NOIDA

Certificate No: BCA/21-22/ SP401/001

Date:- 23rd June, 22

CERTIFICATE OF COURSE COMPELITION

This is to certify that

------------- Sunil Kumar -----------------------------------

Student of BCA, Batch (2021-22) has successfully completed 30 Hours

Specialization Course on IOT

from   Mar, 22   to   June, 22 with Grade A+

Grading	A+	A	B+	B	Fail
System	13-15	10-12	7-9	4-6	0-3

Course Coordinator

Head of the Department

Chairman/Vice Chairman