<u>**REQUISITION LETTER**</u>   10.06.2016

FROM

The HOD
Department of Mechatronics
Bharath Institute of Higher Education and Research
Selaiyur-Chennai- 73

TO

The Dean Engineering
Bharath Institute of Higher Education and Research
Selaiyur-Chennai- 73

Respected Sir,

Subject: Requisition for conducting Value Added course reg.

The school of Mechanical sciences had planned to conduct a 5 -day value added course on the topic
"Electro-Mechanical Simulation PSPICE" dated from **08.08.2016 to 12.08.2016**. In this regard, I request
you to kindly grant permission for conducting the same.

Thanking You

HOD   Dean Engineering
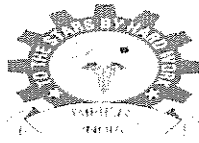
Date: 10.06.2016

Department of Mechatronics

Circular

The Department of Mechatronics, BIHER is glad to conduct a 5 - day Value Added Program on "ELECTROMECHANICAL SIMULATION PSPICE" dated from 8.8.2016 for a period of 25 hours. Those who are interested to participate do register your name with the program coordinator mentioned below.

Resource persons:

Dr.P.Sengottuvel,
Professor,
BIHER
Mr. Murugesan
Trainer,
Soft logic Systems pvt Ltd,
K K Nagar Chennai.

Maximum No. of registration Allowed – 46

*First come first serve basis.

Program Coordinator:
Mrs.M.DEEPA
Assistant Professor
Mrs.G.VASUMATHI
Assistant Professor,
E-Mail: arun08v@gmail.com
Mobile: 9962133365

HOD

Bharath

Department of Mechatronics

ELECTROMECHANICAL SIMULATION PSPICE

OBJECTIVES:

The objective of Simulation PSPICEis to impart hands on experience in verification of circuit laws and theorems, measurement of circuit parameters, study of circuit characteristics using PSPICE. It also gives practical exposure to the usage of different circuits with different condition. SPICE is a powerful general purpose analog and mixed-mode circuit simulator that is used to verify circuit designs and to predict the circuit behavior. This is of particular importance for integrated circuits.

[DAY: 1]MODULE I PSPICE SIMULATION OF Nodal analysis for DC circuits (5 Hrs)

Create a web application, design responsive UIs and controls, and debug, build, and package your WebVIs.

[DAY: 2]MODULE II *PSPICE SIMULATION OF AC CIRCUIT* (5 Hrs)

Access Web VI resource files, web service data, and use web services like System Link Tag and Message in your web application.

[DAY: 3]MODULE III Using Transformer circuit (5 Hrs)

SPICE has no model for an ideal transformer. An ideal transformer is simulated using mutual inductances such that the transformer ratio $N1/N2 = sqrt(L1/L2)$. The part in PSpice is called TFRM_LINEAR

[DAY: 4] MODULE IV - AM Modulated Signal (AM Modulation) (5 Hrs)

To generate a AM signal in PSpice we can make use of the Multiplication function MULT that can be found in the ABM library.

[DAY: 5] MODULE V – ERROR VERIFICATION (5 Hrs)

PSpice SLPS enables co-simulation for complete system model for test and verification and helps identify errors early in the design process..

Department of Mechatronics

Value Added Course - ELECTROMECHANICAL SIMULATION PSPICE

PARTICIPANTS LIST

S.No	Reg.No	Name	Department
1.	U17MT001	PRASANNA KUMAR R	Mechatronics
2.	U17MT002	NATARAJAN M A	Mechatronics
3.	U17MT012	TAMILSELVAN A	Mechatronics
4.	U17MT013	ARUN KUMAR C K	Mechatronics
5.	U17MT014	MOHAN PIRASATH M	Mechatronics
6.	U17MT015	BAGIYARAJ D	Mechatronics
7.	U17MT026	MADUGULA BALACHANDRA	Mechatronics
8.	U17MT027	ALEX ANTO	Mechatronics
9.	U17MT052	SATHISH KUMAR S	Mechatronics
10.	U17MT056	SURYA PRAKASH N	Mechatronics
11.	U17MT057	SREE MUKESH R V	Mechatronics
12.	U17MT058	NAGARAJ P	Mechatronics
13.	U17ME019	EDLA MANISH	Mechanical Engineering
14.	U17ME021	DARAM PRITHVI RAJ .	Automobile Engineering
15.	U17ME035	DAMARLA SAI SANTHOSH .	Automobile Engineering
16.	U17ME036	FEROZ AKHTAR M A	Automobile Engineering
17.	U17ME038	HARIRAM K	Automobile Engineering
18.	U17ME045	JEYABHARATHI R	Mechanical Engineering

19.	U17ME047	THIRUGNANA SAMMANDAM R	Mechanical Engineering
20.	U17ME056	KAMPARAJU RAM SRINIVAS RAJU .	Mechanical Engineering
21.	U17ME059	BALAJI P	Mechanical Engineering
22.	U17ME062	PAKAM SARATH KUMAR .	Mechanical Engineering
23.	U17ME066	YETTELLA BHUVANESWARA REDDY .	Mechanical Engineering
24.	U17ME068	CHALLA GIREESH	Mechanical Engineering
25.	U17ME019	EDLA MANISH	Mechanical Engineering
26.	U17ME021	DARAM PRITHVI RAJ .	Mechanical Engineering
27.	U17ME035	DAMARLA SAI SANTHOSH .	Mechanical Engineering
28.	U17ME036	FEROZ AKHTAR M A	Mechanical Engineering
29.	U17AM047	MANISH P MUTREJA.	Automobile Engineering
30.	U17AM048	HARIHARAN S	Automobile Engineering
31.	U17AM501	NITHIN UNNI	Automobile Engineering
32.	U17AM502	KISHORE C	Automobile Engineering
33.	U17AM503	VEERANKI NAGA PRAMOD	Automobile Engineering
34.	U17AM701	JABANESH SG	Automobile Engineering
35.	U17AM702	LAWANBHA GYMPAD .	Automobile Engineering
36.	U17AM703	NEIKHOZO KHAMO .	Automobile Engineering
37.	U17AM704	U17AM704-SINGIREDDY HARSHITH REDDY .	Automobile Engineering
38.	U17AM705	STEVE CASTONE CHYNE	Automobile Engineering
39.	U17AM026	SANJAI M	Automobile Engineering
40.	U17AM027	RAKESH KUMAR S	Automobile Engineering
41.	U17AM029	GANGIREDDY PAVAN KUMAR REDDY .	Automobile Engineering
42.	U17AM030	GOUTHAM K	Automobile Engineering

43.	U17AM031	SHANKARANATHAN K	Automobile Engineering
44.	U17AM032	BARATH KUMAR R	Automobile Engineering
45.	U17AM033	DEVARAPALLI RAHUL	Automobile Engineering
46.	U17AM034	SARIYAM VIDYASAGAR	Automobile Engineering

BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY

DEPARTMENT OF MECHATRONICS

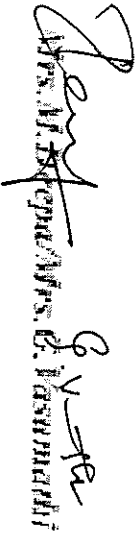### CERTIFICATE OF PARTICIPATION

This is to certify that

MADUGULA BALACHANDRA

of Bharath Institute of Science and Technology

had attended the 5 day Value Added Program on "*ELECTROMECHANICAL SIMULATION PSPICE*"
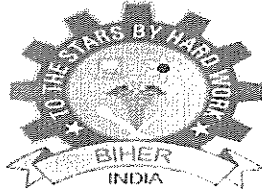
organized by the Department of Mechatronics-

Bharath Institute of Higher Education and Research,Chennai on 8/8/2016 TO 12/8/2016

Mrs.M.Supraja/Mrs.B.Vasumathi
Coordinators

Dr.P.Sengottuvel
Resource Person

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

Department of Mechatronics

ELECTROMECHANICAL SIMULATION PSPICE

Value added course on ELECTROMECHANICAL SIMULATION PSPICE conducted by Murugesan,Soft Logic Systems Pvt Ltd,K Nagar,Chennai.

Bharath

BHARATH INSTITUTE OF SCIENCE & TECHNOLOGY
Selaiyur, Chennai – 73.

DEPARTMENT OF MECHATRONICS

VALVE ADDED COURSE
FEEDBACK FORM

Date: 12.08.2016

NAME	JABANESH S(7)				
REGISTER.NO	UI7AM701				
COURSE TITLE	ELECTRO MECHANICAL SPICE				
	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
OVERALL PROGRAM					✓
THE SPEAKER					✓
AUDIO,VISIAL AIDS,TECHNOLOGY USED				✓	
PRESENTATION HAND OUTS			✓		

STUDENT SIGNATURE Jabenol. S. (7).

Bharath

BHARATH INSTITUTE OF SCIENCE & TECHNOLOGY

Selaiyur, Chennai – 73.

DEPARTMENT OF MECHATRONICS

VALVE ADDED COURSE
FEEDBACK FORM

Date: 12.08.2016

NAME	BHUVANESH				
REGISTER.NO	U17ME066				
COURSE TITLE	Electro Mechanical Spico				
	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
OVERALL PROGRAM				✓	
THE SPEAKER					✓
AUDIO,VISIAL AIDS,TECHNOLOGY USED					✓
PRESENTATION HAND OUTS					✓

STUDENT SIGNATURE

<u>**Requisition Letter**</u>   23.10.2016

FROM

The HOD
Department of Mechatronics
Bharath Institute of Higher Education and Research
Selaiyur-Chennai- 73

TO

The Dean Engineering
Bharath Institute of Higher Education and Research
Selaiyur-Chennai- 73

Respected Sir,

      Subject: Requisition for conducting Value Added course reg.

The school of Mechanical sciences had planned to conduct a 5 day value added course on the topic " Course on **Arduino Hands-On**" dated from 01.11.2016 to 05.11.2016 . In this regard, I request you to kindly grant permission for conducting the same.

Thanking You

Dean Engineering

Date: 23.10.2016

Department of Mechatronics

Circular

The Department of Mechatronics, BIHER is glad to conduct a 5 - day Value Added Program on **"COURSE ON ARDUINO HANDS ON"** dated from 01.11.2016 for a period of 25 hours. Those who are interested to participate do register your name with the program coordinator mentioned below.

Resource persons:

Dr.P.Sengottuvel,
Professor,
BIHER

Mr. Shanthi lal
Skilled Teacher,
Jay Robotic tech-pvt Ltd-Tambaram

Maximum No. of registration Allowed – 56

*First come first serve basis.

Program Coordinator:
Mrs.SRIDEVI
Assistant Professor
Mr.J.DHANASEKAR
Assistant Professor,
E-Mail:jdhanas   @gmail.com
Mobile: 984125

Department of Mechatronics

COURSE ON ARDUINO HANDS ON

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.

[DAY: 1]MODULE 1 Introduction to Arduino (5 Hrs)

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.

[DAY: 2]MODULE II Basic Concepts of Arduino (5 Hrs)

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

[DAY: 3] MODULE III Introduction to Sensors (5 Hrs)

Learn about your hosting options during development and how to host your web application to share with users. Determine how to integrate your web application into your hardware system to share measurement data and interact with your hardware.

[DAY: 4]MODULE IV Drives and control systems (5 Hrs)

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

[DAY: 5]MODULE V Making it a reality (Arduino & Roboticsb based Projects (5 Hrs)

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.

Department of Mechatronics

Value Added Course - COURSE ON AUDINO HANDS ON

PARTICIPANTS LIST

S.No	Reg.No	Name	Department
1.	U16MT002	RAAHUL GANESH R	Mechatronics
2.	U16MT003	DINESH J	Mechatronics
3.	U16MT004	SRINATH B	Mechatronics
4.	U16MT005	DHANASEKAR R	Mechatronics
5.	U16MT006	GOUTHAM M	Mechatronics
6.	U16MT007	SATHIYASEELAN S	Mechatronics
7.	U16MT008	RAKESH P	Mechatronics
8.	U16MT009	ABDUL FAHEEM S	Mechatronics
9.	U16MT010	SAKTHI R	Mechatronics
10.	U16MT011	MELVINE ROHAN R	Mechatronics
11.	U16MT014	SARATHKUMAR D	Mechatronics
12.	U16MT015	SOMENDRAN A	Mechatronics
13.	U16MT018	RATHISH KRISHNAN R	Mechatronics
14.	U16MT501	MUGILAN M	Mechatronics
15.	U16MT502	VIGNESHWAR C B	Mechatronics
16.	U16MT503	KARUPHIN KAWIN J	Mechatronics
17.	U16MT701	CHANDRASEKAR D G	Mechatronics

18.	U16MT702	CHIRANJEEVI G	Mechatronics
19.	U16MT703	VIGNESH A	Mechatronics
20.	U16MT704	AJITH H	Mechatronics
21.	U16ME014	RAVIRAJAN S	Mechanical Engineering
22.	U16ME023	ARAVINDAN K	Mechanical Engineering
23.	U16ME029	DINESH KUMAR M	Mechanical Engineering
24.	U16ME031	ZHAKIRHUSSAIN S	Mechanical Engineering
25.	U16ME033	SHERIN T MAMMEN	Mechanical Engineering
26.	U16ME035	PARTHAN V	Mechanical Engineering
27.	U16ME041	SUVODEEP RAKSHIT	Mechanical Engineering
28	U16ME049	MOHAMED ABDULLAH K	Mechanical Engineering
29	U16ME055	DEEPAK H	Mechanical Engineering
30	U16ME056	YOGESH P	Mechanical Engineering
31	U16ME059	JEFRON G	Mechanical Engineering
32	U16ME062	DANIEL N P	Mechanical Engineering
33	U16ME066	VASANTH KUMAR R	Mechanical Engineering
34	U16ME078	KAMASANI SURESH	Mechanical Engineering
35	U16ME080	MAJID ALI	Mechanical Engineering
36	U16ME082	HARISH S	Mechanical Engineering
37	U16ME087	ANAND KUMAR .	Mechanical Engineering
38	U16ME093	MACHUNURU PRASAD KUMAR REDDY	Mechanical Engineering
39	U16ME113	PYNKHLAINBORLANG KHARSATI	Mechanical Engineering
40	U16ME115	GUNA SUKESH	Mechanical Engineering
41	U16ME119	PALAPALA KOTESWARARAO	Mechanical Engineering
42	U16ME120	MADDIKARA SRIKAMTHREDDY	Mechanical Engineering
43	U16ME121	MUKESH K	Mechanical Engineering
44	U16ME129	DEEPAK RAJAN D	Mechanical Engineering

46	U16ME131	VIJAY M	Mechanical Engineering
47	U16ME133	AKASH SAHA	Mechanical Engineering
48	U16ME134	ARANYA JASH	Mechanical Engineering
49	U16AM007	SUNDARESWARAN B	Automobile Engineering
50	U16AM008	PALAPANDALA PRUDHVI	Automobile Engineering
51	U16AM009	THAMIM ANSARI K	Automobile Engineering
52	U16AM010	JAI KUMAR VERMA	Automobile Engineering
53	U16AM012	MOHAMED IMTHIYAZ M	Automobile Engineering
54	U16AM015	PARIMI SAI SURYA VAMSI .	Automobile Engineering
55	U16AM017	AMAL PHILIP GEORGE .	Automobile Engineering
56	U16AM018	ROSHAN ROMARIO FRANCIS .	Automobile Engineering

BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY

DEPARTMENT OF MECHATRONICS

CERTIFICATE OF PARTICIPATION

This is to certify that

SRINATH.B

of Bharath Institute of Science and Technology

had attended the 5 day Value Added Program on "Course on Audino-Hands ON"

organized by the Department of Mechatronics-

Bharath Institute of Higher Education and Research,Chennai on 01.11.2016 to 05.11.2016

Mrs.SRIDEVI/Mr.J.DHANASEKAR
Coordinators

Dr.P.Sengottuvel
Resource Person

ℬharath
INSTITUTE OF HIGHER EDUCATION AND RESEARCH
(Declared as Deemed - to - be - University under section 3 of UGC Act 1956)
BHARATH INSTITUTE OF SCIENCE & TECHNOLOGY
Selaiyur, Chennai – 73.
DEPARTMENT OF MECHATRONICS

VALVE ADDED COURSE
FEEDBACK FORM

Date: 05/11/2016

NAME	DINESH KUMAR. M				
REGISTER.NO	U16ME029				
COURSE TITLE	ARDUINO HANDS ON				
	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
OVERALL PROGRAM				✓	
THE SPEAKER				✓	
AUDIO,VISIAL AIDS,TECHNOLOGY USED					✓
PRESENTATION HAND OUTS					✓

STUDENT SIGNATURE

Bharath

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

BHARATH INSTITUTE OF SCIENCE & TECHNOLOGY

Selaiyur, Chennai – 73.

DEPARTMENT OF MECHATRONICS

VALVE ADDED COURSE
FEEDBACK FORM

Date: 5/11/2016

NAME	Vighneshwar. C. B				
REGISTER.NO	U16 MT 502				
COURSE TITLE	Arduino Hands on				
	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
OVERALL PROGRAM					✓
THE SPEAKER				✓	
AUDIO,VISIAL AIDS,TECHNOLOGY USED					✓
PRESENTATION HAND OUTS					✓

C.B Vighneshwar
STUDENT SIGNATURE

Department of Mechatronics

COURSE ON ARDUINO HANDS ON

Requisition Letter

Date: 12.10.2016

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 on "Course on manual Testing and Automation" on 01-11-2016. In this regard we kindly request you to grant permission for the same.

Thanking You

HOD/MECH

Dean Engineering

Head of the Department
Department of Mechanical Engineering
Bharath Institute of Higher Education and Research
(Dec.u/s 3 of UGC Act.1956)
Selaiyur, Chennai-600 073

Date: 14.10.2016

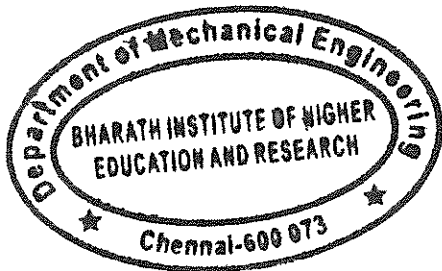## Department of Mechanical Engineering

Circular

The of Department of Mechanical Engineering, BIHER glad to conduct on five days value added program on *"Course on Manual Testing and Automation"* from 01.11.2016 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: Mrs.C.M.Meenakshi and Mrs. G.Sucharitha

Maximum no. of registration Allowed – 60.

*First come first serve basis.

Program coordinator

Mr.V.Jose Ananth Vino

Mr.N. Lenin Rakesh

Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

Department of Mechanical Engineering

Course on Manual Testing and Automation

OBJECTIVE:

- The aim of the subject is to provide make the students to understand the strength of materials.
- To get a basic understanding of microstructures of specimens of different materials
- To impart the necessary basic concepts of industrial automation, robotics, and control methods and to apply them to various manufacturing problems
- To emphasize the knowledge on the quality improvement, automation, and advanced manufacturing techniques to create the highest-caliber products quickly, efficiently, inexpensively, and in synchronization with the marketing, sales, and customer service of the company.

| MODULE 1 | **Manual Testing** | (10Hrs) |

[DAY: 1]

Stress- Strain and Deformation of Solids: Properties of material, Concept of Stress and Strain, Hook's Law, Stress Strain Diagram for structural steel and Non-ferrous materials. Poisson's Ratio & principles of superposition, Total elongation of tapering bars of circular and rectangular cross-sections. Elongation due to self-weight, volumetric strain. Expression for Volumetric strain, Elastic constants, relationship among elastic constants, compound bars Rigid and Deformable bodies – Strength- Stiffness and Stability – Stresses; Tensile- Compressive and Shear – Elastic constants – Strain energy and unit strain energy – Strain energy in uniaxial loads.

> Determination of Tensile strength and Compression strength on a given specimen.
> Determination of shear strength of Mild steel and Aluminium rods

[DAY: 2]

> Determination of Torsional strength of mild steel rod
> Determination of Impact strength
> Conduct of Hardness test on metals - Brinell and Rockwell Hardness.
> Conduct of Deflection test on beams

[DAY: 3]

> Measurement of delicate parts in a Tool Makers Microscope.
> Fundamental dimension measurement of a gear using a contour projector.
> Straightness measurement using an autocollimator

MODULE II   Industrial Tribology   **(5 Hrs)**

[DAY: 4]   **Surfaces and Friction, Wear**

Surfaces and Friction : Topography of Engineering surfaces- Contact between surfaces - Sources of sliding friction – AdhesionPloughing- Energy dissipation mechanisms Friction Characteristics of metals - Friction of non metals. Friction of lamellar solids - friction of Ceramic materials and polymers - Rolling Friction - Source of Rolling Friction – Stick slip motion - Measurement of Friction.

Wear: Types of wear - Simple theory of Sliding Wear Mechanism of sliding wear of metals - Abrasive wear – Materials for Adhesive and Abrasive wear situations - Corrosive wear - Surface Fatigue wear situations - Brittle Fracture - wear - Wear of Ceramics and Polymers - Wear Measurements.

[DAY: 5] Automation   **(10 Hrs)**

Introduction Production System Facilities, Manufacturing Support systems, Automation in Production systems, Automation principles & Strategies

Fundamentals of Industrial Robots: Specifications and Characteristics, Basic components, configurations, Criteria for selection, various industrial applications. Robotic Control Systems: Drives, Robot Motions, Actuators, Power transmission systems; Robot controllers, Dynamic properties of robots-stability, control resolution, spatial resolution, accuracy, repeatability, compliance.

[DAY: 6]   **(5 Hrs)**

Automated Manufacturing Systems Components of a Manufacturing system, Classification of Manufacturing Systems, overview of Classification Scheme, Single Station Manned Workstations and Single Station Automated Cells.

Assembly Automation: Types and configurations, Parts delivery at workstations- Various vibratory and non-vibratory devices for feeding and orientation, Calculations of feeding rates, Cycle time for single station assembly machines and partially automated systems; Product design for automated assembly.

> 360 degree pick and place robotic Machine
> Engraving machine
> 3D printing

Department of Mechanical Engineering

One Week Value added Program on "*Course on manual Testing and Automation*"
1st Nov to 6th Nov 2016

Date	Morning Session (9 AM – 12 PM)	Afternoon Session (1:30 PM – 3:30 PM)
01 – 11 – 2016 (Monday)	Program Inauguration Mrs.C.M.Meenakshi , Assistant professor, BIHER Introduction:Stress- Strain and Deformation of Solids *Practical Session:* • *Determination of Tensile strength and Compression strength on a given specimen.*	Mrs. G.Sucharitha, Assistant professor, BIHER Strength- Stiffness and Stability – Stresses; Tensile-Compressive and Shear – Elastic constants – Strain energy and unit strain energy. *Practical Session:* • *Determination of shear strength of Mild steel and Aluminium rods*
02 – 11 – 2016 (Tuesday)	*Practical Session:* Mrs. G.Sucharitha ➢ *Determination of Torsional strength of mild steel rod* ➢ *Determination of Impact strength*	*Practical Session:* Mrs.C.M.Meenakshi ➢ *Conduct of Hardness test on metals - Brinell and Rockwell Hardness.* ➢ *Conduct of Deflection test on beams*
03 – 11 – 2016 (Wednesday)	*Practical Session:* Mrs.C.M.Meenakshi ➢ *Measurement of delicate parts in a Tool Makers Microscope.* ➢ *Fundamental dimension measurement of a gear using a contour projector.*	*Practical Session:* Mrs. G.Sucharitha ➢ *Straightness measurement using an autocollimator*
04 – 11 – 2016 (Thursday)	*Surfaces and Friction:* Mrs. G.Sucharitha *Topography of Engineering surfaces- Contact between surfaces - Sources of sliding friction – AdhesionPloughing- Energy dissipation mechanisms Friction Characteristics of metals - Friction of non metals. Friction of lamellar solids - friction of Ceramic materials and polymers - Rolling Friction - Source of Rolling Friction – Stick slip motion - Measurement of Friction.*	*Wear:* Mrs.C.M.Meenakshi *Types of wear - Simple theory of Sliding Wear Mechanism of sliding wear of metals - Abrasive wear – Materials for Adhesive and Abrasive wear situations - Corrosive wear - Surface Fatigue wear situations - Brittle Fracture - wear - Wear of Ceramics and Polymers - Wear Measurements.*
05 – 12– 2016 (Friday)	*Automation:* Mrs.C.M.Meenakshi *Introduction Production System Facilities, Manufacturing Support systems, Automation in Production systems, Automation principles & Strategies*	*Fundamentals of Industrial Robots:* Mrs. G.Sucharitha *Specifications and Characteristics, Basic components, configurations, Criteria for selection, various industrial applications. Robotic Control Systems: Drives, Robot Motions, Actuators, Power transmission systems; Robot controllers, Dynamic properties of robots- stability, control resolution, spatial resolution, accuracy, repeatability, compliance.*
06 – 12 – 2016 (Saturday)	*Assembly Automation:* Mrs.C.M.Meenakshi *Types and configurations, Parts delivery at workstations- Various vibratory and non-vibratory devices for feeding and orientation, Calculations of feeding rates, Cycle time for single station assembly machines and partially automated systems; Product design for automated assembly.* • *360 degree pick and place robotic Machine* • *Engraving machine* • *3D printing*	*Quiz/ Feedback / valedictory Session*

Program Coordinator:

Mr.V.Jose Ananth Vino

Mr.N. Lenin Rakesh

Assistant Professor,

E-Mail:joseananth.mech@bharathuniv.ac.in

leninrakesh.mech@bharathuniv.ac.in

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

Course on Manual Testing and Automation

Attendance sheet

S.No	Reg.No	Name	Department
1.	U16ME014	RAVIRAJAN	Mechanical Engineering
2.	U16ME023	ARAVINDAN	Mechanical Engineering
3.	U16ME029	DINESH KUMAR	Mechanical Engineering
4.	U16ME031	ZHAKIRHUSSAIN	Mechanical Engineering
5.	U16ME033	SHERIN T	Mechanical Engineering
6.	U16ME035	PARTHAN	Mechanical Engineering
7.	U16ME041	SUVODEEP	Mechanical Engineering
8.	U16ME049	MOHAMED ABDULLAH	Mechanical Engineering
9.	U16ME055	DEEPAK	Mechanical Engineering
10.	U16ME056	YOGESH	Mechanical Engineering
11.	U15MT008	OVIAN NICHOLA	Mechatronics
12.	U15MT010	TADIKONDA SAI TEJA	Mechatronics
13.	U15MT011	VIJAY	Mechatronics
14.	U15MT012	MOHAMMED MOIDEEN RIYAZ	Mechatronics
15.	U15AM013	MARIA SUBITCHAM VINITH	Automobile Engineering
16.	U15AM014	MATHAN KUMAR	Automobile Engineering
17.	U15AM015	MOHAMED ASHIF	Automobile Engineering

18.	U15AM017	MUTUM NAOBA SINGH	Automobile Engineering
19.	U15AM018	NELLUBALLI CHAITANYA	Automobile Engineering
20.	U15AM019	PERIMIREDDY NAVEEN KUMAR	Automobile Engineering
21.	U15AM020	PIHE	Automobile Engineering
22.	U15AM021	PREM	Automobile Engineering
23.	U15AM022	RAJU	Automobile Engineering
24.	U16ME135	KRISHNAKANTH	Mechanical Engineering
25.	U16ME136	MOHAMMED THAUFEEQ	Mechanical Engineering
26.	U16ME137	DINESHKUMAR	Mechanical Engineering
27.	U16ME141	DEJOEL HAROLD RAYMOND	Mechanical Engineering
28.	U16ME142	JARUPULA REVANTH	Mechanical Engineering
29.	U16ME502	JULIAN NIRMAL	Mechanical Engineering
30.	U16ME503	ARAVIND	Mechanical Engineering
31.	U16MT005	DHANASEKAR	Mechatronics
32.	U16MT006	GOUTHAM	Mechatronics
33.	U16MT007	SATHIYASEELAN	Mechatronics
34.	U16MT008	RAKESH	Mechatronics
35.	U16MT009	ABDUL FAHEEM	Mechatronics
36.	U16MT010	SAKTHI	Mechatronics
37.	U16MT011	MELVINE ROHAN	Mechatronics
38.	U16MT014	SARATHKUMAR	Mechatronics
39.	U16MT015	SOMENDRAN	Mechatronics
40.	U16MT018	RATHISH KRISHNAN	Mechatronics

41.	U15AM504	BONDALAPATI LEELA KRISHNA PRASAD	Automobile Engineering
42.	U15AM702	BONDALAPATI LEELA KRISHNA PRASAD	Automobile Engineering
43.	U15ME705	DIVINO	Mechanical Engineering
44.	U15ME706	GOKUL	Mechanical Engineering
45.	U15ME707	KAMESH	Mechanical Engineering
46.	U15AM008	GANNI VINEETH	Automobile Engineering
47.	U15AM009	GOKULPRASHANTH	Automobile Engineering

Certificate

Bharath Institute of Higher Education and Research

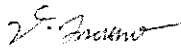### DEPARTMENT OF MECHANICAL ENGINEERING

Certificate of Participation

This is to certify that

DEEPAK

of

Bharath Institute of Higher Education and Research

has attended the value added program on "Course on manual Testing and Automation" organized by the Department of Mechanical Engineering, Bharath Institute of Higher Education and Research, Chennai on November (1-6), 2016.
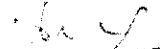
Mr.V.Jose Ananth Vino	Mr. N. Lenin Rakesh	Mrs.C .M.Meenakshi	Mrs. G.Sucharitha
Coordinators		Resource Persons	

Feedback Form

Course Name: Course on Manual testing and Automation

COURSE FEEDBACK FORM

Name : Sherin T

Date: 01/11/2016

Reg.No: U16 ME 033

1.	About the Course Information on the Respondent: (Tick (√) Appropriately)

Depth of Coverage

UG level		Graduate level		Advance level	✓

Standard of text and assignments

High	✓	Normal		Easy	

	A	B	C	D	E
Coverage of the syllabus	✓				
Organisation of the Course		✓			
Emphasis on fundamentals	✓				
Emphasis of fundamentals	✓				
Coverage of modern/advanced topics	✓				
Availability of text books/study materials		✓			
Usefulness of tests and assignments	✓				
Overall rating of the Course		✓			
What benefit you derived from the course?	✓				

Course Name Course on Manual testing and
Automation.

About the Instructor: Information on the Respondent: (Tick (√) Appropriately)

		A	B	C	D	E
1	Pace of the Teaching lecture	√				
2	Content of the Subject	√				
3	Clarity of expression	√				
4	Level of preparation	√				
5	Level of interaction	√				
6	Accessibility outside the class	√				
7	Other (please specify)	Very Good Presentation.				

A: Excellent	B: Very Good	C: Good	D: Satisfactory	E: Poor

Course on Manual Testing and Automation – Image
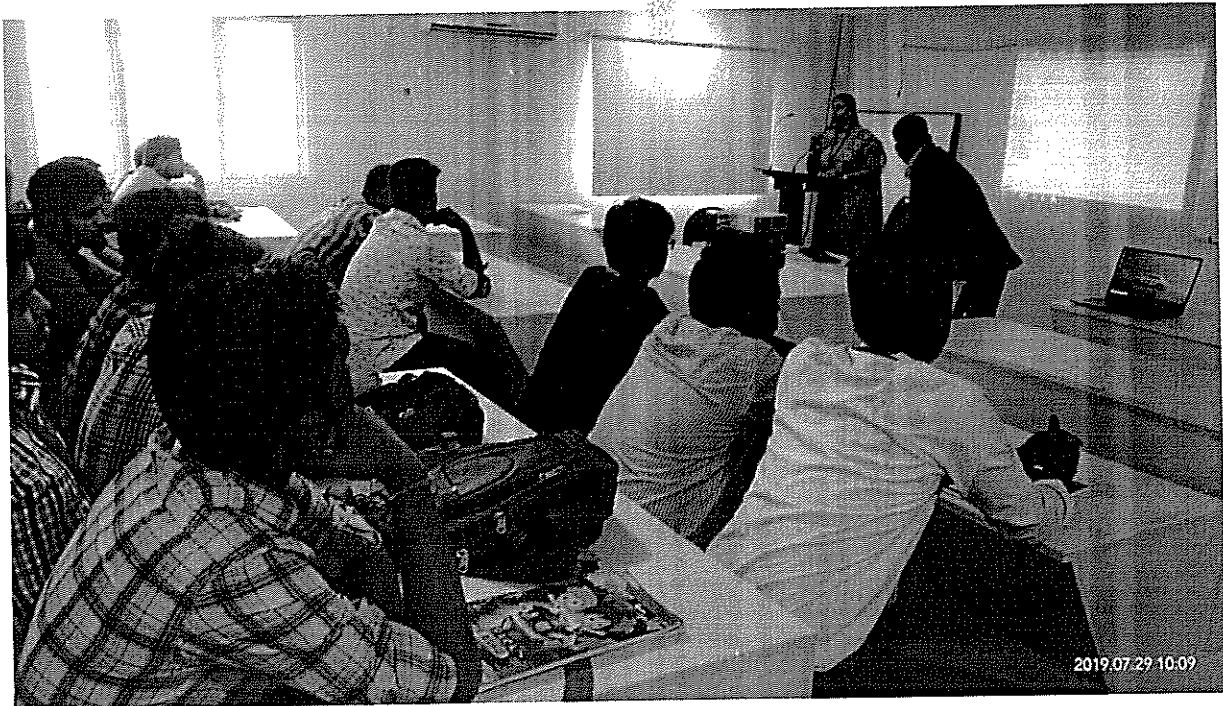
2019.07.29 10:09

01/12/2016
Chennai

From

Dr.P. Naveen Chandran,
Professor & Head,
Department of Automobile Engineering,
Bharath Institute of Higher Education and Research,
Chennai – 600017.

To

The Dean Engineering,
Bharath Institute of Higher Education and Research,
Chennai – 600017.

Sub: Permission to conduct value- added course: Electric vehicles and system design- reg.,

Respected Sir,

With reference to subject mentioned above, the department proposes to conduct a value-added course titled: **Electric vehicles and system design** on 12/12/2016. We kindly solicit your kind permission to commence the program.

Warm Regards,

Dr.P Naveen Chandran

DEAN- Engineering

Professor & Head
Department of Automobile Engineering
BIST, Bharath University
Chennai - 600 073.

BHARATH INSITUTE OF HIGHER EDUCATION AND RESEARCH

SELAIYUR CHENNAI – 73

2016 TO 2017

VALUE ADDED COURSE

ELECTRICAL VEHICLES AND SYSTEM DESIGN

RESOURCE PERSON DETAILS

Faculty Name: Dr. Lingesan Subramani, Associate Professor, Department of Automobile Engineering

Mail ID: s.lingesan@gmail.com

Mobile Number: +919626126744

Bharath Institute of Higher Education & Research

School of Mechanical Science

Value Added Course: Electric vehicles and system design   **Course Duration:30**

S.No	Date	Topic	Time	Hour
1	12/12/2016	Characteristics of battery, rating, capacity and efficiency of batteries	12.00-5.00 Pm	5
2	13/12/2016	Various tests on battery condition	12.00-5.00 Pm	5
3	14/12/2016	Modern storage batteries-Lion-Nickel	1.00-5.00 Pm	4
4	15/12/2016	Batteries for electric cars	1.00-5.00 Pm	4
5	16/12/2016	Condition of starting Behavior of starter during starting.	1.00-5.00 Pm	4
6	17/12/2016	Series motor and its characteristics	1.00-5.00 Pm	4
7	18/12/2016	Principle & construction of starter motor	1.00-5.00 Pm	4

COURSE OBJECTIVES

This course introduces the fundamental concepts, principles, analysis and design of Electric vehicles and system design.

Day 1 - Characteristics of battery, rating, capacity and efficiency of batteries

Day 2 – Various tests on battery condition

Day 3 – Modern storage batteries- Lion- Nickel

Day 4 – Batteries for electric cars-

Day 5 – Condition of starting Behavior of starter during starting.

Day 6 – Series motor and its characteristics

Day 7 - Principle & construction of starter motor.

School of Mechanical Science

Participant List

Value Added Course: Electric vehicles and system design

Sl. No	Register No	Name	Department
1.	U16AM001	RAMACHANDRAN M	Automobile Engineering
2.	U16AM002	KARMUGILAN V	Automobile Engineering
3.	U16AM003	PALAPANDALA	Automobile Engineering
4.	U16AM004	AMAL PHILIP GEORGE	Automobile Engineering
5.	U16AM006	PRADEEPAN S	Automobile Engineering
6.	U16AM008	DINESH J	Automobile Engineering
7.	U16AM010	ARUL L	Automobile Engineering
8.	U16AM012	MURUGAN P	Automobile Engineering
9.	U16AM014	RAJESH A	Automobile Engineering
10.	U16AM015	ASHOK K	Automobile Engineering
11.	U16AM017	RAKESH KUMAR L	Automobile Engineering
12.	U16AM019	ARUN P	Automobile Engineering
13.	U16AM021	DHANUSH P	Automobile Engineering
14.	U16AM023	ABDUL FAHEEM S	Automobile Engineering
15.	U16MT001	PRADEEPAN K	Mechatronics
16.	U16MT002	RAAHUL A	Mechatronics
17.	U16MT003	DINESH KUMAR P	Mechatronics
18.	U16MT004	SRINATH D	Mechatronics
19.	U16MT005	DHANASEKAR R	Mechatronics
20.	U16MT005	CHIRANJEEVI K	Mechatronics
21.	U16ME045	JEYABHARATHI R	Mechanical Engineering
22.	U16ME047	THIRUGNANA SAMMANDAM R	Mechanical Engineering

23.	U16ME056	KAMPARAJU RAM SRINIVAS RAJU	Mechanical Engineering
24.	U16ME059	BALAJI P	Mechanical Engineering
25.	U16ME062	PAKAM SARATH KUMAR	Mechanical Engineering
26.	U16ME066	YETTELLA BHUVANESWARA REDDY	Mechanical Engineering
27.	U16ME068	CHALLA GIREESH	Mechanical Engineering
28.	U16ME019	EDLA MANISH	Mechanical Engineering
29.	U16ME021	DARAM PRITHVI RAJ	Mechanical Engineering
30.	U16AM047	MANISH P MUTREJA	Automobile Engineering
31.	U16AM048	HARIHARAN S	Automobile Engineering

Course Feedback form

Date: 12/12/2016

Course Title: Electric vehicles and system design

Name: DHIN ESH J

Reg No: U16AM008

Department: AUTOMOBILE ENGINEERING

S.No	Particulars	1	2	3	4	5
	(1. Very Unsatisfied 2. Unsatisfied 3. Neutral 4. Satisfied 5. Very Satisfied)					
1.	objectives of the course clear to you					✓
2.	The course contents met with your expectations				✓	
3.	The lecture sequence was well planned				✓	
4.	The lectures were clear and easy to understand				✓	
5.	The teaching aids were effective					✓
6.	The instructors encourage interaction and were helpful					✓
7.	The level of the course					✓
	(1. Very poor 2. Poor 3. Average 4. Good 5. Excellent)	1	2	3	4	5
8.	Overall rating of the course:					

Please give Suggestion for the improvement of the course: NIL

Weakness of the course: No

Strength of the course: No

Signature

*** Thank you ***

Course Feedback form

Date: 12/12/2016

Course Title: Electric vehicles and system design

Name: : Raman Chandran M.

Reg No: : V16AM001

Department: Automotive

S.No	Particulars	1	2	3	4	5
	(1. Very Unsatisfied 2. Unsatisfied 3. Neutral 4. Satisfied 5. Very Satisfied)					
1.	objectives of the course clear to you					✓
2.	The course contents met with your expectations					✓
3.	The lecture sequence was well planned					✓
4.	The lectures were clear and easy to understand				✓	
5.	The teaching aids were effective					✓
6.	The instructors encourage interaction and were helpful				✓	
7.	The level of the course					✓
	(1. Very poor 2. Poor 3. Average 4. Good 5. Excellent)					
8.	Overall rating of the course:	1	2	3	4	5 ✓

Please give Suggestion for the improvement of the course: _ Customer expectation to be fulfilled.

Weakness of the course: Inbuilt/sudden changes of conventional IC engine into Electric vehicle

Strength of the course: : No pollution from EV, ie good our Society

Signature

*** Thank you ***

Course Feedback form

Date: 12/12/2016

Course Title: Electric vehicles and system design

Name: PALAPANDLA

Reg No: U16AM003

Department: Automobile Engineering

S.No	Particulars	1	2	3	4	5
	(1. Very Unsatisfied 2. Unsatisfied 3. Neutral 4. Satisfied 5. Very Satisfied)					
1.	objectives of the course clear to you				✓	
2.	The course contents met with your expectations				✓	
3.	The lecture sequence was well planned					✓
4.	The lectures were clear and easy to understand					✓
5.	The teaching aids were effective					✓
6.	The instructors encourage interaction and were helpful					✓
7.	The level of the course					✓
	(1. Very poor 2. Poor 3. Average 4. Good 5. Excellent)					
8.	Overall rating of the course:	1	2	3	4	5 ✓

Please give Suggestion for the improvement of the course: Please give animation Video, .

Weakness of the course: No

Strength of the course: No

Signature

*** Thank you ***

Course Feedback form

Date: 12/12/2016

Course Title: Electric vehicles and system design

Name: SRINATH D

Reg No: V16MT004

Department: MECHATRONICS

S.No	Particulars	1	2	3	4	5
	(1. Very Unsatisfied 2. Unsatisfied 3. Neutral 4. Satisfied 5. Very Satisfied)					
1.	objectives of the course clear to you				✓	✓
2.	The course contents met with your expectations				✓	
3.	The lecture sequence was well planned					✓
4.	The lectures were clear and easy to understand					✓
5.	The teaching aids were effective				✓	
6.	The instructors encourage interaction and were helpful				✓	✓
7.	The level of the course					✓
	(1. Very poor 2. Poor 3. Average 4. Good 5. Excellent)					
8.	Overall rating of the course:	1	2	3	4	5

Please give Suggestion for the improvement of the course: No

Weakness of the course: No

Strength of the course: No

Signature

*** Thank you ***

BHARATH INSITUTE OF HIGHER EDUCATION AND RESEARCH

SELAIYUR CHENNAI – 73

2016 TO 2017

VALUE ADDED COURSE

ELECTRICAL VEHICLES AND SYSTEM DESIGN-12-12-2016
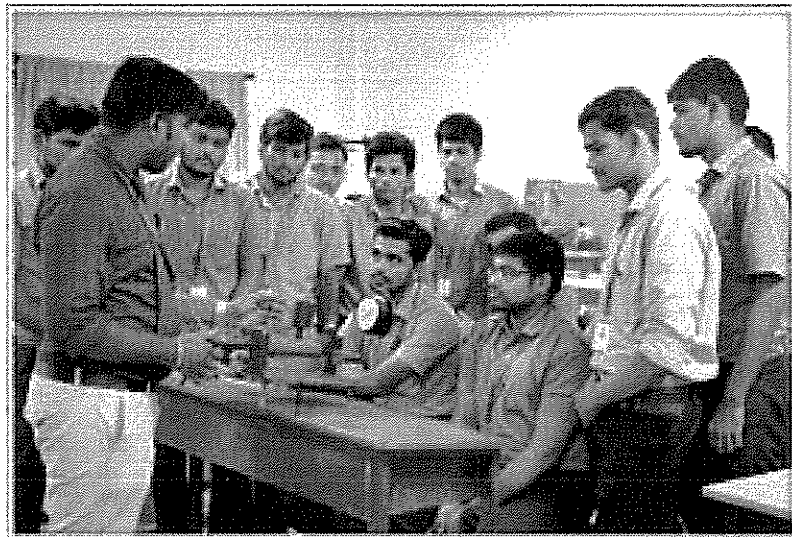
Students attended value added course on electrical vehicle and system design

CERTIFICATE OF PARTICIPATION

This is to certify that Mr. .... of

PRADEEPAN K

Bharath Institute of Higher Education and Research .... has participated in

Electric vehicles and system design programme on value-added course at Bharath Institute of Higher Education and

Research.

Coordinator

Head of the Department

CERTIFICATE OF PARTICIPATION

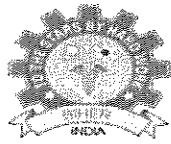This is to certify that Mr. .... of

Bharath Institute of Higher Education and Research

....has participated in

Electric vehicles and system design programme on value-added course at Bharath Institute of Higher Education and Research.

BALAJI P

Coordinator

Head of the Department

CERTIFICATE OF PARTICIPATION

This is to certify that Mr. .... of

RAJESH A

Bharath Institute of Higher Education and Research

....has participated in

Electric vehicles and system design programme on value-added course at Bharath Institute of Higher Education and

Research.

Coordinator

Head of the Department

CERTIFICATE OF PARTICIPATION

This is to certify that Mr. .... of

Bharath Institute of Higher Education and Research

.... has participated in

Electric vehicles and system design programme on value-added course at Bharath Institute of Higher Education and Research.

MURUGAN P

Coordinator

Head of the Department

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

NAAC

<u>Requisition Letter</u>   03.01.2017

FROM

The HOD
Department of Mechatronics
Bharath Institute of Higher Education and Research
Selaiyur-Chennai- 73

TO

The Dean Engineering
Bharath Institute of Higher Education and Research
Selaiyur-Chennai- 73

Respected Sir,
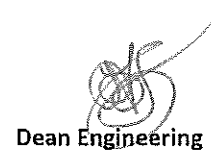
Subject: Requisition for conducting Value Added course reg.

The school of Mechanical sciences had planned to conduct a 5 -day value added course on the topic
"Hypermesh" dated from **16.01,2017**. In this regard, I request you to kindly grant permission for
conducting the same.

Thanking You

HOD   Dean Engineering

Date: 03.01.2017

Department of Mechatronics

Circular

The Department of Mechatronics, BIHER is glad to conduct a 5 - day Value Added Program on **"Hyper mesh"** dated from 16.01.2017 for a period of 25 hours. Those who are interested to participate do register your name with the program coordinator mentioned below.

Resource persons:

Dr.P.Sengottuvel,
Professor,
BIHER

Mr. Uday Shankar Prabhu
CEO,
CAD/CAM/CAE Solutions,
Royapuram, Chennai.

Maximum No. of registration Allowed – 60

*First come first serve basis.

Program Coordinator:
Mr.J.Dhanasekar
Assistant Professor
E-Mail: jdhanasekar81@gmail.com/
jairajesh2008@gmail.com
Mobile: 9841259514 / 7299956395

HOD

Department of Mechatronics

Hyper mesh

OBJECTIVES:

This is an introductory course using Hyper Mesh to create and set up finite element models for analysis. A combination of lectures and exercises will familiarize students to the Hyper Mesh environment, its processes, and the suitable tools needed. This course is combined with the Hyper View introductory course too.

[DAY: 1]

MODULE 1 Introduction to Hyper Mesh

[DAY: 2]

MODULE II Preparing Models for Analysis

[DAY: 3]

MODULE III Creating Hexa and Penta mesh (5 Hrs)

[DAY: 4]

MODULE IV Types of meshing

[DAY: 5]

MODULE V Assemblies

Department of Mechatronics

Value Added Course - Hyper Mesh

PARTICIPANTS LIST

S.No	Reg.No	Name	Department
1.	U16AM001	RAMACHANDRAN M	Automobile Engineering
2.	U16AM002	LIBIN BOBBY	Automobile Engineering
3.	U16AM005	VASANTHKUMAR R	Automobile Engineering
4.	U16AM014	KARMUGILAN V	Automobile Engineering
5.	U16AM008	PALAPANDALA	Automobile Engineering
6.	U16AM012	MOHAMED IMTHIYAZ	Automobile Engineering
7.	U16AM017	AMAL PHILIP GEORGE	Automobile Engineering
8.	U16MT010	SAKTHI	Mechatronics
9.	U16MT011	MELVINE ROHAN	Mechatronics
10.	U16MT014	SARATHKUMAR	Mechatronics
11.	U16MT015	SOMENDRAN	Mechatronics
12.	U16MT018	RATHISH KRISHNAN	Mechatronics
13.	U16MT501	MUGILAN	Mechatronics
14.	U16MT502	VIGNESHWAR	Mechatronics
15.	U16MT503	KARUPHIN KAWIN J	Mechatronics
16.	U16MT701	CHANDRASEKAR	Mechatronics

17.	U16MT702	CHIRANJEEVI	Mechatronics
18.	U16MT703	VIGNESH	Mechatronics
19.	U16MT704	AJITH	Mechatronics
20.	U19ME011	ANTONY MICHEAL RAJ D	Mechanical Engineering
21.	U19ME014	ASHKIN JEBA G	Mechanical Engineering
22.	U19ME016	BAJJANAGARI NICHITH REDDY	Mechanical Engineering
23.	U19ME040	GOKUL R	Automobile Engineering
24.	U19ME055	K PRANAY	Automobile Engineering
25.	U19ME059	KANAPARTHI SAI MANEESH CHOWDARY	Automobile Engineering
26.	U19ME060	KANDUKURI VENKATA RAMANA	Automobile Engineering
27.	U19ME062	KANKANALA KEERAVANI	Mechanical Engineering
28.	U19ME069	KOTHAPALLI SAI RAM	Mechanical Engineering
29.	U19ME070	KOUDAGANI VISHNU	Mechanical Engineering
30.	U19ME072	KUMMITHA NARENDRA REDDY	Mechanical Engineering
31.	U19ME118	RAPAKA DAVID GABRIEL	Mechanical Engineering
32.	U19ME122	RITHISH G	Mechanical Engineering
33.	U19ME132	TARUN REDDY SAMA	Mechanical Engineering
34.	U19ME140	VANGALA NAVEEN KUMAR REDDY	Mechanical Engineering
35.	U19ME141	VEERAMALLU JSG AADITHYAA	Mechanical Engineering
36.	U19ME142	VELPURI HEMANTH KUMAR	Mechanical Engineering
37.	U19ME145	VIRIGINENI HARINADH	Mechanical Engineering
38.	U19ME146	XAVIER SANTHOSH P	Mechanical Engineering

39.	U19ME069	KOTHAPALLI SAI RAM	Mechanical Engineering
40.	U16ME082	HARISH	Mechanical Engineering
41.	U16ME087	ANAND KUMAR	Mechanical Engineering
42.	U16ME093	MACHUNURU PRASAD KUMAR	Mechanical Engineering
43.	U16ME094	GOPAL KUMAR	Mechanical Engineering
44.	U16ME098	PRAJEESH S NAIR	Mechanical Engineering
45.	U16ME100	NAGIREDDY AJAYKUMAR	Mechanical Engineering
46.	U16ME101	VIJAY	Mechanical Engineering
47.	U16ME104	MULLAGURA BHARATH KUMAR	Mechanical Engineering
48.	U16ME105	CHALLA CHARANKUMAR	Mechanical Engineering
49.	U16ME106	RAJEEV KUMAR	Mechanical Engineering
50.	U16ME107	MANOJ	Mechanical Engineering
51.	U16ME113	PYNKHLAINBORLANG	Mechanical Engineering
52.	U16ME115	GUNA	Mechanical Engineering
53.	U16ME119	PALAPALA	Mechanical Engineering

BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY

DEPARTMENT OF MECHATRONICS
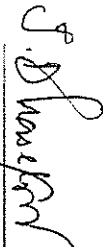
CERTIFICATE OF PARTICIPATION

This is to certify that

RATHISH KRISHNAN

of **Bharath Institute of Science and Technology**

had attended the 5 day Value Added Program on "Hypermesh" organized by the

Department of Mechatronics-

Bharath Institute of Higher Education and Research,Chennai on January (16-20) 2017.

Mr.J.Dhanasekar   Mr.P.Jai Rajesh
Coordinators

Dr.P.Sengottuvel
Resource Person

BHARATH INSTITUTE OF SCIENCE & TECHNOLOGY

Selaiyur, Chennai – 73.

DEPARTMENT OF MECHATRONICS

VALVE ADDED COURSE
FEEDBACK FORM

Date: 20.01.2017

NAME	SOMENDRAN				
REGISTER.NO	U16MT015				
COURSE TITLE	HYPER MESH				
	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
OVERALL PROGRAM				✓	
THE SPEAKER					✓
AUDIO,VISIAL AIDS,TECHNOLOGY USED					✓
PRESENTATION HAND OUTS					✓

STUDENT SIGNATURE

BHARATH INSTITUTE OF SCIENCE & TECHNOLOGY
Selaiyur, Chennai – 73.

DEPARTMENT OF MECHATRONICS

VALVE ADDED COURSE
FEEDBACK FORM

Date: 20. 01. 2017

NAME	Karupin Kawin. 7				
REGISTER.NO	U16MT503				
COURSE TITLE	Hyper mesh				
	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
OVERALL PROGRAM					✓
THE SPEAKER					✓
AUDIO,VISIAL AIDS,TECHNOLOGY USED				✓	
PRESENTATION HAND OUTS					✓

STUDENT SIGNATURE

Department of Mechatronics

Value Added Course – Hyper Mesh

<u>**Requisition Letter**</u>   03.01.2017

FROM

The HOD
Department of Mechatronics
Bharath Institute of Higher Education and Research
Selaiyur-Chennai- 73

TO

The Dean Engineering
Bharath Institute of Higher Education and Research
Selaiyur-Chennai- 73

Respected Sir,

  Subject: Requisition for conducting Value Added course reg.

The school of Mechanical sciences had planned to conduct a 5 day value added course on the topic **"Arm Processor and Development tools"** dated from 16.01.2017 to 20.01.2017. In this regard, I request you to kindly grant permission for conducting the same.

Thanking You

HOD   **Dean Engineering**

Bharath

Date: 3.1.2017

<u>**Department of Mechatronics**</u>

<u>Circular</u>

The Department of Mechatronics, BIHER is glad to conduct a 5 - day Value Added Program on **"ARM PROCESSOR AND DEVELOPMENT TOOLS"** dated from 16.01.2017 for a period of 25 hours. Those who are interested to participate do register your name with the program coordinator mentioned below.

Resource persons:

Dr.P.Sengottuvel,
Professor,
BIHER

Mr. Murugesan
Trainer,
Soft logic Systems pvt Ltd,
K K Nagar Chennai.

Maximum No. of registration Allowed – 30

*First come first serve basis.

Program Coordinator:
Mrs.V.G.VIJAYA
 Assistant Professor
Mr.MUTHUKUMARAN
Assistant Professor,
E-Mail: vijayasaravanan84@gmail.com
Mobile: 8870136732

HOD

Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

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

Department of Mechatronics

ARM PROCESSOR AND DEVELOPMENT TOOLS

OBJECTIVES:

This course will show you how to Use the LabVIEW NXG Web Module to create browser-based user interfaces to visualize data from distributed systems. This manual contains step-by-step instructions for working with WebVIs and creating web applications.

[DAY: 1]

MODULE I Developing (5 Hrs)

Create a web application, design responsive UIs and controls, and debug, build, and package your WebVIs.

[DAY: 2]

MODULE II COMMUNICATING DATA (5 Hrs)

Access WebVI resource files, web service data, and use web services like System Link Tag and Message in your web application.

[DAY: 3]

MODULE III Using javascript (5 Hrs)

Add JavaScript functions to your web application using a JavaScript Library Interface (JSLI) document and create custom UI elements.

[DAY: 4]

MODULE IV Hosting (5 Hrs)

Learn about your hosting options during development and how to host your web application to share with users. etermine how to integrate your web application into your hardware system to share measurement data and interact with your hardware.

[DAY: 5]

MODULE V :Using software (5 Hrs)

Build a library and add cus   ies to share code and create add-ons

Bharath

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

Department of Mechatronics

Value Added Course - ARM PROCESSOR AND DEVELOPMENT TOOLS

PARTICIPANTS LIST

S.No	Reg.No	Name	Department
1.	U16AM001	RAMACHANDRAN M	Automobile Engineering
2.	U16AM002	LIBIN BOBBY	Automobile Engineering
3.	U16AM005	VASANTHKUMAR R	Automobile Engineering
4.	U16AM014	KARMUGILAN V	Automobile Engineering
5.	U16AM008	PALAPANDALA	Automobile Engineering
6.	U16AM012	MOHAMED IMTHIYAZ	Automobile Engineering
7.	U16AM017	AMAL PHILIP GEORGE	Automobile Engineering
8.	U16MT010	SAKTHI	Mechatronics
9.	U16MT011	MELVINE ROHAN	Mechatronics
10.	U16MT014	SARATHKUMAR	Mechatronics
11.	U16MT015	SOMENDRAN	Mechatronics
12.	U16MT018	RATHISH KRISHNAN	Mechatronics
13.	U16MT501	MUGILAN	Mechatronics
14.	U16MT502	VIGNESHWAR	Mechatronics
15.	U16MT503	KARUPHIN KAWIN J	Mechatronics
16.	U16MT701	CHANDRASEKAR	nics
17.	U16MT702	CHIRANJEEVI	Mechatronics

18.	U16MT703	VIGNESH	Mechatronics
19.	U16MT704	AJITH	Mechatronics
20.	U16ME093	MACHUNURU PRASAD KUMAR	Mechanical Engineering
21.	U16ME094	GOPAL KUMAR	Mechanical Engineering
22.	U16ME098	PRAJEESH S NAIR	Mechanical Engineering
23.	U16ME100	NAGIREDDY AJAYKUMAR	Mechanical Engineering
24.	U16ME101	VIJAY	Mechanical Engineering
25.	U16ME104	MULLAGURA BHARATH KUMAR	Mechanical Engineering
26.	U16ME105	CHALLA CHARANKUMAR	Mechanical Engineering
27.	U16ME106	RAJEEV KUMAR	Mechanical Engineering
28.	U16ME107	MANOJ	Mechanical Engineering
29.	U16ME113	PYNKHLAINBORLANG	Mechanical Engineering
30.	U16ME115	GUNA	Mechanical Engineering

BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY

DEPARTMENT OF MECHATRONICS

CERTIFICATE OF PARTICIPATION

This is to certify that

LIBIN BOBBY

of Bharath Institute of Science and Technology

had attended the 5 day Value Added Program on "*ARM PROCESSOR AND*

DEVELOPMENT TOOLS"

organized by the Department of Mechatronics-

Bharath Institute of Higher Education and Research, Chennai on 16/1/2017 TO 20/1/2017

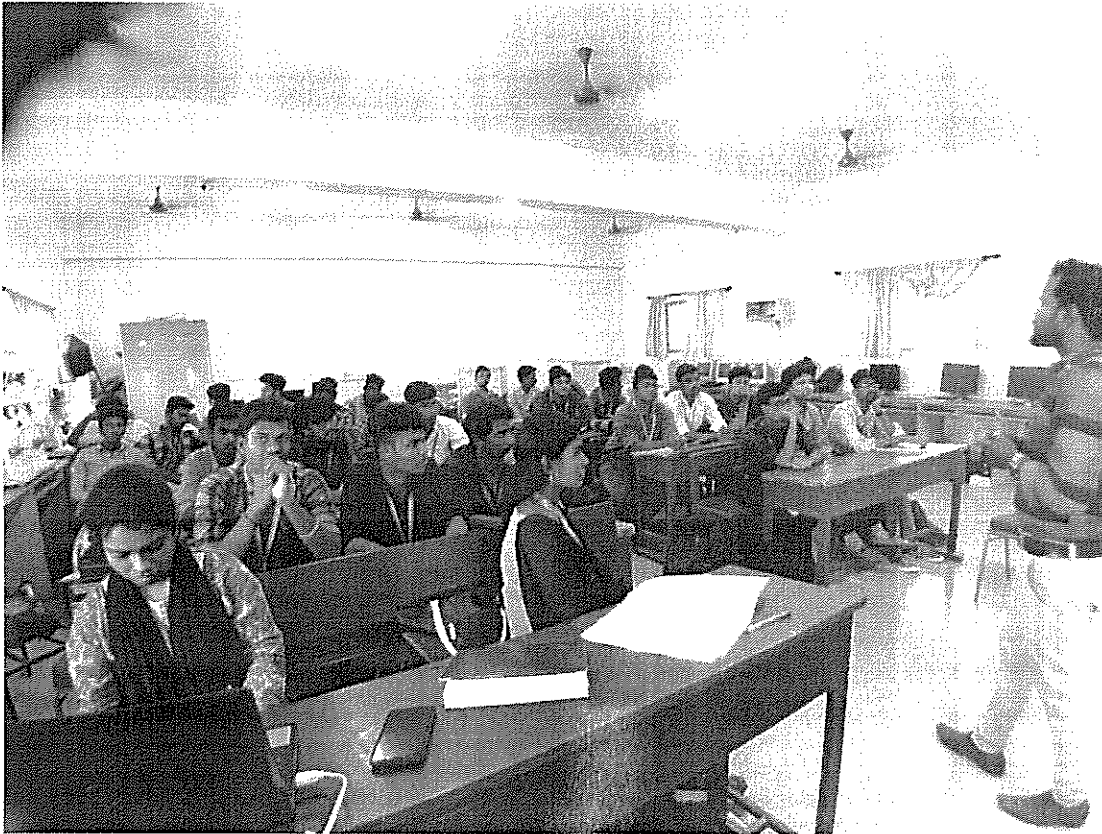Mrs.E.GAJALAKSHMI/Mr.MUTHUKUMARAN

Coordinators

Dr.P.Sengottuvel
Resource Person

Bharath

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

BHARATH INSTITUTE OF SCIENCE & TECHNOLOGY

Selaiyur, Chennai – 73.

DEPARTMENT OF MECHATRONICS

VALVE ADDED COURSE
FEEDBACK FORM

Date: 19/01/2017

NAME	Chiranjeevi				
REGISTER.NO	U16MT702				
COURSE TITLE	Arm processor ad Development				
	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
OVERALL PROGRAM			✓		
THE SPEAKER				✓	
AUDIO,VISIAL AIDS,TECHNOLOGY USED				✓	
PRESENTATION HAND OUTS				✓	

STUDENT SIGNATURE

𝔅𝔥𝔞𝔯𝔞𝔱𝔥

INSTITUTE OF HIGHER EDUCATION AND RESEARCH
(Declared as Deemed - to - be - University under section 3 of UGC Act 1956)
BHARATH INSTITUTE OF SCIENCE & TECHNOLOGY
Selaiyur, Chennai – 73.
DEPARTMENT OF MECHATRONICS

VALVE ADDED COURSE
FEEDBACK FORM

Date: 19/01/2017

NAME	Challa Charan Kumar				
REGISTER.NO	U16ME103				
COURSE TITLE	APP				
	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
OVERALL PROGRAM				✓	
THE SPEAKER				✓	
AUDIO,VISIAL AIDS,TECHNOLOGY USED				✓	
PRESENTATION HAND OUTS				✓	

STUDENT SIGNATURE

Department of Mechatronics

ARM PROCESSOR AND DEVELOPMENT TOOLS

Requisition Letter

Date: 26.01.2017

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 on "Skill Development on CNC Lathe Machine" on 18-02-2017. In this regard we kindly request you to grant permission for the same.

<div align="center">Thanking You</div>

HOD/MECH

Dean Engineering

Head of the Department
Department of Mechanical Engineering
Bharath Institute of Higher Education and Research
(Dec.u/s 3 of UGC Act.1956)
Selaiyur, Chennai-600 073

Bharath

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

Date: 01.02.2017

Department of Mechanical Engineering

Circular

The of Department of Mechanical Engineering, BIHER glad to conduct on six days value added program on *"Skill Development on CNC Lathe Machine"* from **18.02.2017** 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: Mr.S.Thirumavalavan and Mr.V.Srinivasan

Maximum no. of registration Allowed – 60.
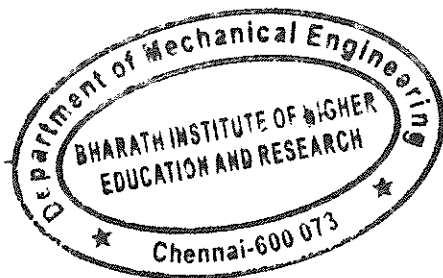
First come first serve basis.

Program coordinator

Mr.R.Sabarish,

Mr.S.Manavalan

Department of Mechanical Engineering

Skill Development on CNC Lathe Machine

OBJECTIVE:

- This course is intended for manufacturing students to broaden their knowledge domain regarding state of the art machining operations. Numerical technology provides accuracy and extra strength. Knowledge and skills regarding modern manufacturing systems that use CNC technology are emphasized.

COURSE OUTCOMES:

- The theory should be taught and practical should be carried out in such a manner that students are able to acquire required learning outcomes in cognitive, psychomotor and affective domain to demonstrate following course outcomes:
  ✓ i. Identify different axes, machine zero, home position, systems and controls CNC machines.
  ✓ ii. Select, mount and set cutting tools and tool holders on CNC.
  ✓ iii. Prepare part programmers' using ISO format for given simple components with and without use of MACRO, CANNED CYCLE and SUBROUTINE using ISO format.
  ✓ iv. Interface software application for auto part programming. v. Apply maintenance practices for CNC machines.

[DAY: 1]

MODULE 1 Industrial Safety &Practices   **(5Hrs)**
Industrial Safety Practices: Introduction – Safe guarding methods – Safety in Workshop - Common methods of protection in workshop.

Engineering Drawing: Engineering drawing – Limits, fits and Tolerance (Dimensional and Geometrical tolerance), Surface finish representation. Symbolic representation of Wheels, Gears etc Basics on Orthographic views from isometric views of machine parts / components. Dimensionings, Sectioning.

Shop Theory: Work holding devices, setting & dialling of work piece, tool holding devices, application of coolant.

[DAY: 2]

MODULE II   Metrology & Inspection

(5 Hrs)

Marking tools: Introduction to marking tools, Divider, Scriber, Surface Gauge, V-Block, Parallel Block, Surface Plate, Angle Plate & Punches Measuring Tools: Introduction to measuring instruments, construction, application of steel rule, try square, vernier calliper, vernier height gauge, micrometre, bore gauge, radius gauge, bevel protractor, callipers & gauges. Conventional Lathe Machine: Lathe: Specification - Types - Mechanisms - Operations - Calculations - Capstan and turret lathe – Tooling with examples - Copy turning lathe

[DAY: 3]

MODULE III   Basics Of N.C Machine Tools

(5Hrs)

Conventional Numerical Control: Basic components of NC system, the NC procedure, NC coordinate systems, NC motion control system, applications of numerical control, advantages and disadvantages of NC, computer controls in NC, problems with conventional NC, NC controller technology, computer numerical control, functions of CNC, advantages of CNC. Tooling: Cutting Tool materials and its applications, carbide index able inserts, tooling systems for CNC Lathe, selection of tools for various work piece materials, selection of cutting parameters.

DAY: 4]

MODULE IV   Programming & Operations On CNC Lathe

(5Hrs)

Operating Principles of CNC Lathe Machine, speed and feed selections, Details on G codes, Details on M codes, Part programming, tool offset, nose radius compensation, work locating methods and devices, Applications of CNC Lathe.

[DAY: 5]

MODULE V   Practical- Familiarization with lathes

(5 Hrs)

Principal parts, work holding device, cutting tools & tool holding device. Plain turning, taper turning, eccentric turning, chamfering, facing, internal thread cutting, tapping, undercutting, parting–off, drilling and reaming, boring and counter boring, thread cutting and knurling combination of above operations.

[DAY: 6]

MODULE VI V Practical- Operations On CNC Lathe   (5 Hrs)

Operating Principles of CNC Lathe Machine, speed and feed selections, Part programming, CNC machining centers, Tooling for CNC machines, Advanced CNC applications, tool radius Compensation. Practical on Various Jobs on CNC Lathe Machines. Study of machine speciation & features. Study of machine axis system & concept of coordinate system. Generation of coordinates using Cartesian & polar coordinate system. Study of origin concept & types of origin. Description of various parts of CNC lathe machine & control panel. Description of various G codes & M codes used for programming. Machine start-up & operation in different Modes, Exposure on work & tool setting. Introduction to creation of part programs. Creation of part programs for simple profiles using linear & circular interpolation. Programming using tool nose radius compensation. Programming using canned cycles. (Turning, facing, drilling, boring, tapping etc.).Programming of thread cutting, taper thread cutting, grooving & face grooving cycle. Setting the work piece origin point & tool offset measurement. Practical machining of work pieces Difference between machining centre and turning centreaxis designation of CNC lathe- types & classification of CNC lathe. Exposure on MASTERCAM. CAM software MASTERCAM/Unigraphics/Pro-E/ Cimatron etc.

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

Department of Mechanical Engineering

One Week Value added Program on *"Skill Development on CNC Lathe Machine"*
18th Feb to 24th Feb 2017

| Date	Morning Session (9 AM – 12 PM)	Afternoon Session (1:30 PM – 3:30 PM)
18 – 02 – 2017 (Saturday)	Program Inauguration Mr.S.Thirumavalavan , Assistant professor, BIHER *Introduction: Industrial Safety Practices: Introduction – Safe guarding methods – Safety in Workshop - Common methods of protection in workshop* *Shop Theory: Work holding devices, setting & dialling of work piece, tool holding devices, application of coolant*	Mr.V.Srinivasan , Assistant professor, BIHER *Engineering Drawing: Engineering drawing – Limits, fits and Tolerance (Dimensional and Geometrical tolerance), Surface finish representation. Symbolic representation of Wheels, Gears etc Basics on Orthographic views from isometric views of machine parts / components. Dimensionings, Sectioning.*
20 – 02 – 2017 (Monday)	Metrology & Inspection: Mr.V.Srinivasan *Marking tools: Introduction to marking tools, Divider, Scriber, Surface Gauge, V-Block, Parallel Block, Surface Plate, Angle Plate & Punches Measuring Tools: Introduction to measuring instruments.*	Metrology & Inspection: Mr.S.Thirumavalavan *Conventional Lathe Machine: Lathe: Specification - Types - Mechanisms - Operations - Calculations - Capstan and turret lathe – Tooling with examples - Copy turning lathe*
21 – 02 – 2017 (Tuesday)	Basics Of N.C Machine Tools: Mr.S.Thirumavalavan *Conventional Numerical Control: Basic components of NC system, the NC procedure, NC coordinate systems, NC motion control system, applications of numerical control, advantages and disadvantages of NC, computer controls in NC, problems with conventional NC.*	Basics Of N.C Machine Tools: Mr.V.Srinivasan *Tooling: Cutting Tool materials and its applications, carbide index able inserts, tooling systems for CNC Lathe, selection of tools for various work piece materials, selection of cutting parameters.*
22 – 02 – 2017 (Wednesday)	Programming & Operations On CNC Lathe Mr.V.Srinivasan *Operating Principles of CNC Lathe Machine, speed and feed selections, Details on G codes, Details on M codes*	Programming & Operations On CNC Lathe Mr.S.Thirumavalavan *Part programming, tool offset, nose radius compensation, work locating methods and devices, Applications of CNC Lathe.*
23 – 02– 2017 (Thursday)	Practical- Familiarization with lathes Mr.S.Thirumavalavan *Principal parts, work holding device, cutting tools & tool holding device. Plain turning, taper turning, eccentric turning, chamfering, facing*	Practical- Familiarization with lathes Mr.V.Srinivasan *internal thread cutting, tapping, undercutting, parting–off, drilling and reaming, boring and counter boring, thread cutting and knurling combination of above operations.*
24 – 02 – 2017 (Friday)	*Practical Session: Mr.V.Srinivasan* *Practical machining of work pieces Difference between machining centre and turning centreaxis designation of CNC lathe- types & classification of CNC lathe. Exposure on MASTERCAM. CAM software MASTERCAM/Unigraphics/Pro-E/ Cimatron etc.*	*Quiz/ Feedback / valedictory Session*

Program Coordinator:

Mr.R.Sabarish

Mr.S.Manavalan

Assistant Professor,

E-Mail:sabarish.mech@bharathuniv.ac.in

manavalan.mech@bharathuniv.ac.in
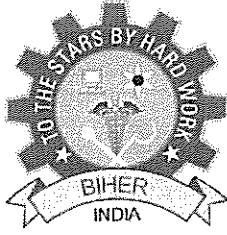
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Skill Development on CNC Lathe Machine

Attendance sheet

S.No	Reg.No	Name	Department
1.	U15AM026	SATHISHKUMAR	Automobile Engineering
2.	U15AM027	SRIHARI	Automobile Engineering
3.	U15AM028	TARIGOPPALA NITHIN KUMAR	Automobile Engineering
4.	U15AM029	VIGNESH	Automobile Engineering
5.	U15AM030	VISHANTH	Automobile Engineering
6.	U15AM031	SURYA NARAYANAN	Automobile Engineering
7.	U15AM032	SATHIYANARAYANAN	Automobile Engineering
8.	U15AM033	PRAKASH	Automobile Engineering
9.	U15AM034	DERIN	Automobile Engineering
10.	U15AM501	MOHIT	Automobile Engineering
11.	U16ME138	VAIDHEESWARAN	Mechanical Engineering
12.	U16ME139	MD ZEESHAN RAZA	Mechanical Engineering
13.	U16ME144	JAGADALA KUMARA	Mechanical Engineering
14.	U16ME501	BENDICT JOHN SMITH	Mechanical Engineering
15.	U16ME507	BHARGAV	Mechanical Engineering
16.	U15ME126	MANOVA PENIEL	Mechanical Engineering

17.	U15ME127	MARSHAL RAJ	Mechanical Engineering
18.	U15ME509	MUTHUKAMACHI	Mechanical Engineering
19.	U15ME512	VIGNESH	Mechanical Engineering
20.	U15ME513	SAI	Mechanical Engineering
21.	U16MT501	MUGILAN	Mechatronics
22.	U16MT502	VIGNESHWAR	Mechatronics
23.	U16MT503	KARUPHIN KAWIN J	Mechatronics
24.	U16MT701	CHANDRASEKAR	Mechatronics
25.	U16MT702	CHIRANJEEVI	Mechatronics
26.	U15MT001	AJITH	Mechatronics
27.	U15MT002	BALAJI	Mechatronics
28.	U15MT003	INAYAT ULLA RABBANI	Mechatronics
29.	U15MT004	INAYATHULLA	Mechatronics
30.	U15MT005	KARTHIGAYAN	Mechatronics

Certificate

Bharath Institute of Higher Education and Research

DEPARTMENT OF MECHANICAL ENGINEERING

Certificate of Participation

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VAIDHEESWARAN
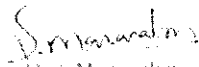
of
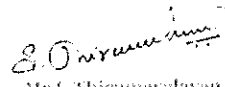
Bharath Institute of Higher Education and Research

has attended the value added program on "Skill Development on CNC Lathe Machine" organized by the Department of Mechanical Engineering, Bharath Institute of Higher Education and Research, Chennai on February (18-24), 2017.
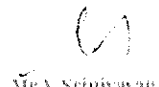
Mr.R.Sabarish   Mr.S.Manavalan   Mr.S.Thirunavalavan   Mr.A.Srinivasan

Coordinators   **Resource Persons**

Feedback Form

Course Name: SKILL DEVELOPMENT ON CNC LATHE MACHINE

COURSE FEEDBACK FORM

Name : Vignesh   Date: 15/02/2017

Reg.No: U15AM029

1. About the Course Information on the Respondent: (Tick (✓) Appropriately)						
Depth of Coverage						
U G level	Graduate level		✓	Advance level		
Standard of test and assignments						
High	Normal		✓	Easy		

	A	B	C	D	E
Coverage of the syllabus	✓				
Organisation of the Course		✓			
Emphasis on fundamentals					
Emphasis on fundamentals	✓				
Coverage of modern advanced topics		✓			
Availability of text books/study materials		✓			
Usefulness of tests and assignments	✓				
Overall rating of the Course	✓				
What benefit you derived from the course?		✓			

Course Name: _SKILL DEVELOPMENT ON CNC LATHE MACHINE_

About the Instructor: Information on the Respondent: (Tick (√) Appropriately)

		A	B	C	D	E
1.	Pace of the Teaching/lecture	✓				
2.	Comment of the Subject	✓				
3.	Clarity of expression	✓				
4.	Level of preparation		✓			
5.	Level of interaction		✓			
6.	Accessibility outside the class	✓				
7.	Others (please specify Teaching is good.	✓				

A: Excellent	B: Very Good	C: Good	D: Satisfactory	E: Poor

Skill Development on CNC Lathe Machine – Image
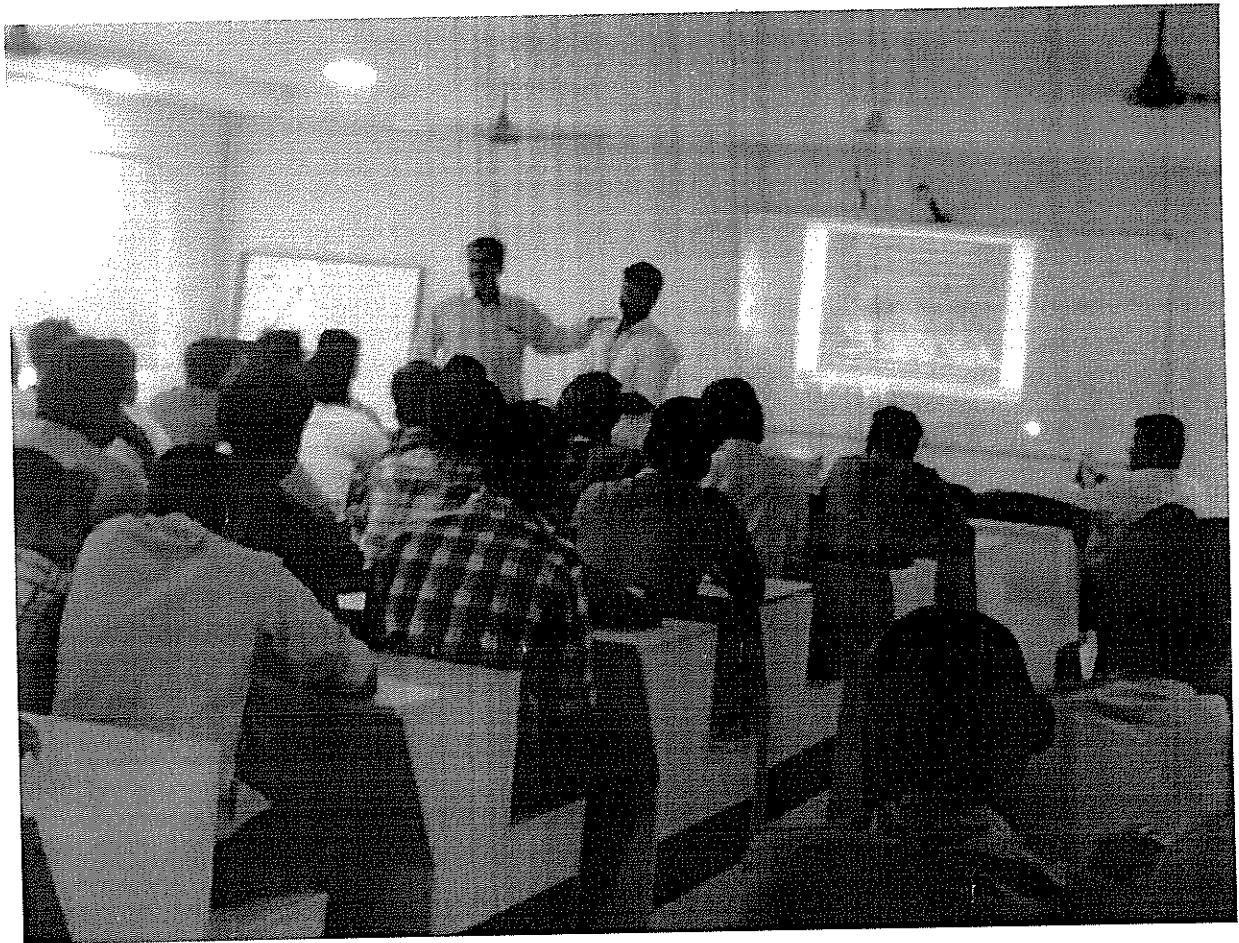
Requisition Letter

Date: 27.01.2017

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 on "Course on Industrial Automation Development" on 18-02-2017. In this regard we kindly request you to grant permission for the same.

Thanking You

HOD/MECH

Head of the Department
Department of Mechanical Engineering
Bharath Institute of Higher Education and Research
(Dec.u/s 3 of UGC Act.1956)
Selaiyur, Chennai-600 073

Dean Engineering

Date: 01.02.2017
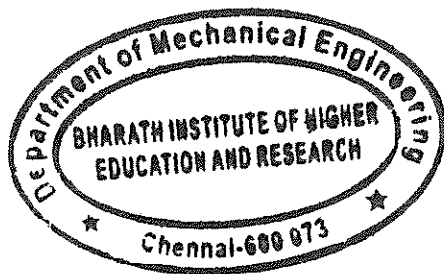
Department of Mechanical Engineering

Circular

The of Department of Mechanical Engineering, BIHER glad to conduct on six days value added program on *"Course on Industrial Automation Development"* from **18.02.2017** 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: Mr.S.Nakkeeran and Mr.V.P.Durairaj
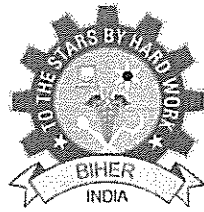
Maximum no. of registration Allowed – 60.

*First come first serve basis.

Program coordinator

Mr.Arun V Rejus Kumar

Mr.R.Hariharan

Department of Mechanical Engineering

Course on Industrial Automation Development

OBJECTIVE:

- To impart the necessary basic concepts of industrial automation, Industrial Robotics, Shop Floor Control and control methods and to apply them to various manufacturing problems.

[DAY: 1]

MODULE 1 Automation & Control Technologies (5Hrs)
Introduction to CAD, CAM, CAD/CAM and CIM – Introduction to Manufacturing Systems – Automation in manufacturing Systems – Types of Automation – Reasons for Automation – Automation Strategies – Manufacturing Models and Metrics – Basic elements of an Automated System – Levels of Automation – Continuous versus Discrete Control – Computer Process Control.

[DAY: 2]

MODULE II Numerical Control & Industrial Robotics (5 Hrs)

Elements of NC Manufacturing Systems – Computer Numerical Control – Axes and Co-ordinate Systems – Features, Advantages, Disadvantages and Limitations – Manual Part Programming – Robot Anatomy – Robot Control Systems – End Effectors – Sensors – Applications – Robot programming.

[DAY: 3]

MODULE III Manufacturing Support Systems (5Hrs)
Process Planning – Computer Aided Process Planning – Production planning and Control Systems – Aggregate Planning and Master Production schedule – Material Requirement Planning – Capacity Planning – Shop Floor Control – Overview of Automatic Identification and Data capture – Bar Code Technology and Radio Frequency Identification.

DAY: 4]

MODULE IV Fundamentals of Industrial Robots (5Hrs)
Specifications and Characteristics, Basic components, configurations, Criteria for selection, various industrial applications. Robotic Control Systems: Drives, Robot Motions, Actuators, Power transmission systems; Robot controllers, Dynamic properties of robots- stability, control resolution, spatial resolution, accuracy, repeatability, compliance.

[DAY: 5]

MODULE V Robotic End Effectors and Sensors (5 Hrs)

Transducers and sensors- sensors in robotics and their classification, Touch (Tactile) sensors, proximity and range sensors, force and torque sensing, End Effectors- Types, grippers, Various process tools as end effectors; Robot-End effectors interface, Active and passive compliance, Gripper selection and design Robot Programming: Lead through method, Robot program as a path in space, Methods of defining positions in space, Motion interpolation, branching;

[DAY: 6]

MODULE VI   Economic factors affecting Design & Value Engineering and Product Design
(5 Hrs)

Economic factors affecting Design: product value, Design for safety, Reliability and Environmental considerations, Economic analysis, profit and competitiveness, break-even analysis and economics.

Value Engineering and Product Design: Introduction, Historical perspective, Value, Nature and measurement of value, Maximum value, Normal degree of value, Importance of value, The value Analysis Job Plan, Creativity, Steps to problem solving and value analysis, Value Engg. Idea generation check list, Cost reduction, materials and process selection in value engineering.

Bharath
INSTITUTE OF HIGHER EDUCATION AND RESEARCH
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Department of Mechanical Engineering

One Week Value added Program on *"Course on Industrial Automation Development"*
18th Feb to 24th Feb 2017

| Date	Morning Session (9 AM – 12 PM)	Afternoon Session (1:30 PM – 3:30 PM)
18 – 02 – 2017 (Saturday)	Program Inauguration Mr.S.Nakkeeran , Assistant professor, BIHER *Introduction:* CAD, CAM, CAD/CAM and CIM – *Introduction to Manufacturing Systems – Automation in manufacturing Systems – Types of Automation – Reasons for Automation – Automation Strategies – Manufacturing Models and Metrics*	Mr.V.P.Durairaj , Assistant professor, BIHER *Basic elements of an Automated System – Levels of Automation – Continuous versus Discrete Control – Computer Process Control.*
20 – 02 – 2017 (Monday)	Numerical Control & Industrial Robotics Mr.V.P.Durairaj *Elements of NC Manufacturing Systems – Computer Numerical Control – Axes and Co-ordinate Systems – Features, Advantages, Disadvantages and Limitations*	Numerical Control & Industrial Robotics Mr.S.Nakkeeran *Manual Part Programming – Robot Anatomy – Robot Control Systems – End Effectors – Sensors – Applications – Robot programming.*
21 – 02 – 2017 (Tuesday)	Manufacturing Support Systems: Mr.S.Nakkeeran *Process Planning – Computer Aided Process Planning – Production planning and Control Systems – Aggregate Planning and Master Production schedule*	Manufacturing Support Systems: Mr.V.P.Durairaj *Material Requirement Planning – Capacity Planning – Shop Floor Control – Overview of Automatic Identification and Data capture – Bar Code Technology and Radio Frequency Identification.*
22 – 02 – 2017 (Wednesday)	Fundamentals of Industrial Robots: Mr.V.P.Durairaj *Specifications and Characteristics, Basic components, configurations, Criteria for selection, various industrial applications. Robotic Control Systems: Drives, Robot Motions, Actuators, Power transmission systems;*	Industrial Robots: Mr.S.Nakkeeran *Robot controllers, Dynamic properties of robots- stability, control resolution, spatial resolution, accuracy, repeatability, compliance.*
23 – 02– 2017 (Thursday)	Sensors :Mr.S.Nakkeeran *Transducers and sensors- sensors in robotics and their classification, Touch (Tactile) sensors, proximity and range sensors, force and torque sensing, End Effectors- Types, grippers, Various process tools as end effectors*	Robotic End Effectors :Mr.V.P.Durairaj *Robot-End effectors interface, Active and passive compliance, Gripper selection and design Robot Programming: Lead through method, Robot program as a path in space, Methods of defining positions in space, Motion interpolation, branching*
24 – 02 – 2017 (Friday)	Value Engineering and Product Design: Mr.V.P.Durairaj *Historical perspective, Value, Nature and measurement of value, Maximum value, Normal degree of value, Importance of value, The value Analysis Job Plan.*	Economic factors affecting Design: Mr.S.Nakkeeran *product value, Design for safety, Reliability and Environmental considerations, Economic analysis, profit and competitiveness, break-even analysis and economics.* __Quiz/ Feedback / valedictory Session__

Program Coordinator:

Mr.Arun V Rejus Kumar

Mr.R.Hariharan

Assistant Professor,

E-Mail:rejus10.mech@gmail.com

hariharan.mech@bharathuniv.ac.in
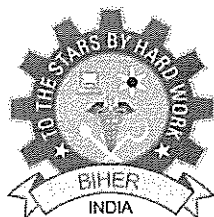
18-02-2017

Course on Industrial Automation Development

Attendance sheet

S.No	Reg.No	Name	Department
1.	U16ME101	VIJAY	Mechanical Engineering
2.	U16ME104	MULLAGURA BHARATH KUMAR	Mechanical Engineering
3.	U16ME105	CHALLA CHARANKUMAR	Mechanical Engineering
4.	U16ME106	RAJEEV KUMAR	Mechanical Engineering
5.	U16ME107	MANOJ	Mechanical Engineering
6.	U16ME113	PYNKHLAINBORLANG	Mechanical Engineering
7.	U16ME115	GUNA	Mechanical Engineering
8.	U16ME119	PALAPALA	Mechanical Engineering
9.	U16ME120	MADDIKARA	Mechanical Engineering
10.	U16ME121	MUKESH	Mechanical Engineering
11.	U16ME037	THAMIN ANSARI	Mechanical Engineering
12.	U16ME038	VIGNESH	Mechanical Engineering
13.	U16ME039	PRADHIP	Mechanical Engineering
14.	U16ME040	RAGUL KUMAR	Mechanical Engineering
15.	U16ME043	AAKASH KAVIN	Mechanical Engineering
16.	U15ME006	ADHITHYAN	Mechanical Engineering

17.	U15ME007	AGASH RAJ	Mechanical Engineering
18.	U15ME008	AGATHIYAN	Mechanical Engineering
19.	U15ME009	AJAY	Mechanical Engineering
20.	U15ME010	AKASH	Mechanical Engineering
21.	U15MT001	AJITH	Mechatronics
22.	U15MT002	BALAJI	Mechatronics
23.	U15MT003	INAYAT ULLA RABBANI	Mechatronics
24.	U15MT004	INAYATHULLA	Mechatronics
25.	U15MT005	KARTHIGAYAN	Mechatronics
26.	U15MT007	MOHAMMED IDRIS	Mechatronics
27.	U15MT501	NAREN KUMAR	Mechatronics
28.	U15MT503	MUGILVARMA	Mechatronics
29.	U15MT702	NEELAM	Mechatronics
30.	U15MT703	MOHANAKUMARESAN	Mechatronics
31.	U15AM001	ABHIJIT	Automobile Engineering
32.	U15AM002	ABISHEK	Automobile Engineering
33.	U15AM004	ASWIN	Automobile Engineering
34.	U15AM005	BHARANIDHARAN	Automobile Engineering
35.	U15AM006	GIRIDAAR	Automobile Engineering
36.	U15AM007	EDULA VISHNU GOVARDHAN	Automobile Engineering
37.	U15AM008	GANNI VINEETH	Automobile Engineering
38.	U15AM009	GOKULPRASHANTH	Automobile Engineering

39.	U15AM010	HASHIM JAWAD MELEDATH	Automobile Engineering
40.	U15AM011	INNAMULHASAN	Automobile Engineering
41.	U16MT001	PRADEEPAN	Mechatronics
42.	U16MT002	RAAHUL GANESH	Mechatronics
43.	U16MT003	DINESH	Mechatronics
44.	U16MT004	SRINATH	Mechatronics
45.	U16MT703	VIGNESH	Mechatronics

Certificate

Bharath Institute of Higher Education and Research

DEPARTMENT OF MECHANICAL ENGINEERING

Certificate of Participation

This is to certify that

RAJEEV KUMAR

of

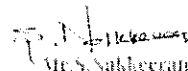*Bharath Institute of Higher Education and Research*

has attended the value added program on "Course on Industrial Automation Development" organized by the Department of Mechanical Engineering, Bharath Institute of Higher Education and Research, Chennai on February (18-24), 2017.

Mr. Arun A Rejas Kumar   Mr. R.Haribaran

Mr. S. Nakkeeran   Mr. A.P.Durairaj

Coordinators   **Resource Persons**

Feedback Form

Course Name: Course on Industrial Automation Development

COURSE FEEDBACK FORM

Name : MONAJ

Date: 18/2/ 2019

Reg.No: U1GMC 107

I.	About the Course Information on the Respondent: (Tick (√) Appropriately)

Depth of Coverage					
UG level		Graduate level	✓	Advance level	

Standard of test and assignments					
High	✓	Normal		Easy	

	A	B	C	D	E
Coverage of the syllabus	✓				
Organisation of the Course	✓				
Emphasis on fundamentals	✓				
Emphasis of fundamentals	✓				
Coverage of modern/advanced topics		✓			
Availability of text books/study materials	✓				
Usefulness of tests and assignments	✓				
Overall rating of the Course		✓			
What benefit you derived from the course?	✓				

Course Name: COURSE ON INDUSTRIAL AUTOMATION DEVELOPMENT

		A	B	C	D	E
	About the Instructor: Information on the Respondent: (Tick (√) Appropriately)					
1.	Pace of the Teaching/lecture	✓				
2.	Comment of the Subject	✓				
3.	Clarity of expression	✓				
4.	Level of preparation	✓				
5.	Level of interaction	✓				
6.	Accessibility outside the class	✓				
7.	Others (please specify)	✓				

A: Excellent		B: Very Good		C: Good		D: Satisfactory		E: Poor	

Course on Industrial Automation Development – Image

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

NAAC

Requisition Letter   03.01.2017

FROM

The HOD
Department of Mechatronics
Bharath Institute of Higher Education and Research
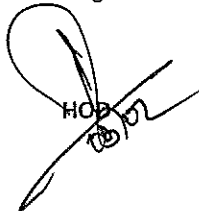Selaiyur-Chennai- 73

TO

The Dean Engineering
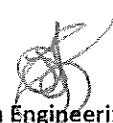Bharath Institute of Higher Education and Research
Selaiyur-Chennai- 73

Respected Sir,

Subject: Requisition for conducting Value Added course reg.

The school of Mechanical sciences had planned to conduct a 5 day value added course on the topic "**Radioss**"dated from 07.03.2017. In this regard, I request you to kindly grant permission for conducting the same.

Thanking You

HOD   Dean Engineering

Date: 5.03.2017

Department of Mechatronics

Circular

The Department of Mechatronics, BIHER is glad to conduct a 5 - day Value Added Program on **"Radioss"** dated from 17.03.2017 for a period of 25 hours. Those who are interested to participate do register your name with the program coordinator mentioned below.

Resource persons:

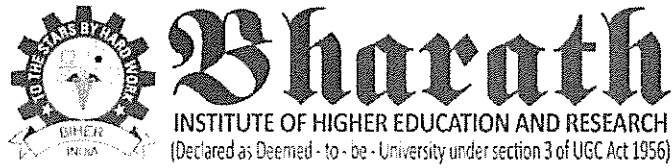**Dr.P.Sengottuvel,**
Professor,
BIHER

Mr. K. Nagendran & Team
COE,
Caddam Technologies-Tambaram

Maximum No. of registration Allowed – 30

*****First come first serve basis.**

Program Coordinator:
Mr.Dhanasekar
Assistant Professor
Mr.JaiRajesh
Assistant Professor,
Mobile: 8870136732 / 9962133365

HOD

Bharath

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

Department of Mechatronics

Value added course on "Radioss"

Introduction : The student will learn how to use RADIOSS to solve highly non-linear transient problems typical of impact. Users will be able to apply RADIOSS to evaluate product performance under loading that causes large displacements, large strains, contact and material non-linearity.

Topics

Module 1 - Background about finite element formulations and time integration schemes

Pre and Post-processing structural dynamic simulations

Module 2 -Time-step stability and control

Contact interfaces

Module 3 - Material Laws and Techniques with examples

Module 4 -Debugging models and understanding error messages

Module 5 - Best Practices on solving high non-linear problems

Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

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

Department of Mechatronics

Value Added Course - RADIOSS

PARTICIPANTS LIST

S.No	Reg.No	Name	Department
1.	U17MT001	PRASANNA KUMAR R	Mechatronics
2.	U17MT002	NATARAJAN M A	Mechatronics
3.	U17MT012	TAMILSELVAN A	Mechatronics
4.	U17MT013	ARUN KUMAR C K	Mechatronics
5.	U17MT014	MOHAN PIRASATH M	Mechatronics
6.	U17MT015	BAGIYARAJ D	Mechatronics
7.	U17MT026	MADUGULA BALACHANDRA	Mechatronics
8.	U17MT027	ALEX ANTO	Mechatronics
9.	U17MT052	SATHISH KUMAR S	Mechatronics
10.	U17MT056	SURYA PRAKASH N	Mechatronics
11.	U17MT057	SREE MUKESH R V	Mechatronics
12.	U17MT058	NAGARAJ P	Mechatronics
13.	U17ME001	MADHAVAN H	Mechanical Engineering
14.	U17ME006	STEPHEN CHITARANJAN B	Mechanical Engineering
15.	U17ME019	EDLA MANISH	Mechanical Engineering
16.	U17ME021	DARAM PRITHVI RAJ .	Automobile Engineering

17.	U17ME035	DAMARLA SAI SANTHOSH .	Automobile Engineering
18.	U17ME036	FEROZ AKHTAR M A	Automobile Engineering
19.	U17ME038	HARIRAM K	Automobile Engineering
20.	U17ME045	JEYABHARATHI R	Mechanical Engineering
21.	U17ME047	THIRUGNANA SAMMANDAM R	Mechanical Engineering
22.	U17ME056	KAMPARAJU RAM SRINIVAS RAJU .	Mechanical Engineering
23.	U17ME059	BALAJI P	Mechanical Engineering
24.	U17ME062	PAKAM SARATH KUMAR .	Mechanical Engineering
25.	U17ME066	YETTELLA BHUVANESWARA REDDY .	Mechanical Engineering
26.	U17ME068	CHALLA GIREESH	Mechanical Engineering
27.	U17ME069	VEMPULURU RAKESH	Mechanical Engineering
28.	U17ME001	MADHAVAN H	Mechanical Engineering
29.	U17ME006	STEPHEN CHITARANJAN B	Mechanical Engineering
30.	U17ME019	EDLA MANISH	Mechanical Engineering

BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY

DEPARTMENT OF MECHATRONICS

CERTIFICATE OF PARTICIPATION

This is to certify that

HARIRAM K

of Bharath Institute of Science and Technology

had attended the 5 day Value Added Program on "Radioss" organized by the

Department of Mechatronics-

Bharath Institute of Higher Education and Research,Chennai on March (17-21) 2017.

Mr.J.Dhanasekar   Mr.P.Jai Rajesh
Coordinators

Dr.P.Sengottuvel
Resource Person

Bharath
INSTITUTE OF HIGHER EDUCATION AND RESEARCH
(Declared as Deemed - to - be - University under section 3 of UGC Act 1956)
BHARATH INSTITUTE OF SCIENCE & TECHNOLOGY
Selaiyur, Chennai – 73.
DEPARTMENT OF MECHATRONICS

VALVE ADDED COURSE
FEEDBACK FORM

Date: 23.03.17

NAME	Nagaraj. P				
REGISTER.NO	U17MT058				
COURSE TITLE	RADIOSS				
	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
OVERALL PROGRAM				✓	
THE SPEAKER					✓
AUDIO,VISIAL AIDS,TECHNOLOGY USED					✓
PRESENTATION HAND OUTS					✓

STUDENT SIGNATURE

Bharath

VALVE ADDED COURSE
FEEDBACK FORM

Date: 23.03.20__

NAME	Edl_manish .				
REGISTER.NO	U17ME019				
COURSE TITLE	RADIOSS				
	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
OVERALL PROGRAM			✓		
THE SPEAKER				✓	
AUDIO,VISIAL AIDS,TECHNOLOGY USED				✓	
PRESENTATION HAND OUTS				✓	

STUDENT SIGNATURE

Mr Selvakumar explaining the students

<u>Requisition Letter</u>   10.04.2017

FROM

The HOD
Department of Mechatronics
Bharath Institute of Higher Education and Research
Selaiyur-Chennai- 73

TO

The Dean Engineering
Bharath Institute of Higher Education and Research
Selaiyur-Chennai- 73

Respected Sir,

      Subject: Requisition for conducting Value Added course reg.

The school of Mechanical sciences had planned to conduct a value added course on the topic " Course on **Mobile Robotics**" dated from 15.04.2017 to 19.04.2017. In this regard, I request you to kindly grant permission for conducting the same.

Thanking You

HOD

Dean Engineering

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

Department of Mechatronics

Circular

The Department of Mechatronics, BIHER is glad to conduct a 5 - day Value Added Program on **"Course on mobile robotics"** dated from 15.04.2017 for a period of 25 hours. Those who are interested to participate do register your name with the program coordinator mentioned below.

Resource persons:

Dr.P.Sengottuvel,
Professor,
BIHER

Mr. Karthik
Robosapiens pvt Ltd
Chennai.

Maximum No. of registration Allowed – 35

*First come first serve basis.

Program Coordinator:
Mrs.G.VASUMATHI
 Assistant Professor
Mr.JAIRAJESH
Assistant Professor,
E-Mail: arun08v@gmail.com
Mobile: 9962133365

Department of Mechatronics

"Course on mobile robotics"

OBJECTIVES:

Mobile robots are now enabling human beings to physically reach and explore unchartered territories in the Universe. Be a place as distant as Mars, in abysmal depths of ocean, or shrouded by thick glaciers of Antarctic, mobile robots help exploring everything; yet this is just the beginning. Even in day to day life autonomous cars hold a potential to revolutionize transportation and domestic mobile robots help humans in cleaning, elderly help, etc. National defense is an area replete with the use of mobile robots. This course will present various aspects of design, fabrication, motion planning, and control of intelligent mobile robotic systems. The focus of the course is distributed equally on the computational aspects and practical implementation issues and thereby leads to a well rounded training.

[DAY: 1]MODULE I Robot locomotion (5 Hrs)

Types of locomotion, hopping robots, legged robots, wheeled robots, stability, maneuverability, controllability

[DAY: 2]Mobile robot kinematics and dynamics: (5 Hrs)

Forward and inverse kinematics, holonomic and nonholonomic constraints, kinematic models of simple car and legged robots, dynamics simulation of mobile robots

[DAY: 3]MODULE III Perception (5 Hrs)

Proprioceptive/Exteroceptive and passive/active sensors, performance measures of sensors, sensors for mobile robots like global positioning system (GPS), Doppler effect-based sensors, vision based sensors, uncertainty in sensing, filtering;

[DAY: 4] Localization: (5 Hrs)
Odometric position estimation, belief representation, probabilistic mapping, Markov localization, Bayesian localization, Kalman localization

[DAY: 5]MODULE V Introduction to planning and navigation (5 Hrs)

path planning algorithms based on A-star, Dijkstra, Voronoi diagram, probabilistic roadmaps (PRM), rapidly exploring random trees (RRT), Markov Decision P (MDP), stochastic dynamic programming (SDP);

Department of Mechatronics

Value Added Course - Course on mobile robotics

PARTICIPANTS LIST

S.No	Reg.No	Name	Department
1.	U16ME093	MACHUNURU PRASAD KUMAR	Mechanical Engineering
2.	U16ME094	GOPAL KUMAR	Mechanical Engineering
3.	U16ME098	PRAJEESH S NAIR	Mechanical Engineering
4.	U16ME100	NAGIREDDY AJAYKUMAR	Mechanical Engineering
5.	U16ME101	VIJAY	Mechanical Engineering
6.	U16ME104	MULLAGURA BHARATH KUMAR	Mechanical Engineering
7.	U16ME105	CHALLA CHARANKUMAR	Mechanical Engineering
8.	U16ME106	RAJEEV KUMAR	Mechanical Engineering
9.	U16ME107	MANOJ	Mechanical Engineering
10.	U16ME113	PYNKHLAINBORLANG	Mechanical Engineering
11.	U16ME115	GUNA	Mechanical Engineering
12.	U16ME119	PALAPALA	Mechanical Engineering
13.	U16ME093	MACHUNURU PRASAD KUMAR	Mechanical Engineering
14.	U16ME094	GOPAL KUMAR	Mechanical Engineering
15.	U16ME098	PRAJEESH S NAIR	Mechanical Engineering
16.	U16ME100	NAGIREDDY AJAYKUMAR	Mechanical Engineering
17.	U16AM	RAMACHANDRAN M	Automobile Engineering
18.	U16AM002	LIBIN BOBBY	Automobile Engineering

19.	U16AM005	VASANTHKUMAR R	Automobile Engineering
20.	U16AM014	KARMUGILAN V	Automobile Engineering
21.	U16AM008	PALAPANDALA	Automobile Engineering
22.	U16AM012	MOHAMED IMTHIYAZ	Automobile Engineering
23.	U16AM017	AMAL PHILIP GEORGE	Automobile Engineering
24.	U16MT010	SAKTHI	Mechatronics
25.	U16MT011	MELVINE ROHAN	Mechatronics
26.	U16MT014	SARATHKUMAR	Mechatronics
27.	U16MT015	SOMENDRAN	Mechatronics
28.	U16MT018	RATHISH KRISHNAN	Mechatronics
29.	U16MT501	MUGILAN	Mechatronics
30.	U16MT502	VIGNESHWAR	Mechatronics
31.	U16MT503	KARUPHIN KAWIN J	Mechatronics
32.	U16MT701	CHANDRASEKAR	Mechatronics
33.	U16MT702	CHIRANJEEVI	Mechatronics
34.	U16MT703	VIGNESH	Mechatronics
35.	U16MT704	AJITH	Mechatronics

BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY

DEPARTMENT OF MECHATRONICS

CERTIFICATE OF PARTICIPATION

This is to certify that

MANOJ

of Bharath Institute of Science and Technology

had attended the 5 day Value Added Program on "Course on mobile robotics"

organized by the Department of Mechatronics,

Bharath Institute of Higher Education and Research, Chennai on 15/4/2017 TO 19/4/2017

Mrs.G.VASUMATHI/Mrs.J.JENCY LATHA

Coordinators

Dr.P.Sengottuvel
Resource Person

Bharath

BHARATH INSTITUTE OF SCIENCE & TECHNOLOGY

Selaiyur, Chennai – 73.

DEPARTMENT OF MECHATRONICS

VALVE ADDED COURSE
FEEDBACK FORM

Date: 20.04.2017

NAME	Palapandala				
REGISTER.NO	U16AM008				
COURSE TITLE	Mobile Robotics				
	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
OVERALL PROGRAM					✓
THE SPEAKER					✓
AUDIO,VISIAL AIDS,TECHNOLOGY USED					✓
PRESENTATION HAND OUTS					✓

STUDENT SIGNATURE

Bharath
INSTITUTE OF HIGHER EDUCATION AND RESEARCH
(Declared as Deemed - to - be - University under section 3 of UGC Act 1956)
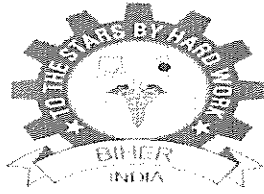## BHARATH INSTITUTE OF SCIENCE & TECHNOLOGY
Selaiyur, Chennai – 73.
DEPARTMENT OF MECHATRONICS

VALVE ADDED COURSE
FEEDBACK FORM

Date: 20.04.17

NAME	VASANTH KR. R.				
REGISTER.NO	U16AM6005				
COURSE TITLE	MOBILE ROBOTICS				
	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
OVERALL PROGRAM				✓	
THE SPEAKER					✓
AUDIO,VISIAL AIDS,TECHNOLOGY USED					✓
PRESENTATION HAND OUTS					✓

STUDENT SIGNATURE

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

Department of Mechatronics

Course on mobile robotics

<u>Requisition Letter</u>   10.06.2017

FROM

The HOD
Department of Mechatronics
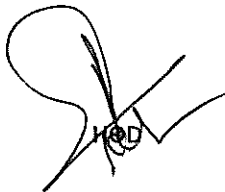Bharath Institute of Higher Education and Research
Selaiyur-Chennai- 73

TO

The Dean Engineering
Bharath Institute of Higher Education and Research
Selaiyur-Chennai- 73

Respected Sir,

Subject: Requisition for conducting Value Added course reg.

The school of Mechanical sciences had planned to conduct a 5 day value added course on the topic
"Creating Web applications using Lab View-NXG"dated from 16.06.2017 to 20.06.2017. In this regard, I
request you to kindly grant permission for conducting the same.

Thanking You

HOD   **Dean Engineering**

Date: 10.06.2017

Department of Mechatronics

Circular

The Department of Mechatronics, BIHER is glad to conduct a 5 - day Value Added Program on **"Creating web applications using lab view NXG"** dated from 16.06.2017 for a period of 25 hours. Those who are interested to participate do register your name with the program coordinator mentioned below.

Resource persons:

Dr.P.Sengottuvel,
Professor,
BIHER

Mr. Uday Shankar Prabhu
CEO,
CAD/CAM/CAE Solutions,
Royapuram, Chennai.

Maximum No. of registration Allowed – 60

***First come first serve basis.**

Program Coordinator:
Mrs.SRIDEVI
Assistant Professor
Mr.JAIRAJESH
Assistant Professor,
E-Mail: jairajesh2008@gmail.com
Mobile: 7299956395

HOD

Department of Mechatronics
Creating Web Applications using Lab view NXG

OBJECTIVES:

This course will show you how to use the Lab VIEW NXG Web Module to create browser-based user interfaces to visualize data from distributed systems. This manual contains step-by-step instructions for working with Web VIs and creating web applications.

[DAY: 1]

MODULE I Developing(5 Hrs)

Create a web application, design responsive UIs and controls, and debug, build, and package your WebVIs.

[DAY: 2]

MODULE II COMMUNICATING DATA (5 Hrs)

Access WebVI resource files, web service data, and use web services like System Link Tag and Message in your web application.

[DAY: 3]

MODULE III Using javascript (5 Hrs)

Add JavaScript functions to your web application using a JavaScript Library Interface (JSLI) document and create custom UI elements.

[DAY: 4]

MODULE IV Hosting (5 Hrs)

Learn about your hosting options during development and how to host your web application to share with users. etermine how to integrate your web application into your hardware system to share measurement data and interact with your hardware.

[DAY: 5]

MODULE V :Using software(5 Hrs)

Build a library and add custom palettes to share code and create add-onS

Department of Mechatronics

Value Added Course - Creating web applications using lab view NXG

PARTICIPANTS LIST

S.No	Reg.No	Name	Department
1.	U16AM001	RAMACHANDRAN M	Automobile Engineering
2.	U16AM002	LIBIN BOBBY	Automobile Engineering
3.	U16AM004	NANDA KUMAR K	Automobile Engineering
4.	U16AM005	VASANTHKUMAR R	Automobile Engineering
5.	U16AM006	KARAN PRAKASH R	Automobile Engineering
6.	U16AM007	SUNDARESWARAN B	Automobile Engineering
7.	U16AM008	PALAPANDALA PRUDHVI	Automobile Engineering
8.	U16AM009	THAMIM ANSARI K	Automobile Engineering
9.	U16AM010	JAI KUMAR VERMA	Automobile Engineering
10.	U16AM012	MOHAMED IMTHIYAZ M	Automobile Engineering
11.	U16AM015	PARIMI SAI SURYA VAMSI .	Automobile Engineering
12.	U16AM017	AMAL PHILIP GEORGE .	Automobile Engineering
13.	U16AM018	ROSHAN ROMARIO FRANCIS .	Automobile Engineering
14.	U16AM019	ANTHAM JEEVAN REDDY .	Automobile Engineering
15.	U16AM020	MERUGU SHIVA SAGAR .	Automobile Engineering
16.	U16ME100	NAGIREDDY AJAYKUMAR REDDY	Mechanical Engineering

17.	U16ME101	VIJAY M	Mechanical Engineering
18.	U16ME104	MULLAGURA BHARATH KUMAR .	Mechanical Engineering
19.	U16ME105	CHALLA CHARANKUMAR .	Mechanical Engineering
20.	U16ME106	RAJEEV KUMAR .	Mechanical Engineering
21.	U16ME107	MANOJ .	Mechanical Engineering
22.	U16ME113	PYNKHLAINBORLANG KHARSATI	Mechanical Engineering
23.	U16ME115	GUNA SUKESH	Mechanical Engineering
24.	U16ME119	PALAPALA KOTESWARARAO	Mechanical Engineering
25.	U16ME120	MADDIKARA SRIKAMTHREDDY	Mechanical Engineering
26.	U16ME121	MUKESH K	Mechanical Engineering
27.	U16ME129	DEEPAK RAJAN D	Mechanical Engineering
28.	U16ME131	VIJAY M	Mechanical Engineering
29.	U16ME133	AKASH SAHA	Mechanical Engineering
30.	U16ME134	ARANYA JASH	Mechanical Engineering
31.	U16ME140	MO WASEEM .	Mechanical Engineering
32.	U16ME504	MASAPALLI GURUTEJA	Mechanical Engineering
33.	U16ME505	KONDURU VENKATESWARA PRASAD	Mechanical Engineering
34.	U16ME506	ARUN GOSH P A	Mechanical Engineering
35.	U16ME510	Selva Kumar M	Mechanical Engineering
36.	U16ME513	CHINTALA RAMESH DORAUV	Mechanical Engineering
37.	U16ME516	KARTHIKEYAN K	Mechanical Engineering
38.	U16ME520	PAVITHRAN OMEZHILAN	Mechanical Engineering
39.	U16ME522	I S V SAI DATTHA SHARAN	Mechanical Engineering
40.	U16ME572	RANJITH VIGNESHWAR A	Mechanical Engineering
41.	U16ME602	SHAIK MAHAMMED HANEEF	Mechanical Engineering

42.	U16ME603	SHAIK RIYAZ	Mechanical Engineering
43.	U16ME702	KARTHIKEYAN H	Mechanical Engineering
44.	U16ME705	VASANTH C	Mechanical Engineering
45.	U16ME706	SAURAV HAJONG	Mechanical Engineering
46.	U16ME709	ABINANTH A	Mechanical Engineering
47.	U16ME714	GANJIKUNTA CHARAN KUMAR REDDY .	Mechanical Engineering
48.	U16ME716	AAKASH V	Mechanical Engineering
49.	U16ME721	SRINIVASAN R	Mechanical Engineering
50.	U16MT002	RAAHUL GANESH R	Mechatronics
51.	U16MT003	DINESH J	Mechatronics
52.	U16MT004	SRINATH B	Mechatronics
53.	U16MT005	DHANASEKAR R	Mechatronics
54.	U16MT006	GOUTHAM M	Mechatronics
55.	U16MT007	SATHIYASEELAN S	Mechatronics
56.	U16MT008	RAKESH P	Mechatronics
57.	U16MT009	ABDUL FAHEEM S	Mechatronics
58.	U16MT010	SAKTHI R	Mechatronics
59.	U16MT011	MELVINE ROHAN R	Mechatronics
60.	U16MT014	SARATHKUMAR D	Mechatronics

BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY

DEPARTMENT OF MECHATRONICS

CERTIFICATE OF PARTICIPATION

This is to certify that

VASANTH. C

of Bharath Institute of Science and Technology

had attended the 5 day Value Added Program on "Creating web applications using labview XXG"

organized by the Department of Mechatronics-

Bharath Institute of Higher Education and Research,Chennai on 16.06.2017 TO 20.06.2017

Mrs.SRIDEVI/Mr.JIREEJEW

Coordinators

Dr.P.Sengottuvel

Resource Person

Bharath

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

BHARATH INSTITUTE OF SCIENCE & TECHNOLOGY

Selaiyur, Chennai – 73.

DEPARTMENT OF MECHATRONICS

VALVE ADDED COURSE FEEDBACK FORM

Date: 20.06.2017

NAME	RAmachander.M				
REGISTER.NO	U16AM001				
COURSE TITLE	Creating web Appln using LABVIew NXU				
	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
OVERALL PROGRAM			✓		
THE SPEAKER				✓	
AUDIO,VISIAL AIDS,TECHNOLOGY USED				✓	
PRESENTATION HAND OUTS					✓

STUDENT SIGNATURE

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## BHARATH INSTITUTE OF SCIENCE & TECHNOLOGY
Selaiyur, Chennai – 73.
DEPARTMENT OF MECHATRONICS

VALVE ADDED COURSE FEEDBACK FORM

Date: 20.06.2017

NAME	Nagireddy Ajay				
REGISTER.NO	U16ME100				
COURSE TITLE	Value added Course in LABVIEW				
	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
OVERALL PROGRAM					✓
THE SPEAKER					✓
AUDIO,VISIAL AIDS,TECHNOLOGY USED					✓
PRESENTATION HAND OUTS					✓

STUDENT SIGNATURE
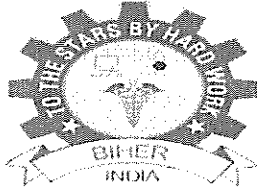
Department of Mechatronics

Value Added Course Creating web applications using lab view NXG
conducted by Uday Shankar Prabhu ,CEO,CAD/CAM/CAE Solutions.

Requisition Letter

Date: 24.05.2017

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 on "Course on Industrial Automation and FMS" on 16-06-2017. In this regard we kindly request you to grant permission for the same.

Thanking You

HOD/MECH

Head of the Department
Department of Mechanical Engineering
Bharath Institute of Higher Education and Research
(Dec.u/s 3 of UGC Act.1956)
Selaiyur, Chennai-600 073

Dean Engineering

Date: 25.05.2017
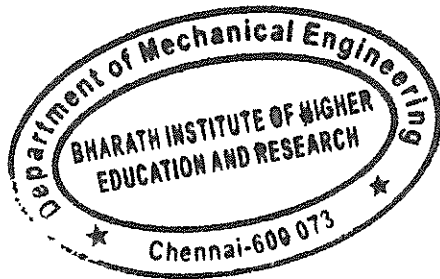
Department of Mechanical Engineering

Circular

The of Department of Mechanical Engineering, BIHER glad to conduct on six days value added program on *"Course on Industrial Automation and FMS"* from **16.06.2017** 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: Mr.R J Golden Renjith Nimal and Mr.R.Hariharan

Maximum no. of registration Allowed – 60.

*First come first serve basis.

Program coordinator

Mr.Arun V Rejus Kumar

Mr.S.Manavalan

Bharath

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

Department of Mechanical Engineering

Course on Industrial Automation and FMS

OBJECTIVE:

- To impart the necessary basic concepts of industrial automation, FMS and control methods and to apply them to various manufacturing problems.

OUTCOME:

- The students should apply industrial automation, robotics, and control techniques to manufacturing systems, cellular manufacturing systems, and flexible manufacturing systems.

[DAY: 1]

MODULE 1 Automated manufacturing systems (5Hrs)

Fixed/Programmable/Flexible Automation, need; Basic elements of automated systems- program and control; advanced automation functions, Levels of automation, industrial control systems in process and discrete manufacturing industries, Continuous and discrete control; Low cost automation, Economic and social aspects of automation. Transfer Lines: Fundamentals, Configurations, Transfer mechanisms, storage buffers, control, applications; Analysis of transfer lines without and with storage buffers.

[DAY: 2]

MODULE II   Inspection Technologies 5 Hrs)

Automated Inspection, Coordinate Measuring Machines Construction, operation &Programming, Software, Application & Benefits, Flexible Inspection System, Inspection Probes on Machine Tools, Machine Vision, Optical Inspection Techniques & Non-contact Non-optical Inspection Technologies

[DAY: 3]

MODULE III   Manufacturing Support System (5Hrs)

Process Planning, Computer Aided Process Planning, Concurrent Engineering & Design for Manufacturing, Advanced Manufacturing Planning, Just-in Time Production System, Basic concepts of lean and Agile manufacturing.

DAY: 4]

MODULE IV   Assembly Automation   **(5Hrs)**

Types and configurations, Parts delivery at workstations- Various vibratory and non-vibratory devices for feeding and orientation, Calculations of feeding rates, Cycle time for single station assembly machines and partially automated systems; Product design for automated assembly.

[DAY: 5]

MODULE V   Group Technology & Flexible Manufacturing Systems   **(5 Hrs)**

Part Families, Parts Classification and coding, Production Flow Analysis, Cellular Manufacturing, Flexible Manufacturing Systems: What is an FMS, FMS Components, FMS Applications & Benefits, and FMS Planning & Implementation Issues.

[DAY: 6]

MODULE VI   Quality Control Systems   **(5 Hrs)**

Traditional and Modern Quality Control Methods, Taguchi Methods in Quality Engineering. Introduction to SQC Tools.

]

Department of Mechanical Engineering
One Week Value added Program on "*Course on Industrial Automation and FMS*"
16th June to 22nd June 2017

| Date	Morning Session (9 AM – 12 PM)	Afternoon Session (1:30 PM – 3:30 PM)
16 – 06 – 2017 (Friday)	Program Inauguration **Mr.R J Golden Renjith Nimal** , Assistant professor, BIHER *Introduction: Automated manufacturing systems*	**Mr.R.Hariharan** , Assistant professor, BIHER *Transfer Lines: Fundamentals, Configurations, Transfer mechanisms, storage buffers, control, applications; Analysis of transfer lines without and with storage buffers.*
17 – 06 – 2017 (Saturday)	**Inspection Technologies: Mr.R.Hariharan** *Automated Inspection, Coordinate Measuring Machines Construction, operation &Programming, Software, Application & Benefits,*	**Inspection Technologies Mr.R J Golden Renjith Nimal** *Flexible Inspection System, Inspection Probes on Machine Tools, Machine Vision, Optical Inspection Techniques & Non-contact Non-optical Inspection Technologies*
19 – 06 – 2017 (Monday)	**Manufacturing Support System: Mr.R J Golden Renjith Nimal** *Process Planning, Computer Aided Process Planning, Concurrent Engineering & Design for Manufacturing,*	**Manufacturing Support System: Mr.R.Hariharan** *Advanced Manufacturing Planning, Just-in Time Production System, Basic concepts of lean and Agile manufacturing.*
20 – 06 – 2017 (Tuesday)	**Assembly Automation: Mr.R.Hariharan** *Types and configurations, Parts delivery at workstations-Various vibratory and non-vibratory devices for feeding and orientation*	**Assembly Automation: Mr.R J Golden Renjith Nimal** *Calculations of feeding rates, Cycle time for single station assembly machines and partially automated systems; Product design for automated assembly.*
21 – 06– 2017 (Wednesday)	**Group Technology: Mr.R J Golden Renjith Nimal** *Part Families, Parts Classification and coding, Production Flow Analysis, Cellular Manufacturing*	**Flexible Manufacturing Systems Mr.R.Hariharan** *Flexible Manufacturing Systems: What is an FMS, FMS Components, FMS Applications & Benefits, and FMS Planning & Implementation Issues.*
22 – 06 – 2017 (Thursday)	**Quality Control Systems: Mr.R.Hariharan** *Traditional and Modern Quality Control Methods, Taguchi Methods in Quality Engineering. Introduction to SQC Tools.*	*Quiz/ Feedback / valedictory Session*

Program Coordinator:
Mr.Arun V Rejus Kumar

Mr.S.Manavalan

Assistant Professor,

E-Mail:rejus10.mech@gmail.com

manavalan.mech@bharathuniv.ac.in
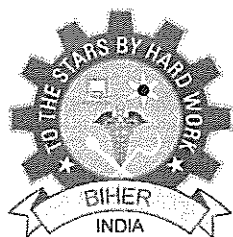
16-06-2017

Course on Industrial Automation and FMS

Attendance sheet

S.No	Reg.No	Name	Department
1.	U16ME057	AMIT PRAKASH	Mechanical Engineering
2.	U16ME058	RAHUL	Mechanical Engineering
3.	U16ME060	PUCHAKAYALA HARI BABU	Mechanical Engineering
4.	U16ME061	KONAKALLA	Mechanical Engineering
5.	U16ME063	GAJULA AKHIL RAGHU SAI	Mechanical Engineering
6.	U16ME065	KOTAPURI MASTAN BABU	Mechanical Engineering
7.	U16ME067	DEVANAMAINA	Mechanical Engineering
8.	U16ME068	PULUSU	Mechanical Engineering
9.	U16ME069	GOLLAGUTHI RAMANJANEYA	Mechanical Engineering
10.	U16ME070	VEERAPANENI	Mechanical Engineering
11.	U15ME139	MOHAMED AZHARUDEEN	Mechanical Engineering
12.	U15ME140	MOHAMED FAZIL	Mechanical Engineering
13.	U15ME142	MOHAMED IRFAN	Mechanical Engineering
14.	U15ME143	MOHAMED MARZOOK	Mechanical Engineering
15.	U15ME144	MOHAMMAD	Mechanical Engineering
16.	U15ME146	MOHD	Mechanical Engineering

17.	U15ME147	MRIGEN	Mechanical Engineering
18.	U15ME150	MUNGARA MADINI BABU	Mechanical Engineering
19.	U15ME151	MURUGESAN	Mechanical Engineering
20.	U15ME152	NANDHA KUMAR	Mechanical Engineering
21.	U16MT003	DINESH	Mechatronics
22.	U16MT004	SRINATH	Mechatronics
23.	U16MT005	DHANASEKAR	Mechatronics
24.	U16MT006	GOUTHAM	Mechatronics
25.	U16MT007	SATHIYASEELAN	Mechatronics
26.	U16MT008	RAKESH	Mechatronics
27.	U16MT009	ABDUL FAHEEM	Mechatronics
28.	U16MT010	SAKTHI	Mechatronics
29.	U16MT011	MELVINE ROHAN	Mechatronics
30.	U16MT014	SARATHKUMAR	Mechatronics
31.	U15MT014	PADIYACHI MONISH DANASEKAR	Mechatronics
32.	U15MT501	NAREN KUMAR	Mechatronics
33.	U15MT503	MUGILVARMA	Mechatronics
34.	U15MT702	NEELAM	Mechatronics
35.	U15MT703	MOHANAKUMARESAN	Mechatronics
36.	U15AM006	GIRIDAAR	Automobile Engineering
37.	U15AM007	EDULA VISHNU GOVARDHAN	Automobile Engineering
38.	U15AM008	GANNI VINEETH	Automobile Engineering

39.	U15AM009	GOKULPRASHANTH	Automobile Engineering
40.	U15AM010	HASHIM JAWAD MELEDATH	Automobile Engineering
41.	U15AM011	INNAMULHASAN	Automobile Engineering
42.	U15AM012	MANIKANDAN	Automobile Engineering
43.	U15AM013	MARIA SUBITCHAM VINITH	Automobile Engineering
44.	U15AM014	MATHAN KUMAR	Automobile Engineering
45.	U15AM015	MOHAMED ASHIF	Automobile Engineering

Certificate

Bharath Institute of Higher Education and Research

DEPARTMENT OF MECHANICAL ENGINEERING

Certificate of Participation

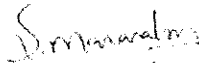This is to certify that

NANDHA KUMAR

of

Bharath Institute of Higher Education and Research

has attended the value added program on "Course on Industrial Automation and FMS" organized by the Department of Mechanical Engineering, Bharath Institute of Higher Education and Research, Chennai on June (16–22), 2017.

Mr. Arun V Rejus Kumar   Mr. S. Manavalan

Coordinators

Mr. R J Golden Renjith Nimal   Mr. R. Hariharan

Resource Persons

Feedback Form

Course Name: _Course on Industrial Automation & PMS_

COURSE FEEDBACK FORM

Name : _Rahul_   Date: _16/06/2012_

Reg.No: _U16ME058_

1.	About the Course Information on the Respondent: (Tick (√) Appropriately)

Depth of Coverage

UG level		Graduate level	✓	Advance level	

Standard of test and assignments

High		✓	Normal		Easy	

	A	B	C	D	E
Coverage of the syllabus	✓				
Organisation of the Course	✓				
Emphasis on fundamentals	✓				
Emphasis of fundamentals	✓				
Coverage of modern/advanced topics		✓			
Availability of text books/study materials		✓			
Usefulness of tests and assignments	✓				
Overall rating of the Course	✓				
What benefit you derived from the course?	✓				

Course Name: Course on Industrial Automation & Pms

		A	B	C	D	E
	About the Instructor: Information on the Respondent: (Tick (√) Appropriately)					
1.	Pace of the Teaching/lecture	√				
2.	Comment of the Subject	√				
3.	Clarity of expression	√				
4.	Level of preparation	√				
5.	Level of interaction		√			
6.	Accessibility outside the class	√				
7.	Others (please specify	√				

A: Excellent		B: Very Good		C: Good		D: Satisfactory		E: Poor	

Course on Industrial Automation and FMS – Image