



**Faculty of Computing Sciences and Engineering**  
**Department of Computer Science and Applications**

**Value Added Course**

**Internet of Things – Training Schedule**

The Department of Computer Science and Applications and LIVEWIRE organized a Value Added Course on Internet of things (IOT) , scheduled from 29.07.2019 to 14.08.2019. It would be a platform to develop the skill of the students in technical base. The course bringing the employability skills and helping the students to gain the knowledge in the latest technologies and also providing an opportunity to get employability.

<b>Date</b>	<b>Session</b>	<b>Topics</b>	<b>Resource Person</b>
<b>29.07.2019</b>	02.00 pm to 2.15 pm	Inaugural Function	Ms.S.Shyamala
	2.15 pm to 2..30 pm	Tea Break	
	2.30 pm to 5.00 pm	Basics of electronics , introduction to IOT concepts and Technologies, Internet of things architecture and Implements	
<b>30.07.2019</b>	2.00 pm to 5.00 pm	Ardunio programming language concepts ,Introduction arduino embedded Development Board and AT mega microcontroller working with Ardunio IDE.1.8.6 and programming Ardunio MEGA Hardware. Interfacing Arduino with LED, Breadboard. Data representation concepts.	Mr.Mathankumar
<b>31.07.2019</b>	2.00 pm to 5.00 pm	Serial communication –UART protocol, USB protocol, UART to USB conversion .Working with serial ports in Ardunio .Introduction to sensors and concepts, Infrared proximity sensors principles working and connecting with Arduino.	Mr.Mathankumar
<b>01.08.2019</b>	2.00 pm to 5.00 pm	IOT communication Wired and Wireless protocols Layers and protocols-TCP/IP Layer,OSI model IEEE standards –Bluetooth standards ,Bluetooth module-working of HC05 module,Bluetooth,Standards ,specification, protocol stack,versions,controlling devices using Bluetooth module	Mr.Mathankumar
<b>02.08.2019</b>	2.00 pm to 5.00 pm	collecting Real time data using temperature sensors(DHT11)- DHT11 libraries and principle wireless technologies and standards –node MCU	Mr. H.Punniyamorthy

		wifi development boards –connecting Node MCU wifi module to internet	
<b>05.08.2019</b>	2.00 pm to 5.00 pm	Cloud computing-introduction ,services and importance in IOT .Introduction to thinkspeak cloud and working with ThinkSpeak API keys and channels. Data collection from sensors and automatic storage ThinkSpeak cloud using node mcu.	Mr. H.Punniyamoorthy
<b>06.08.2019</b>	2.00 pm to 5.00 pm	ESP8266 Wi-Fi chip –working principle ,pin outs, connection with Ardunio MEGA board ,AT commands Setting up TCP client using ESP8266.Data collections and sensors and automatic storage in thinkspeak cloud using inESP8266 and arduino MEGA	
<b>07.08.2019</b>	2.00 pm to 5.00 pm	send messages to IOT devices using Talkback .REST client control IOT devices remotely from REST Client in system and mobile. Python-introduction ,environment setup, basic building blocks –variables -operators IO functions – data types –control structures-Data structures –List ,tuple,set, dictionary ,functions, modules	Mr.Mathankumar
<b>08.08.2019</b>	2.00 pm to 5.00 pm	python Common gateway interface –introduction ,enabling CGI server in windows implementing client-server architecture ,Raspberry Pi-introduction Raspberry pi as an IOT gateway ,connecting with raspberry pi through VNC .make Raspberry pi as server using python CGI.	Mr. H.Punniyamoorthy
<b>09.08.2019</b>	2.00 pm to 5.00 pm	integration of cloud with Raspberry pi as an IOT Gateway .Pubnub cloud –publishers and subscribers architecture .publishing data to Pubnub cloud using raspberry pi.realtime data storage in cloud using arduino , ESP8266 and arduino pi.	Mr. H.Punniyamoorthy
<b>13.08.2019</b>	2.00 pm to 5.00 pm	IOT protocol –message queuing telemetry transport protocol (MQTT)-Architecture ,machine to machine communication ,Implementing MQTT broker using Raspberry pi.	Mr.Mathankumar
14.08.2019	2.00 pm to 5.00 pm	Project	Mr.Mathankumar Mr.Punniyamoorthy

# **Value Added Course IOT Report**

**Academic Year-2019-2020**



**Mr. MathanKumar – EDA Engineer, Livewire,** Demonstration about IOT Kit to all the students

Mr.H.Punniyamooth - CADD CENTRE – Sr. CAD Engineer . Demonstration to all the students . They have spoken about uses and trends on IOT . Around 154 students were attended and benefited.

## Periyar Maniammai Institute of Science & Technology

PMIST is proud to be a unique institution of higher learning and academic excellence. In an endeavour to fulfil the dreams of our Mentor Thanthai Periyar and Annai Maniammayar, the University is dedicated to its societal responsibility for transforming students from different parts of India and abroad into stalwarts by igniting their hidden talents. As it is located in a rural area, the students are admitted from a wide range of calibre and by personal attention, and modern teaching methodology towards a Product / Process / Demo / Case Study teaching, they are shaped into career oriented professionals with bright future.

## Livewire - For Live Careers

Livewire - a Division of CADD Centre Training Services Pvt Ltd is a World-Class innovative training organization headquartered in Chennai, India. Our Mission has always been to combine academics and entrepreneurial approach to maximize the potential of both individuals & organization through globally accredited Livewire Programs. This impeccable approach helps us to demonstrate our Commitment by Producing Professional -minded Graduates.

## Our Program

Our training solutions in IT,ITeS, Engineering Design and Process Management (EDO/EPO) Knowledge Process Outsourcing (KPO), Business Process Management(BPM), IT Service Management(ITSM) and Executive Management Skill enhancement has imparted over thousands of learners since inception. LIVEWIRE's educational process, curriculum, Instructional excellence and training delivery made LIVEWIRE as the most preferred training partner for over thousands of students. LIVEWIRE hopes to be among the leading training organizations in the world within the decade.



## Value Added Training

### Bringing employable skills to the Classrooms!

To help our students gain exposure to the latest in technological developments, to provide an opportunity to develop inter-disciplinary skills and to equip them with skills which shape a global citizen's profile The main objective is improving the employability skills of arts & science students of PMIST

The Course has been Delivered by industry experts, they bring the knowhow of cutting edge technology to the college doorstep.

Students have the options to choose from a host of courses as per their inclination at a nominal fee. These include courses on Software Development IT Infrastructure Management Electronic Design Automation , Industrial Automation and Special Programs which includes Cloud Computing , Internet of Things , Machine Learning , Artificial Intelligence , Block Chain Ethical Hacking, Automotive Embedded system, Data science etc..

*Our Key differentiators is our true customized training programs to empower graduating students to meet the global demand.*

### Course on IOT

Internet of Things (IoT) is the concept of connecting any device to the Internet and to other connected devices. IoT platform uses Devices and objects with built-in sensors which integrates data from the different devices and performs analytics to distribute the most valuable information with applications. When devices/objects can represent themselves digitally, they can be controlled from anywhere.

The course imparts a sound understanding of the basic electronics, microcontroller architectures, sensors, IoT architecture and communication protocols. This course makes you understand the scope of the IoT, architecture of its networks, devices, programming, data, security and the rapidly evolving field of cloud computing and its relation to IoT.





Certificate :

