

Requisition Letter

Date: 12.03.2019

From

The HOD,
ECE Department,
Bharath Institute of Higher Education and Research,
Selaiyur, Chennai.

To

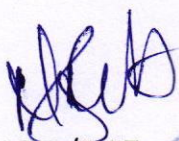
The Dean Engineering,
Bharath Institute of Higher Education and Research,
Selaiyur, Chennai.

Respected Sir,

SUB : Requisition for conducting Value Added Course-Regd

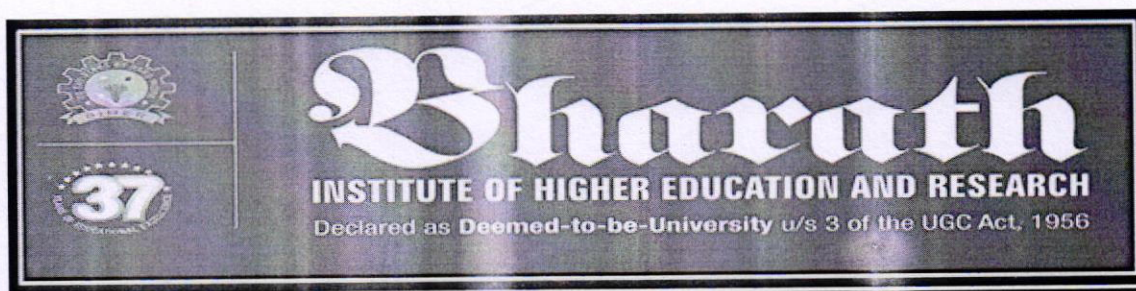
School of Electrical Engineering has planned to conduct Value added Course on "Fabrication Techniques For Mems Based Sensors Clinical Perspective " on 22.04.2019. In this regard we kindly request you to grant permission for the same.

Thanking you


HOD/ECE




Dean Engineering



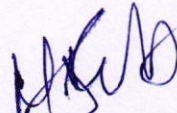
CIRCULAR

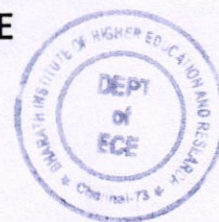
SCHOOL OF ELECTRICAL ENGINEERING

Date: 02.04.2019

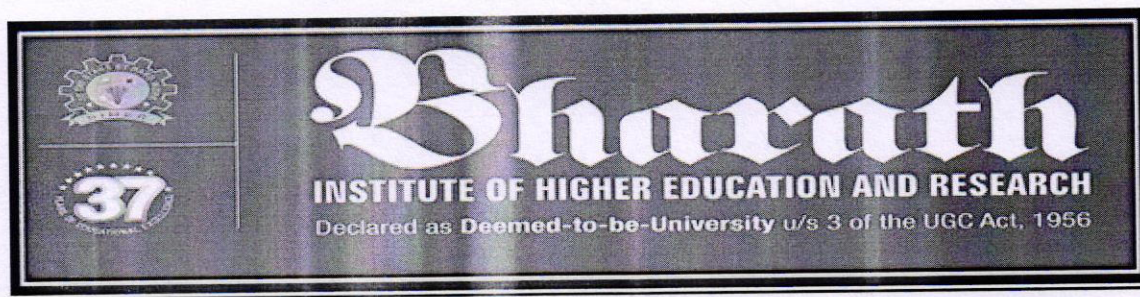
The course on Fabrication Techniques For MemS Based Sensors Clinical Perspective is planned by School of Electrical Engineering which commences on 22-4-2019 (Monday). In this regard the students are requested to give their willingness to Course Coordinator. It is instructed to actively participate and get benefitted for the certified course.

Course Coordinator: S.Balaji
Contact No: 9566078080
Email id : balajis.ece@bharathuniv.ac.in


(Dr.M.Sangeetha)
HOD/ECE



To,
Copy to ECE Department,
Copy to EEE Department,
Department Notice Board



SCHOOL OF ELECTRICAL ENGINEERING

Value Added Courses (2018 -2019)

Fabrication Techniques For MemS Based Sensors Clinical Perspective

Course Objective

This course is designed with an aim of educating students in the area of microtechnology and its use to fabricate sensors and systems. The students will have an exposure to sensors and its importance in the real world. The students will also be able to understand how to fabricate some of those sensors. Several examples of engineering devices used in clinical research will be also covered. Class 10000 non-conventional clean room and some equipment within it will also be shown. Below are some of the course outcomes. Ability to understand microfabrication process Understand sensors used in electronics and biomedical areas Understand Clean Room (Class 1 to Class 10000) Understand Microengineering Technology Design the process flow for fabricating microheater required in gas sensors. Design the process flow for fabricating force sensors for biomedical application. Design microheater for gas sensors as per specifications. Design force sensors as per specifications. Understand fabrication of microfluidic platforms, micro-cantilevers, flexible force sensors, inter-digitated electrodes, polymer-glass bonding etc. for clinical research.

Resource Persons :

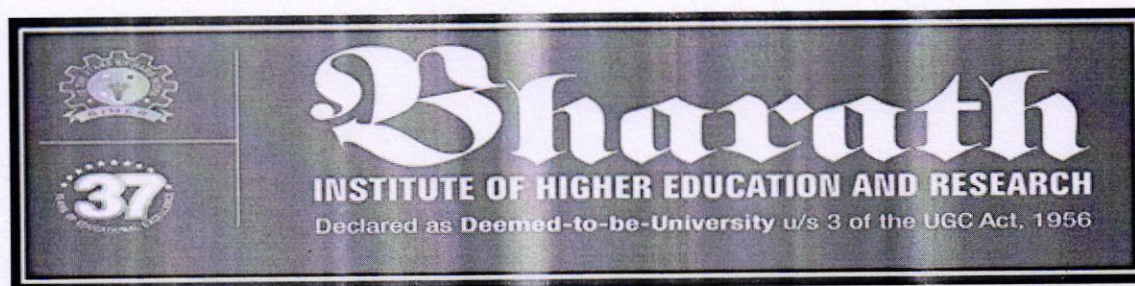
1. K. Subbulakshmi
2. G. Kanagavalli


Convener

Dr.M.Sangeetha

HOD/ECE





SCHOOL OF ELECTRICAL ENGINEERING

Fabrication Techniques For Mems Based Sensors Clinical Perspective

SCHEDULE

Contact Hours : 32 hrs

DATE	SESSI ON	Contact Hours	TOPICS	Resource person
22-4-2019	FN	9.00 am to 12.30 pm	Introduction to microengineering devices and its applicationsWeek	K..Subbulakshmi
	AN	1.30 pm to 4 pm	Clean room, contaminants, wafer cleaning processes (DI water, RCA, metallic impurities, etc.).	G. Kanagavalli
23-4-2019	FN	9.00 am to 12.30 pm	Introduction to the microheater, force sensors, microfluidic devices, its specifications, and applications.	K..Subbulakshmi
	AN	1.30 pm to 4 pm	Masks: Types of masks, Types of Photoresists, Spin Coaters Lithography process: optical lithography, x-ray, and e-beam lithography, lift-off techniques, soft lithography, Use of resists (spin coating, positive and negative photoresists), photoresist pre-baking, exposure, and development.	G. Kanagavalli
24-4-2019	FN	9.00 am to 12.30 pm	Etching: Isotropic/anisotropic, selectivity, wet and plasma assisted etching.	K..Subbulakshmi
	AN	1.30 pm to 4 pm	Types of wafers and orientations. Techniques of metallization: PVD [(Sputtering – DC, RF, and Magnetron), thermal evaporation, e-beam evaporation].	G. Kanagavalli
25-4-2019	FN	9.00 am to 12.30	Chemical Vapor Deposition: Dielectric	K..Subbulakshmi

		pm	films (Plasma Enhance Chemical Vapor Deposition (PECVD)), Atomic Layer Deposition	
	AN	1.30 pm to 5 pm	Understanding and designing the process flow for fabricating microengineering devices. Process flow for microheater, force sensors, and microfluidic devices.	G. Kanagavalli
26-4-2019	FN	9.00 am to 12.30 pm	Wafer dicing and bonding techniques. Microfluidic Chips	K..Subbulakshmi
	AN	1.30 pm to 5 pm	Process Flow for Fabricating Flexible Force Sensors and Force Sensors on Silicon, Process Flow for Fabricating VOC sensors, Biochips	G. Kanagavalli

VALUE ADDED COURSE

SCHOOL OF ELECTRICAL ENGINEERING

Fabrication Techniques For Mems Based Sensors Clinical Perspective

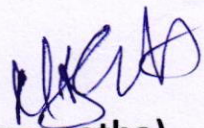
List Of Participants

Date: 22-4-2019

Sl.No	REG.NO	NAME OF THE CANDIDATE
1.	U14EC051	INDU GOPE
2.	U14EC052	JERALD.M.S
3.	U14EC053	KAKARAPARTHY CHITRA HARSHAN
4.	U14EC054	KAKIMANI.VAMSI KRISHNA
5.	U14EC055	KAKULETI BALA PHANI KUMAR
6.	U14EC056	KALAI ARASI.M
7.	U14EC057	KALUMURI VIJAYA KUMAR REDDY
8.	U14EC058	KAMIREDDY SAI VEERA LAKHSMI MONIKA
9.	U14EC059	KANALA RAMANJANEYA REDDY
10	U14EC060	KANIKE SAIPRAKASH
11	U14EC061	KANNA SHIVA KRISHNA
12	U14EC062	KATIPELLI JEEVAN REDDY
13	U14EC063	KATTA ARUN REDDY
14	U14EC064	KODI.BHARADWAJ REDDY
15	U14EC065	KOKATI GEETADITYA RAMKAPIL
16	U14EC066	MANAM KOKILA.

17	U14EC067	KOMMANI DIVYA SREE
18	U14EC068	KOMMIDI PUNNAM CHANDER
19	U14EC069	KONAIHAGARI NAGA VAMSI KRISHNA
20	U14EC070	KONDA MOHITH KUMAR REDDY
21	U14EC071	KONDURI SURENDRAREDDY
22	U14EC072	KONDURU PAVAN SAI
23	U14EC073	KOTA VIDYA SAGAR
24	U14EC074	MADDELA MANIKANTA
25	U14EC075	SINGAMALA MALLIKARJUNA REDDY
26	U14EC076	MANCHIKATLA SURYA TEJA
27	U14EC077	ALURU MANIRATHNAM.
28	U14EC078	MANNEM MAHANTH REDDY
29	U14EC079	MANTU KUMAR SINGH
30	U14EC080	MARKA RAJ KUMAR
31	U14EC081	MAYANK HARSHIT
32	U14EC082	MD.FAIYAZ ALAM
33	U14EC083	MEENAAKSHI S
34	U14EC084	MELARGOAD KALATTAR RAKESH
35	U14EC086	MOHAMED KASHIFUDDIN.B
36	U14EC087	MOLABANTI SAI KARTHIK
37	U14EC088	VASIREDDY MOUNIKA.
38	U14EC089	MUDRAKOLLA SURESH SACHIN
39	U14EC090	MUTYALA SAI HARISHITHA
40	U14EC091	NADENDLA VANAJA
41	U14EC092	NAGUNOORI SANKIRTH KUMAR

42	U14EC093	NALAMARU RAVALI
43	U14EC095	NARESH .I
44	U14EC096	MOGAL NASEER.
45	U14EC097	MATHEGAM NIHAL REDDY
46	U14EC098	NILKAMAL KUMAR
47	U14EC099	PADALA SUBRAHMANYAM
48	U14EC100	PALAPARTHI RAMBABU
49	U14EC101	PANDEM RAGHAVENDRA REDDY
50	U14EC102	PAPIJENNI RAMANAREDDY
51	U14EC103	PAPUGANI PARTHASARADHI.
52	U14EC104	PEDINEEDI VIJAYA BHARGAVI
53	U14EC105	PEDDISETTI VINAY
54	U14EC106	PENGALAPATI BHARATHI
55	U14EC107	PILLI DANIEL PHILIP MOSES
56	U14EC108	PONNAGANTI MANOJ DEEP
57	U14EE057	RAYSHETTI KARTHIK BABU
58	U14EE058	TAMESHWAR BANJARE
59	U14EE059	NAMBALLA MADHU BABU
60	U14EE060	ADIKI SWARNA

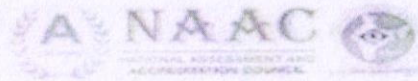

(Dr.M.Sangeetha)

HOD/ECE





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



SCHOOL OF ELECTRICAL ENGINEERING

CERTIFICATE OF PARTICIPATION

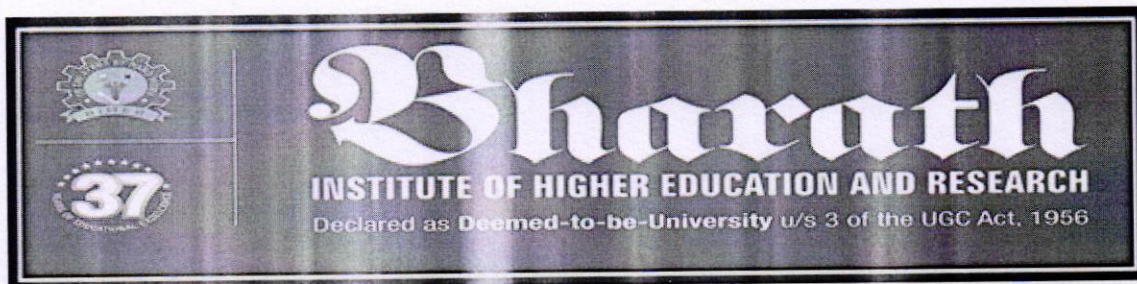
This is to certify that Mr / Ms **KALAI ARASI.M (U14EC056)**
has attended Value added Course On **“Fabrication Techniques For
Mems Based Sensors:Clinical Perspective”** organized by the School of
Electrical Engineering, BIHER conducted from 22-4-2019 to 26-4-2019.

S. Balaji

BALAJI S
COURSE COORDINATOR

Dr. M. Sangeetha

Dr.M.SANGEETHA
CONVENOR



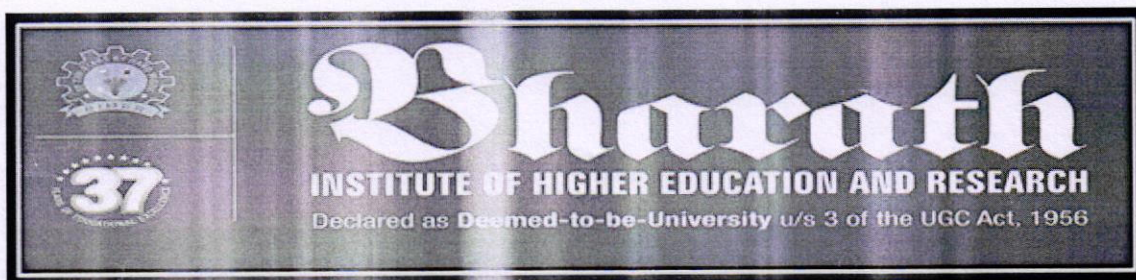
SCHOOL OF ELECTRICAL ENGINEERING

VALUE ADDED COURSE

Fabrication Techniques For MemS Based Sensors Clinical Perspective

FEED BACK FORM		Date: 26-4-2019			
Name	ADIKI SWARNA				
Register number	U14EE060				
	Poor	Fair	Good	Very Good	Excellent
Overall Program				✓	
The Speaker					✓
Audio, Visual Aids Technology used				✓	
Presentation hand outs					✓


 Student Signature



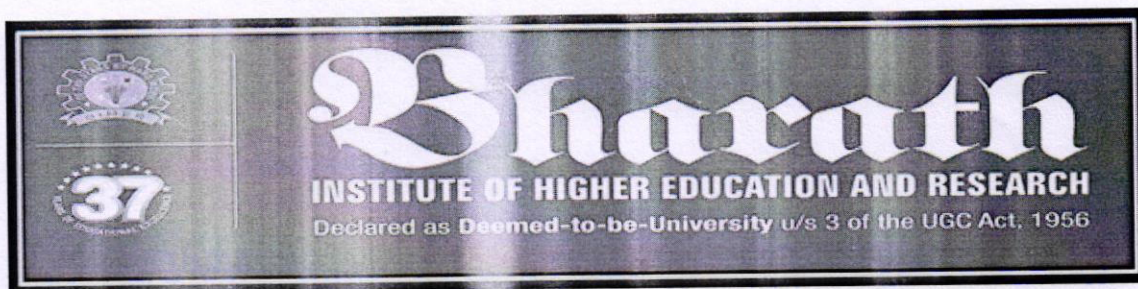
SCHOOL OF ELECTRICAL ENGINEERING

VALUE ADDED COURSE

Fabrication Techniques For Mems Based Sensors Clinical Perspective

FEED BACK FORM		Date:26-4-2019			
Name	Nelkamel kumar.				
Register number	U14 EC098				
	Poor	Fair	Good	Very Good	Excellent
Overall Program				✓	
The Speaker					✓
Audio, Visual Aids Technology used				✓	
Presentation hand outs					✓

Nelkamel kumar
Student Signature



SCHOOL OF ELECTRICAL ENGINEERING

Course Fabrication Techniques For MemS Based Sensors Clinical Perspective

dated on 22-4-2019 conducted by school of Electrical Engineering

