

INSTITUTE OF HIGHER EDUCATION AND RESEARCH



BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY No.173, Asharam Road, Salalyur, Chennal , T.N - 600 073.

Requisition Letter

Date: 05.08.2020

From
Dr. K.P.Kaliyamurthie,
Professor & Head,
Department of CSE,
Bharath Institute of Higher Education and Research,
Chennai

To
The Dean Engineering,
Bharath Institute of Higher Education and Research,
Chennai

Respected sir

Subject: Request of Permission to conduct a value-added course on" HAND ON TRAINING "IOT" (online) -Reg

With reference to above subject, I would like to bring to your kind notice that, our department interested to organize value added course on "HAND ON TRAINING "IOT" in our campus premises on 10.08.2020, students would be participating in this course. We request you kindly to give permission to organize this event.

Timing: 9:30 AM to 12:30 PM (FN) and 1:30 PM to 4:30 PM (AN) and Saturday (FN&AN).

Submitted to Principal for approval to organize this value-added course.

HOD

HEAD OF DEPARTMENT
Department Of Computer Science & Ending
Bharath Institute Of Higher Education & reserved.

(Declared as Deemed to be University to 3.4. Chennal - 600 CT 2 14.7.

DEAN ENGINEERING

DEAN (Engineering)
Bharath Institute of Science & Technology
BHARATH INSTITUTE OF HIGHER EDUCATION & RESEARCH
(Declared as Deemed to be University U/S 3 of UGC Act. 1956)
Selaiyur, Chennai-600 073.



CIRCULAR

07.08.2020

The school of computing, Bharath Institute of Higher Education and Research is planned to conduct a certification value added course on Certificate Course of Hand on Training "IOT" for the benefit of students. This course is scheduled from 10.08.2020 to 21.08.2020 which includes theory and practical. The timings are 9:30 AM to 12:30 PM (FN) and 1:30 PM to 4:30 PM (AN) and Saturday (FN&AN).

All Registered Students must attend all the classes without fail. The following faculty members are assigned to handle the course. S.NO	Name of the Faculty	Designation
1	Dr. R Kerthi keyan	Professor
2	Mr. Snidbar R	Assistant Professor

Head of Department

To

Copy to CSE

Copy to IT

HEAD OF DEPARTMENT

Department Of Computer Science & Engg.,
Bharath Institute Of Higher Education & Research
(Doclared as Deemed to be University U/S 3 CT (CV or 1355)

Chennal - 600 073 1517



CERTIFICATE COURSE ON STATISTICS WITH HAND ON TRAINING "IOT"

Date of Introduction of the Course: 12.09.2020

COURSE SYLLABUS

1.Introduction to IOT

Understanding IoT fundamentals, IOT Architecture and protocols, Various Platforms for IoT

2. Real time Examples of IoT

Overview of IoT components and IoT Communication Technologies, Challenges in IOT

3. Arduino Simulation Environment

Arduino Uno Architecture, Setup the IDE, Writing Arduino Software

4. Arduino Libraries

Basics of Embedded C programming for Arduino, Interfacing LED, push button and buzzer with Arduino, Interfacing Arduino with LCD

5. Sensor & Actuators with Arduino

Overview of Sensors working, Analog and Digital Sensors

6. Interfacing of Temperature, Humidity, Motion, Light and Gas Sensor with Arduino

Interfacing of Actuators with Arduino, Interfacing of Relay Switch and Servo Motor with Arduino

7. Basic Networking with ESP8266 WiFi module

Basics of Wireless Networking, Introduction to ESP8266 Wi-Fi Module

8. Various Wi-Fi library

Web server- introduction, installation, configuration, Posting sensor(s) data to web server NIELIT DELHI Page

9. IoT Protocols • M2M vs. IOT

Communication Protocols 6. Cloud Platforms for IOT, Virtualization concepts and Cloud Architecture

10. Cloud computing, benefits

Cloud services -- SaaS, PaaS, IaaS, Cloud providers & offerings

11.Study of IOT Cloud platforms

ThingSpeak API and MQTT

12.Interfacing ESP8266 with Web services

Brief note on Interfacing ESP8266 with Web services

COURSE OBJECTIVES

This Course focuses on hands-on IoT concepts such as sensing, actuation and communication. It covers the development of Internet of Things (IoT) prototypes—including devices for sensing, actuation, processing, and communication—to help you develop skills and experiences. The Internet of Things (IOT) is the next wave, world is going to witness.

Specifically, the course has the following objectives:

Students will learn

- 1. Describe what IoT is and how it works today
- 2. Recognise the factors that contributed to the emergence of IoT
- 3. Design and program IoT devices
- 4. Use real IoT protocols for communication
- 5. Secure the elements of an IoT device
- 6. Design an IoT device to work with a Cloud Computing infrastructure.
- 7. Transfer IoT data to the cloud and in between cloud providers
- 8. Define the infrastructure for supporting IoT deployments

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

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Department Of Computer Science & Engg.,
Bharath Institute Of Higher Education & Research
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Chennal - 600 073, INDIA



CERTIFICATE COURSE ON HAND ON TRAINING "IOT"

Date of Introduction of the Course: 12.09.2020

The timings are 9:30 AM to 12:30 PM (FN) and 1:30 PM to 4:30 PM (AN) Saturday (FN&AN).

Time Table & Lesson plan

CLASS	DATE	TOPIC
CLASS	DAIL	1.Introduction to IOT
1	10-08-2020(FN)	Understanding IoT fundamentals, IOT Architecture and protocols, Various Platforms for IoT
2	11-08-2020 (FN)	2.Real time Examples of IoT
		Overview of IoT components and IoT Communication Technologies, Challenges in IOT
3	12-08-2020(FN)	3. Arduino Simulation Environment
		Arduino Uno Architecture, Setup the IDE, Writing Arduino Software
4	13-08-2020(FN)	4. Arduino Libraries
		Basics of Embedded C programming for Arduino, Interfacing LED, push button and buzzer with Arduino, Interfacing Arduino with LCD
5	14-08-2020 (FN)	5. Sensor & Actuators with Arduino
		Overview of Sensors working, Analog and Digital Sensors
6,7	15-08-20 20 (FN & AN)	6. Interfacing of Temperature, Humidity, Motion, Light and Gas Sensor with Arduino
		Interfacing of Actuators with Arduino, Interfacing of Relay Switch and Servo Motor with Arduino
		7. Basic Networking with ESP8266 WiFi module
		Basics of Wireless Networking, Introduction to ESP8266 Wi-Fi Module
8	17-08-2020 (FN)	8. Various Wi-Fi library
		Web server- introduction, installation, configuration, Posting sensor(s) data to web server NIELIT DELHI Page

9	18-08-2020 (FN)	8. Various Wi-Fi library Web server- introduction, installation, configuration, Posting sensor(s) data to web server NIELIT DELHI Page				
10	19-08-2020 (FN)	Ommunication Protocols 6. Cloud Platforms for IO Virtualization concepts and Cloud Architecture				
11	20-08-2020 (FN)	20-08-2020 (FN) 10. Cloud computing, benefits Cloud services SaaS, PaaS, IaaS, Cloud services				
12	20-08-2020 (FN)	11.Study of IOT Cloud platforms ThingSpeak API and MQTT				
13	21-08-2020 (FN)	12.Interfacing ESP8266 with Web services Brief note on Interfacing ESP8266 with Web services				

O Sudber COURSE COORDINATOR

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Department Of Computer Science & Engg.,
Bharath Institute Of Higher Education & Research
Declared as Deemed to be University U/S 3 Of UGC Act, 19531
Chennal - 600 073, INDIA



Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed-to-be University under section 3 of UGC Act, 1956)

Objection No. 59,52000 - U.3. Ministry of Human Resource Development, Govt. of India, dated 4" July 2002)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Date of Introduction of the Course: 12.09.2020

B.Tech Computer Science and Engineering

HAND ON TRAINING "IOT"

S. No	REG.NO	NAME OF THE CANDIDATE	
1	U15CS091	KHALYAN S N	
2	U15CS092	KISHORE VENKAT	
3	U15CS093	KM AYUSHI JAISWAL	
4	U15CS094	KOLUKULURI ADITHYA RAGHAV VARMA	
5	U15CS095	KONATALA PUSHPA	
6	U15CS096	KONDURU PREM KUMAR	
7	U15CS097	KONGARA KIRAN KUMAR	
8	U15CS098	KOPPA SEKHAR SAI VISWAM	
9	U15CS099	KOTHAPALLI ARYAN VARMA	
10	U15CS100	KOTIPALLI SRI SAI SURYA PRASANTH	
11	U15CS101	KOTNANI KRISHNA VAMSI	
12	U15CS102	KRISHNA KUMAR YADAV	
13	U15CS103	KUMMETA SAI VAMSI KRISHNA REDDY	
14	U15CS104	KUNISETTY JYOTHSNA	
15	U15CS105	LALJEE	
16	U15CS106	LINGAMPELLY SANNITH REDDY	
17	U15CS107	LOHESH WARAN S	
18	U15CS108	M SHIVA PRAKASH	
19	U15CS109	M UTTEJ	
20	U15CS110	M. DINESH REDDY	
21	U15CS111	M.YESHWITHA REDDY	
22	U15CS112	MAILE ARUN KUMAR	
23	U15CS113	MAMUNDURU BHARATH KUMAR	
24	U15CS114	MANCHALA ROHITH	
25	U15CS115	MANCHIKANTI RAJITHA	

26	U15CS117	MANOJ KUMAR R
27	U15CS118	MANUGUNTA BHARGAVI
28	U15CS119	MARRIBOYINA GOVARDHAN YADAV
29	U15CS120	MARRIPUDI KRISHNA CHAITANYA
30	U15CS121	MD MINHAZ RAZA HASHMI
31	U15CS122	MOHAMED SAJEEN N
32	U15CS123	MOHAMMAD ASLAM SHAREEF
33	U15CS124	MOHANKUMAR J
34	U15CS125	MOLAPANTI SIVA KALPANA
35	U15CS126	MOORABOINA NARESH
36	U15CS127	MUPPALLA SURENDRA
37	U15CS128	MURARI KUMAR CHAUDHARY
38	U15CS129	N SWAPNA RAAGA
39	U15CS130	NAGANNAGARI JAGADISH
40	U15CS132	NALLANALLI SATYA SANDEEP KUMAR
41	U15CS133	NALLURI AKHIL BABU
42	U15CS134	NAMBURI VIJAY KUMAR

HOD

HEAD OF DEPARTMENT

Department Of Computer Science & Engg.,
Bharath Institute Of Higher Education & Research

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Chennal - 500 073. INDIA

COURSE FEEDBACK FORM

Acar	demic Yea	ir	2020-20	21								
Term	n											
Cour	rse Numb	er										
Cou	rse Title		Hand on	Hand on Training "IOT"								
Num	ber of Cr	edits										
Туре	of Cours	se Regular		Electiv	re	F	Add-on					
			,									
I.	Inform	ation on the Res	spondent: (Ti	ck (√) Appropri	ately)							
1.	Percentage of classes attended											
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	0-20		20 .0									
2.	Numbe	er of hours per v	veek spent on	the course (Oth	er than lectu	re hours)						
	0-2		2-4	4-	6	6-8		8-10	/			
	1											
3.	17	paration for the course by the student:										
	(i)	Section Control of the Control of th	Have done part of this course earlier									
	(ii)	Has adequate prior exposure to the prerequisites Had to pickup relevant additional topics through concurrent study										
	(iii)	11 12 12 12 12 12 12 12 12 12 12 12 12 1			gh concurrent	t study	No					
	(iv)	Have no expos	ure to the back	kground material			yes					
4.	The er	The expectations for taking the course by the student are:										
	(a)			area of specializa			Ye	4				
	(b)	Get exposed to	a relevant sub	bject			Ye					
	(c)	Curiosity					ye					
	(d)	Better Employ	ment Opportu	nity			N					
	(e)	Complete Cou	rse requiremen	nts			2					
	(f)	To Improve Co	GPA				2	0				
Abo	ut the In	structor: Inform	nation on the	Respondent: (Ti	ck (√) Appro	priately)						
				A	В	C	D		E			
1.	Pace o	f the Teaching/le	cture									
2.	Comm	ent of the Subjec	t		~							
3.	Clarity	ity of expression										
4.	Level	of preparation		~								
5.	Level	of interaction		~								
6.	Acces	sibility outside th	e class	~					_			
7.	Others	s (please specify										
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A:	Excellent		very Good	C. 6000	•	D. Savistacti	"y \	12.10	1			

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COURSE FEEDBACK FORM

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e Credits	Regular	Hand on	Training "IOT"									
Credits	Regular	Hand on	Training "IOT"	,								
	Regular				Hand on Training "IOT"							
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			Elect	ive		Add-on						
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				0-60	60-80	T	80-100					
							200,100,00					
ber of h		spent on t	he course (Otl	her than lec	ture hours)							
	2-4		4	-6	6-8		8-10	/				
aration	for the course h	v the stud	lent:									
						12						
				tec		Yes						
Had	rest supposed to the prefequisites											
Have	no exposure to	the backer	hockers and the standard to th									
- Control of	pooute to	are backg	ound material			ye	6					
The expectations for taking the course by the student are:												
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		vant subject										
Curio	osity											
Bette	r Employment C	pportunit	у			<u>ye</u>	5					
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							10					
structor	: Information o	on the Res	spondent: (Tid	ek (√) Annr	onriately)		10					
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Department Of Computer Science & Engg..
Bharath Institute Of Higher Education & Research
(Declared as Deemed to be University U/6 a C. UGC AC., 15...
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COURSE FEEDBACK FORM

Acad	demic Yes	ur	2020-2	021							
Term	1										
Cou	rse Numb	ет									
Cour	se Title		Hand o	Hand on Training "IOT"							
Num	ber of Cr	edits									
Туре	of Cours	e Regu	ılar	Ele	ctive		Add-on				
								•			
I.	Inform	ation on t	he Respondent: (T	ick (√) Appro	priately)						
1.	Percen	tage of cla	sses attended								
	0-20	T	20-40		40-60	60-80		80-100			
2.		er of hours	per week spent or	n the course (C	ther than lec	ture hours)					
	0-2		2-4		4-6	6-8		8-10			
3.	Dranar	ation for t	he course by the st	tudants							
٥.	(i)		ne part of this cours				•1				
	(ii)		TO SECURE OF SECURE AND A SECURE ASSESSMENT OF SECURE	TOT TO WATER SHOW THE TOTAL TO THE T		Yes					
	(iii)	Has adequate prior exposure to the prerequisites									
	(iv)	Had to pickup relevant additional topics through concurrent study Have no exposure to the background material									
	(10)	Have no	exposure to the bac	kground mater	IAI		No				
4.	The ex	pectations	for taking the cou	rse by the stud	lent are:						
	(a)	Enhance	by skill base in the	area of special	izations		Yes				
	(b)	Get expo	sed to a relevant su	bject		Yes					
	(c)	Curiosity					No				
	(d)	Better Er	nployment Opportu								
	(e)	Complete	Course requireme								
	(f)	To Impro	ve CGPA		No						
Abou	it the Ins	tructor: In	nformation on the	Respondent: (Tick (√) Appr	opriately)	-				
				A	В	C	D		E		
1.	Pace of	the Teachi	ng/lecture	~							
2.	Comme	ent of the S	ubject								
3.	Clarity	of expressi	on	/		593					
4.	Level o	f preparation	on	~							
5.	Level of interaction										
6.	Accessibility outside the class										
7.	Others	(please spe	cify	V							
4. 5	11	/	D. W C - 1	10.0		In a sec					
A: E	xcellent	\vee	B: Very Good	C: Go	ood	D: Satisfacto	ry	E: Poo	or \		

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