



Bharath

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

Date:11.06.2019

From

The HOD,
Department of Mechanical Engineering,
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 – reg.

School of Mechanical Sciences has planned to conduct Value added course entitled “The Arduino and Robotics “from 17.6.2019 to 21.06.2019. In this regard we kindly request you to grant permission for the same.

Thanking You



HOD/MECH



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Date:5.06.2019

Department of Mechanical Engineering

Circular

The of Department of Mechanical Engineering, BIHER glad to conduct on five days value added program on “**The Arduino and Robotics**” from 17.06.2019 to 21.06.2019 for 30 hours. Those who are interested to participate do register your name to the program coordinator.

All reregistered students must attend all the classes without fail. The students who are completed the course successfully with good score will get the course completion certificate from the institute/Department.

Resource person: Dr.R.Hariharan, Mr.N.Lenin Rakesh

Maximum no. of registration Allowed – 60.

Program coordinator


Mr.V.P.DuraiRaj



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The Arduino and Robotics

OBJECTIVES:

This course will show you how to use your Arduino to control a robot, while providing step-by-step instructions on the entire robot building process. You'll learn Arduino basics as well as the characteristics of different types of motors used in robotics.

MODULE 1

(6 Hrs)

Introduction to Arduino

Introduction to Arduino, Pin configuration and architecture, Device and platform features, Concept of digital and analog ports, Familiarizing with Arduino Interfacing Board, and Arduino platform.

MODULE II

(6 Hrs)

Basic Concepts of Arduino

Arduino data types, Variables and constants, Operators, Control Statements, Arrays, Functions, Arduino i/o Functions, Arduino Time, Arduino sensors, Arduino Display.

MODULE III

(6 Hrs)

Robotics Introduction

Robotics, Introduction, Basic Structure, Classification of robot and Robotic systems, laws of robotics, robot motions, work space, precision of movement

MODULE IV

(6 Hrs)

Drives and control systems

Hydraulic systems, power supply, servo valve, sump, hydraulic motor, DC servo motors, stepper motors, operation.

MODULE V

(6 Hrs)

Making it a reality (Arduino & Robotics based Projects)

This will involve designing, developing, coding and implement Arduino project. Projects will include but not limited to Fingerprint Based Car Ignition System, Obstacle avoiding robot using an ultrasonic sensor and Arduino, Fire Fighting Robot using Arduino Automatic Home cleaning Robot, Arduino Uno based Robotic Arm.



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Department of Mechanical Engineering

One Week Value added Program on “TheArduino and robotics”

Date	Morning Session (9 AM – 12 PM)	Afternoon Session (1:30 PM – 4:30 PM)
17.6.2019 Monday	Dr.R.Hariharan Introduction to Arduino, Pin configuration and architecture, Device and platform features	Mr.N.Lenin Rakesh learn Arduino basics as well as the characteristics of different types of motors used in robot
18.6.2019 Tuesday	Mr.N.Lenin Rakesh Arduino data types, Variables and constants, Operators, Control Statements, Arrays	Dr.R.Hariharan Arduino i/o Functions, Arduino Time, Arduino sensors, Arduino Display.
19.6.2019 Wednesday	Dr.R.Hariharan Robotics, Introduction, Basic Structure, Classification of robot and Robotic systems	Mr.N.Lenin Rakesh laws of robotics, robot motions, work space, precision of movement
20.6.2019 Thursday	Mr. N.Lenin Rakesh Hydraulic systems, power supply, servo valve, sump, hydraulic motor	Dr.R.Hariharan DC servo motors, stepper motors, operation.
21.6.2019 Friday	Dr.R.Hariharan This will involve designing, developing, coding and implement Arduino project. Projects will include but not limited to Fingerprint Based Car Ignition System	Mr.N.LeninRakesh Obstacle avoiding robot using an ultrasonic sensor and Arduino, Arduino Uno based Robotic Arm.



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Sl.No	NAME	Registrations No	Department
1	RAGUL KUMAR S	U16ME040	Mechanical Department
2	AAKASH KAVIN T	U16ME043	Mechanical Engineering
3	DINESH C	U16ME044	Mechanical Engineering
4	MUSTAQ AHMED M	U16ME045	Mechanical Engineering
5	GOWTHAM S	U16ME047	Mechanical Engineering
6	HEMANTH RAJ R	U16ME048	Mechanical Engineering
7	SHRIKHANTH R	U16ME052	Mechanical Engineering
8	SANTHOSH R	U16ME071	Mechanical Engineering
9	MOHAMMED SHAJI B	U16ME079	Mechanical Engineering
10	MUKANTHAN T	U16ME081	Mechanical Engineering
11	SAMPADARAO ASHOK	U16ME084	Mechanical Engineering
12	GODWIN PRABHU G	U16ME088	Mechanical Engineering
13	YERRAMSETTI MAHESH BABU	U16ME108	Mechanical Engineering
14	REDDYVARI TEJESH	U16ME114	Mechanical Engineering
15	ABHIJITH A R	U16ME123	Mechanical Engineering
16	BEENAGONI ANILKUMAR	U16ME124	Mechanical Engineering
17	SUJITH H	U16ME125	Mechanical Engineering
18	JAKKAMSETTI BHANU CHAITANYA	U16ME126	Mechanical Engineering
19	VENKATASRINIVAS M	U16ME130	Mechanical Engineering
20	ASHWIN S	U16ME132	Mechanical Engineering
21	RAGUL KUMAR S	U16ME135	Mechanical Engineering
22	AAKASH KAVIN T	U16ME136	Mechanical Engineering
23	DINESH C	U16ME137	Mechanical Engineering
24	MUSTAQ AHMED M	U16ME141	Mechanical Engineering
25	GOWTHAM S	U16ME142	Mechanical Engineering
26	HEMANTH RAJ R	U16ME502	Mechanical Engineering
27	SHRIKHANTH R	U16ME040	Mechanical Engineering
28	SANTHOSH R	U16ME043	Mechanical Engineering
29	MOHAMMED SHAJI B	U16ME044	Mechanical Engineering
30	MUKANTHAN T	U16ME045	Mechanical Engineering
31	SAMPADARAO ASHOK	U16ME047	Mechanical Engineering
32	GODWIN PRABHU G	U16ME048	Mechanical Engineering
33	YERRAMSETTI MAHESH BABU	U16ME052	Mechanical Engineering
34	REDDYVARI TEJESH	U16ME071	Mechanical Engineering
35	ABHIJITH A R	U16ME079	Mechanical Engineering
36	BEENAGONI ANILKUMAR	U16ME081	Mechanical Engineering
37	VEERANKI NAGA PRAMOD	U16ME084	Automobile Engineering
38	JABANESH SG	U17AM051	Automobile Engineering
39	LA WANBHA GYMPAD	U17AM701	Automobile Engineering
40	NEIKHOZO KHAMO	U17AM702	Automobile Engineering

41	SINGIREDDY HARSHITH REDY	U17AM703	Automobile Engineering
42	STEVE CASTONE CHYNE	U17AM704	Automobile Engineering
43	MUGILAN M	U16MT501	Mechatronics Engineering
44	VIGNESHWAR C B	U16MT502	Mechatronics Engineering
45	KARUPHIN KAWIN J	U16MT503	Mechatronics Engineering
46	CHANDRASEKAR D G	U16MT701	Mechatronics Engineering
47	CHIRANJEEVI A	U16MT702	Mechatronics Engineering
48	VIGNESH.A	U16MT703	Mechatronics Engineering



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FEEDBACK FORM

- ❖ As part of a continuing improvement process, our college appreciates suggestions and inputs regarding the institution. We request you to sincerely answer these questions under assurance of complete confidentiality. Your interest in making our institution better is greatly appreciated.

Name of Department : Mechanical

Date : 21.06.2019

Event / Speaker Name : Value added Course on the Arduino and Robotics
Pr. R. Venkatesh, Mr. N. Lenin Reddy

- Please rate the session on the scale indicated. Your comments are most appreciated.

S.No	Parameters	Below Average	Average	Good	Excellent	Outstanding
1.	The Topic					✓
	The choice of topic was relevant to me					✓
2.	The Lecturer / Speaker				✓	
	Self-confidence					✓
	Communication skills					✓
	Doubts/ queries were answered satisfactorily				✓	
3.	The Content (Topic)					✓
	Refers to latest developments in the field					✓
	Career oriented				✓	
	Innovative learning, if any					✓

- Overall, how would you rate this Guest Lecture / Workshop / Seminar / Event/Value added course?

1. Below Average	2. Average	3. Good	4. Excellent	5. Outstanding
				✓

- Comments (If any):

It very good, very interesting

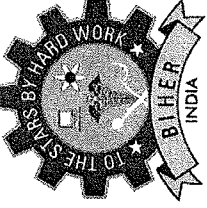
Bharath Institute of Higher Education and Research

CERTIFICATE OF PARTICIPATION

This certificate goes to

RAGUL KUMAR.S

for successfully completing the Value Added Course on
"The Arduino and Robotics" conducted by the School of
Mechanical Engineering during the month of June 2019.



mx

VAC CO-ORDINATOR

[Signature]

HOD MECHANICAL

