



Bharath
INSTITUTE OF HIGHER EDUCATION AND RESEARCH
(Declared as Deemed - to - be - University under section 3 of UGC Act 1956)



BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY
No.173, Agharam Road, Selaiyur, Chennai , T.N - 600 073.

Requisition Letter

From
Dr. T.R. Rangaswamy,
Professor & Head,
Department of EEE,
Bharath Institute of Higher Education and Research,
Chennai

Date: 1.4.19

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 “**Introduction to Sensors and Actuators**” -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 “**Introduction to Sensors and Actuators**” in our campus premises on **22.4.19**.

Mr. Venkatakrishnan Pichchumamani, TATA Consultancy Services, Chennai would deliver lecture for the above mentioned course. 45 students would be participating in this course. We request you kindly to give permission to organize this event.

Venue: **EEE seminar Hall**

Timing : **9 am to 4 pm**

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




DEAN ENGINEERING



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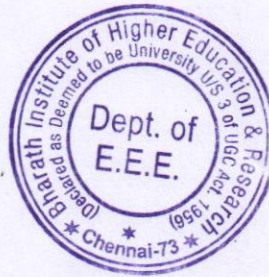
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CIRCULAR

SCHOOL OF ELECTRICAL ENGINEERING

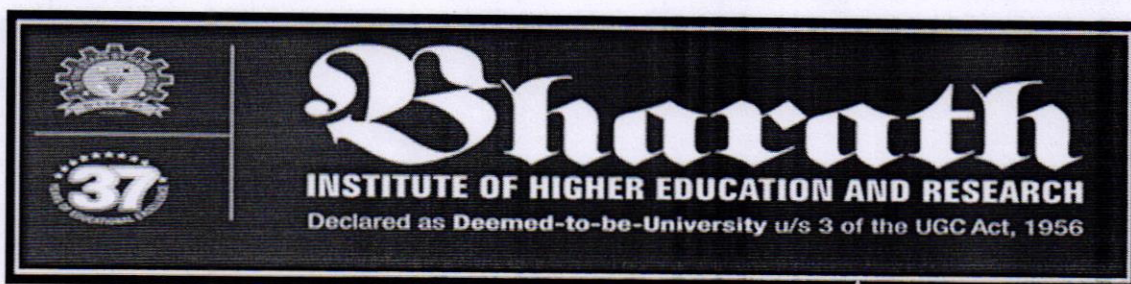
Date: 3.4.19

A value added course on “**Introduction to Sensors and Actuators**” is planned by the School of Electrical Engineering on **22/4/2019**. In this regard, students are instructed to give their willingness and confirm their participation to their respective class in charge before 17.4.2019. Course commences on 22.4.2019 and it would be conducted for five days (**22/4/2019 to 26/4/2019**) from 9.00 AM to 4.00 P.M.



HOD

Copy to
Department of ECE
Notice Board/ Department of EEE



SCHOOL OF ELECTRICAL ENGINEERING

INTRODUCTION SENSORS AND ACTUATORS

SCHEDULE

Contact Hours : 32 hrs

DATE	SESSION	Contact Hours	TOPICS	Resource person
22.4.2019	FN	9.00 am to 12.30 pm	Introduction (Classification of sensors and actuators, sensing and actuating strategies, general requirements for interfacing and actuation, sensing, transduction, actuation)	Mr. Venkatakrishnan Pichchumamani
	AN	1.30 pm to 4 pm	Performance Characteristics of Sensors and Actuators (Input/output characteristics, accuracy, errors, repeatability, sensitivity analysis, hysteresis, nonlinearity, saturation, frequency response, dynamic characteristics, calibration, resolution, excitation, impedance, applications)	Mr. Venkatakrishnan Pichchumamani
23.4.2019	FN	9.00 am to 12.30 pm	Optical sensors: (Photodiodes, phototransistors and photoresistors based sensors, Photomultipliers, light-to-light detectors, Infrared sensors (thermal, PIR, AFIR, thermopiles), CCD sensors and detectors)	Dr.V.Jayalakshmi
	AN	1.30 pm to 4 pm	Temperature Sensors: (Thermoresistive sensors:	Dr.V.Jayalakshmi

			Thermistors, Resistance temperature sensors, Silicon resistive sensors, Thermoelectric sensors, PN junction temperature sensors, Dr.S.Prakash Optical and acoustic temperature sensor	
24.4.2019	FN	9.00 am to 12.30 pm	Magnetic and Electromagnetic Sensors and Actuators: (Motors as actuators (linear, rotational, stepping motors), magnetic valves, inductive sensors (eddy current, LVDT, RVDT, Proximity), Hall effect sensors, Magnetoresistive sensors, Magnetostrictive sensors and actuators, Magnetometers (fluxgate, search-coil, Squid), Voice coil actuators (speakers and speaker-like actuators), Bolometers (microwaves))	Dr.S.Prakash
	AN	1.30 pm to 4 pm	Mechanical Sensors: (Accelerometers (capacitive, piezoelectric, piezoresistive, thermal), Force sensors (strain gauges,tactile sensors), Pressure sensors (semiconductor, piezoresistive, capacitive, VRP), Gyroscopes(mechanical, optical, fiber-optics))	Dr.S.Prakash
25.4.2019	FN	9.00 am to 12.30 pm	Acoustic Sensors and Actuators: (Ultrasonic sensors (piezoelectric, electromagnetic), Piezoelectric actuators, Piezoelectric resonators, Microphones, hydrophones, speakers, buzzers)	Dr.T.R.Rangaswamy
	AN	1.30 pm to 5 pm	Chemical Sensor: (Electrochemical, Thermochemical, ChemFET, Gas, pH, Humidity, moisture and Opticalchemical sensors), Chemical Actuators	Dr.T.R.Rangaswamy

26.4.2019	FN	9.00 am to 12.30 pm	Interfacing Methods and Circuits: (Amplifiers: operational amplifiers, power amplifiers, A/D and D/A converters, Bridge circuits, Interfacing to microprocessors, Data transmission, Excitation methods and circuits, Power requirements, Signal translation, Isolation, Noise, Interference, Compensation (temperature, drift, etc.))	Dr.S.P.Vijayaragavan
	AN	1.30 pm to 5 pm	Interfacing to Microprocessors: (General requirements for sensors and actuators, Input signal conditioning (offset, scaling, isolation, hysteresis, etc.), Output signals (level, power, isolation, etc.), Driving methods (direct, PWM), Errors (A/D and D/A)), noise and errors.	Dr.S.P.Vijayaragavan



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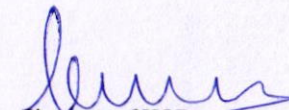
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The following students attended three days' workshop on "Introduction to Sensors and Actuators" On (22/4/2019 to 26/4/2019) conducted by on TATA Consultancy Services, Chennai.

S.No	Register No	Name of the student	Signature of the Student				
			22/4/2019	23/4/2019	24/4/2019	25/4/2019	26/4/2019
1.	U15EE001	ADITYA RAJ					
2.	U15EE002	AMBATI VENKATA REDDY					
3.	U15EE003	ARUNAVA ROY					
4.	U15EE004	BACHU VENKAT SAI					
5.	U15EE005	BHARATHI TIPPAGIUDESE					
6.	U15EE006	BHUMIREDDY OM SEK HAR REDDY					
7.	U15EE008	DHANUSH B					-AD-
8.	U15EE009	DUDEKULA ANWAR BASHA					
9.	U15EE010	EEGA RAMESH					
10.	U15EE011	GODDUMARRI PRUTHVIRAJ					
11.	U15EE012	GOWTHAM K					
12.	U15EE013	HEMANT KUMAR SAHU					

13.	U15EE014	JATAVATH SURESH	Ju	gu	hu	ju	hu
14.	U15EE015	JAYANT KUMAR	Jay	Jay	Jay	Jay	Jay
15.	U15EE016	K THARUN KUMAR REDDY	Tharun	Tharun	Tharun	Tharun	Tharun
16.	U15EE018	LOKESH KUMAR M	Lok	Lok	Lok	Lok	Lok
17.	U15EE019	MD ASIF	Asif	Asif	Asif	Asif	-AB-
18.	U15EE020	MOHAMED GHIYASUDEEN J	Ghi	Ghi	Ghi	Ghi	Ghi
19.	U15EE021	MUTHUKUMARAN G	Muthu	Muthu	Muthu	Muthu	Muthu
20.	U15EE022	NANDAN KUMAR	Nan	Nan	Nan	Nan	Nan
21.	U15EE024	POTTA SYAM KUMAR	Syam	Syam	Syam	Syam	Syam
22.	U15EE025	PRAMOD KUMAR GHOSH	Pram	Pram	Pram	Pram	Pram
23.	U15EE026	PRASHANT KUMAR PANDEY	Prash	Prash	Prash	Prash	Prash
24.	U15EE027	PUGAZANTHI A	Pugaz	Pugaz	Pugaz	Pugaz	Pugaz
25.	U15EE028	SENTHAMIL SELVAN K	Selvan	Selvan	Selvan	Selvan	Selvan
26.	U15EE029	SONU KUMAR SUMAN	Sonu	Sonu	Sonu	Sonu	Sonu
27.	U15EE030	SHRIDHAR DWIVEDI	Shrid	Shrid	Shrid	Shrid	Shrid
28.	U15EE031	SRIRAM S	Sriram	-AB-	Sriram	Sriram	Sriram
29.	U15EE032	SUBIN SUNIL	Subin	Subin	Subin	Subin	Subin
30.	U15EE033	SUSANTA GHOSH	Susanta	Susanta	Susanta	Susanta	Susanta
31.	U15EE035	TOIJAM NONGKHONGKOIBA	Toijam	Toijam	Toijam	Toijam	Toijam
32.	U15EE036	UDHAYACHANDRAN R	Udhay	Udhay	Udhay	Udhay	Udhay
33.	U15EE037	USHA KUMARI	Usha	Usha	Usha	Usha	Usha
34.	U15EE039	ZAFFER HUSSAIN HAJAM	Zaffer	Zaffer	Zaffer	Zaffer	Zaffer
35.	U15EE041	PRASHANT VERMA	Prash	Prash	Prash	Prash	Prash
36.	U15EE042	SANOJ KUMAR	Sanoj	Sanoj	Sanoj	-AB-	Sanoj

37.	U15EE043	ALAYA CHOWDHURY					
38.	U15EE044	BIRBAL PANDIT					
39.	U15EE045	SANDEEP					
40.	U15EE047	AKBAR ALAM					
41.	U15EE048	RAVINDRA KUMAR					
42.	U15EE701	RAVINDER SINGH					
43.	U15EE702	SAKTHIVEL C					
44.	U15EE703	RABIN RAJ R					
45.	U15EE704	GUGAN S					


Signature of HOD



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DEPARTMENT OF ELECTRICAL AND ELECTRONICS

VALUE ADDED COURSES

2018-19

Value added course on “Introduction to Sensors and Actuators” by

Mr. VenkatakrisnanPichchumamani, TATA Consultancy Services, Chennai on 22.4.19





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VALUE ADDED COURSE - Introduction to Sensors and Actuators

FEEDBACK FORM		Date: 26/4/2019				
Name	Srinivas Kumar					
Register Number	U15EE042					
Phone Number						
Email address						
	Poor	Fair	Good	Very Good	Excellent	
Overall Program					✓	
Resource person					✓	
Audio visual aids & Technology used					✓	
Presentation Handouts					✓	

Student's Signature



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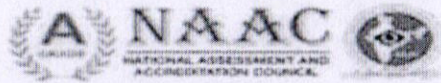
VALUE ADDED COURSE - Introduction to Sensors and Actuators

FEEDBACK FORM		Date: 26/4/2019			
Name	Eega Rameh				
Register Number	U15EE010				
Phone Number					
Email address					
	Poor	Fair	Good	Very Good	Excellent
Overall Program					✓
Resource person					✓
Audio visual aids & Technology used					✓
Presentation Handouts					✓


Student's Signature



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CERTIFICATE OF PARTICIPATION

This is to certify that Mr / Ms **ARUNAVA ROY(U15EE003)**

has attended Value added Course On “*Introduction to Sensors and Actuators*”

organized by the School of Electrical Engineering, BIHER conducted

from **22/4/2019 to 26/4/2019.**


COURSE COORDINATOR


CONVENOR