



# Bharath Institute of Higher Education and Research

[Declared Under Section 3 of UGC Act, 1956]

Chennai – 600 073

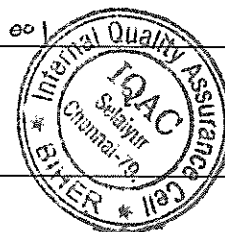
## INTERNAL QUALITY ASSURANCE CELL (IQAC)

### DOCUMENTS SUBMISSION FORM

|                    |  |
|--------------------|--|
| Date of Submission | 22/12/2015                             |
| Type of Documents  | Value Added course program Report      |
| Description        | Skill development on CNC lathe Machine |
| Enclosures         | a) Requisition letter                  |
|                    | b) Circulars                           |
|                    | c) Curricula                           |
|                    | d) Schedule                            |
|                    | e) Attendance Sheet                    |
|                    | f) Feedback form                       |
|                    | g) Certificate                         |
|                    | h) Image                               |
| No. of Pages       | 12                                     |
| Submitted By       | Name : R. HARIHARAN                    |
|                    | Designation : Assistant professor      |
|                    | Department : Mechanical Engineering    |
|                    | Signature :                            |

### For Office Use Only

|              |                                     |       |                |
|--------------|-------------------------------------|-------|----------------|
| Verified By: | K. Sakthivel                        | Sign: | Date: 22/12/15 |
| Uploaded By: | K. S. Senthil Kumar                 | Sign: | Date: 22/12/15 |
| File Name:   | MECH - ME - VAC - 2015 - 2016 - 001 |       |                |



IQAC - BIHER



# Bharath

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

## Requisition Letter

Date: 12.11.2015

From

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

To

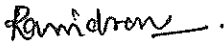
The Dean Engineering,  
Bharath Institute of Higher Education and Research,  
Selaiyur, Chennai.

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 9/12/2015. 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

**DEAN**  
BHARATH INSTITUTE OF HIGHER EDUCATION & RESEARCH  
(Declared as Deemed to be University U/S 3 of UGC Act. 1956)  
Chennai-600 073. INDIA.





**Bharath**  
INSTITUTE OF HIGHER EDUCATION AND RESEARCH  
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Date: 16.11.2015

**Department of Mechanical Engineering**

**Circular**

The of Department of Mechanical Engineering, BIHER glad to conduct on five days value added program on “*Skill Development on CNC Lathe Machine*” from 09.12.2015 for 30 hours. Those who are interested to participate do register your name to the program coordinator.

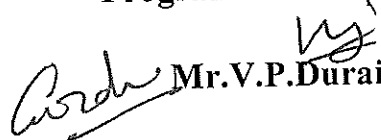
All reregistered students must attend all the classes without fail. The students who are completed the course successfully with good score will get the course completion certificate from the institute/Department.

**Resource person: Mr.S.Thirumavalavan and Mr.S.Nakkeeran**

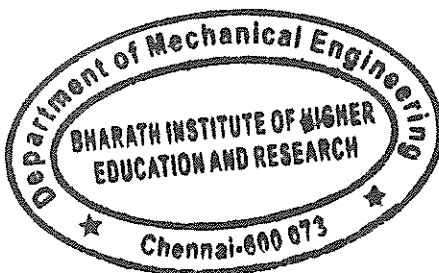
Maximum no. of registration Allowed – 60.

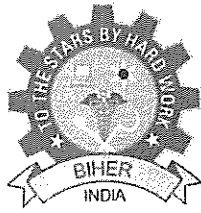
**\*First come first serve basis.**

Program coordinator

  
Mr.V.P.Durairaj

Mr.R J Golden Renjith Nimal





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## Department of Mechanical Engineering

### **Skill Development on CNC Lathe Machine**

#### **OBJECTIVE:**

- The aim of the subject is to provide make the students to understand the CNC.
- 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 [DAY: 1]**

#### **Advanced Manufacturing Processes**

**(10Hrs)**

The Subject deals with Advanced Manufacturing process viz. computer numerical control 5 axis machining, EDM. Various machine elements of CNC 5 Axis machining, CNC EDM Wire cut machining and CNC EDM Die sinker machining. Constructional features of these machines and differentiate between conventional and CNC machines. Illustrate the working principle and operation of these CNC machine

#### **[DAY: 2]**

Structure of CNC part programme and preparation of part programme for various machining operations. Usage of different programming cycles. Coordinate Systems used in CNC 5 axis machine. Execute part programme on CNC machines (Machining centre's and EDM's etc.). Preventive and periodical maintenance of CNC machines and Safety measures to be followed.

#### **[DAY: 3]**

Various machine elements of CNC turning machine & CNC Milling machines/Machining centres and their constructional features. Differentiate between conventional and CNC machines. Illustrate the working principle and operation of CNC machine. Structure of CNC part programme and preparation of part programme for various machining operations such as milling, drilling and turning and their simulation with software.

## **MODULE II CAD/CAM**

**(5 Hrs)**

**[DAY: 4]**

This Subject deals with Basics of Engineering Drawing, Orthographic projections, Isometric Projections. Introduction to AutoCAD, Co-ordinate system, 2D Drafting, 3D Modeling., Design need and requirements, Importance of Parametric constraints, Types of CAD software and their features, Necessity of CAD-CAM integration. Creating and Editing features, Sheet metal components, Surface modeling, Designing. Developing parametric modeling , Behavioral modeling, Mechanism simulation.

## **MODULE III**

**[DAY: 5] CNC Technology**

**(10 Hrs)**

CNC technology basics: Difference between CNC and conventional lathes. Advantages and disadvantages of CNC machines over conventional machines. Schematic diagram of CNC system. Axes convention. Working of parts explained using multimedia CNC teachware. Parts shown on machine.

Programming - sequence, formats, different codes, canned cycles. Absolute and incremental programming. Tool nose radius compensation (G41/42). Cutting tool materials, cutting tool geometry - insert types, holder types, insert cutting edge geometry, ISO nomenclature for turning tools, boring tools, inserts. Cutting parameters - cutting speed, feed rate, depth of cut, constant surface speed, limiting spindle speed. Process planning, tool selection and cutting parameters selection. Explained using multimedia CNC teachware and CNC machine simulator.

CNC part programming with simple exercises and various programming codes. Practice on CNC machine simulator. CNC machining center operation in various modes: jog, single block, auto, MDI, edit, etc. Program entry. Setting of tool offsets, entry of tool radius. Practice on CNC machine simulator.

## **MODULE IV**

**[DAY: 6]**

**(5 Hrs)**

Usage of different programming cycles. CNC Grinding machine construction and its elements, CNC Part programming on Grinding machine. Coordinate Systems used in CNC Grinding. Execute part programme on CNC machines (Machining centre's and Turning centre's, Grinding machines etc.). Preventive and periodical maintenance of CNC machines and Safety measures to be followed.



**Department of Mechanical Engineering**  
**One Week Value added Program on “Skill Development on CNC Lathe Machine”**  
**9<sup>th</sup> Dec to 15<sup>th</sup> Dec 2015**

| Date                          | Morning Session (9 AM – 12 PM)  | Afternoon Session (1:30 PM – 3:30 PM)  |
|-------------------------------|---|--|
| 09 – 12 – 2015<br>(Wednesday) | <b>Program Inauguration</b><br><b>Mr.S.Thirumavalavan</b><br><i>computer numerical control 5 axis machining, EDM. Various machine elements of CNC 5 Axis machining, CNC EDM Wire cut machining and CNC EDM Die sinker machining.</i>  | <b>Mr.S.Nakkeeran</b><br><i>Constructional features of these machines and differentiate between conventional and CNC machines. Illustrate the working principle and operation of these CNC machine</i>   |
| 10 – 12 – 2015<br>(Thursday)  | <b>Mr.S.Nakkeeran</b><br><i>Structure of CNC part programme and preparation of part programme for various machining operations. Usage of different programming cycles. Coordinate Systems used in CNC 5 axis machine</i>  | <b>Mr.S.Thirumavalavan</b><br><i>Execute part programme on CNC machines (Machining centre's and EDM's etc.). Preventive and periodical maintenance of CNC machines and Safety measures to be followed.</i>   |
| 11 – 12 – 2015<br>(Friday)    | <b>Mr.S.Thirumavalavan</b><br><i>Various machine elements of CNC turning machine &amp; CNC Milling machines/Machining centres and their constructional features. Differentiate between conventional and CNC machines. Illustrate the working principle and operation of CNC machine.</i>                                  | <b>Mr.S.Nakkeeran</b><br><i>Structure of CNC part programme and preparation of part programme for various machining operations such as milling, drilling and turning and their simulation with software.</i>   |
| 12 – 12 – 2015<br>(Saturday)  | <b>Mr.S.Nakkeeran</b><br><i>Isometric Projections. Introduction to AutoCAD, Co-ordinate system, 2D Drafting, 3D Modeling., Design need and requirements, Importance of Parametric constraints, Types of CAD software and their features, Necessity of CAD-CAM integration.</i>  | <b>Mr.S.Thirumavalavan</b><br><i>Creating and Editing features, Sheet metal components, Surface modeling, Designing. Developing parametric modeling, Behavioral modeling, and Mechanism simulation.</i>  |
| 14 – 12 – 2015<br>(Monday)    | <b>Mr.S.Thirumavalavan</b><br><i>CNC technology basics: Difference between CNC and conventional lathes. Advantages and disadvantages of CNC machines over conventional machines. Schematic diagram of CNC system. Axes convention. Working of parts explained using multimedia CNC teachware. Parts shown on machine.</i> | <b>Mr.S.Nakkeeran</b><br><i>Programming - sequence, formats, different codes, canned cycles. Absolute and incremental programming. Tool nose radius compensation (G41/42). Cutting tool materials, cutting tool geometry - insert types, holder types, insert cutting edge geometry.</i> |
| 15 – 12 – 2016<br>(Tuesday)   | <b>Mr.S.Nakkeeran</b><br><i>Usage of different programming cycles. CNC Grinding machine construction and its elements, CNC Part programming on Grinding machine. Coordinate Systems used in CNC Grinding. Execute part programme on CNC machines (Machining centre's and Turning centre's, Grinding machines etc.).</i>   | <b>Mr.S.Thirumavalavan</b><br><i>Preventive and periodical maintenance of CNC machines and Safety measures to be followed.</i><br><br><b>Quiz/ Feedback / valedictory Session</b>  |

**Program Coordinator:**

**Mr.V.P.Durairaj**

**Mr.R J Golden Renjith Nimal**

Assistant Professor,

E-Mail: vpdurairaj57@gmail.com

goldenrenjith.mech@bharathuniv.ac.in



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09-12-2015

## Skill Development on CNC Lathe Machine

### Attendance sheet

| S.No | Reg.No   | Name                   | Department             |
|------|----------|------------------------|------------------------|
| 1.   | U13ME005 | ABHISHEK MARKI         | Mechanical Engineering |
| 2.   | U13ME006 | ABINASH MISHRA         | Mechanical Engineering |
| 3.   | U13ME007 | ACHARI RAGHU GANAPATHY | Mechanical Engineering |
| 4.   | U13ME008 | ADARSH GIRI            | Mechanical Engineering |
| 5.   | U13ME009 | ADITYA ANANDKAR        | Mechanical Engineering |
| 6.   | U13ME010 | ADITYA RAJ             | Mechanical Engineering |
| 7.   | U13ME011 | AISHWARY PRATAP SINGH  | Mechanical Engineering |
| 8.   | U13ME012 | AJIT KUMAR KESHRI      | Mechanical Engineering |
| 9.   | U13ME013 | AJMAL ALIKHAN M        | Mechanical Engineering |
| 10.  | U13ME014 | AKASH PANDEY           | Mechanical Engineering |
| 11.  | U13ME027 | AMLAN BHUYAN           | Mechanical Engineering |
| 12.  | U13ME028 | AMUDHAN R              | Mechanical Engineering |
| 13.  | U13ME029 | ANIL KUMAR GOPE        | Mechanical Engineering |
| 14.  | U13ME030 | ANKIT                  | Mechanical Engineering |
| 15.  | U13ME031 | ANKIT KUMAR            | Mechanical Engineering |
| 16.  | U13ME032 | ANKIT PRAVAKAR         | Mechanical Engineering |

|     |          |                         |                        |
|-----|----------|-------------------------|------------------------|
| 17. | U13ME033 | ANMOL PURTY             | Mechanical Engineering |
| 18. | U13ME034 | ARAVINDAN R             | Mechanical Engineering |
| 19. | U13ME036 | ARUL SELVAN K           | Mechanical Engineering |
| 20. | U13ME037 | ARUN KUMAR YADAV        | Mechanical Engineering |
| 21. | U13ME121 | MOHAMED SUHAIL S        | Mechanical Engineering |
| 22. | U13ME122 | MOHAMED YASIN K         | Mechanical Engineering |
| 23. | U13ME123 | MOHAMMAD JAWED RAIN     | Mechanical Engineering |
| 24. | U13ME124 | MOHAMMED IBRAHIM N      | Mechanical Engineering |
| 25. | U13ME125 | MOHAMMED IMRAN BAIG I   | Mechanical Engineering |
| 26. | U13ME159 | RAHUL RAM R             | Mechanical Engineering |
| 27. | U13ME160 | RAJA BAL                | Mechanical Engineering |
| 28. | U13ME161 | RAJAN KUMAR             | Mechanical Engineering |
| 29. | U13ME162 | RAJIYAPRABU P           | Mechanical Engineering |
| 30. | U13ME163 | RAJMOHAN KUMAR          | Mechanical Engineering |
| 31. | U13ME713 | SANDEEP.S               | Mechanical Engineering |
| 32. | U13ME714 | KASINATHAN R            | Mechanical Engineering |
| 33. | U13ME717 | A.KARTHIKEYAN           | Mechanical Engineering |
| 34. | U13ME719 | DIPTADIP ROY            | Mechanical Engineering |
| 35. | U13ME722 | RAMAIAHGARI HARI PRASAD | Mechanical Engineering |
| 36. | U14ME003 | ABHILASH .S             | Mechanical Engineering |
| 37. | U14ME004 | ABHISHEK                | Mechanical Engineering |
| 38. | U14ME005 | ABHISHEK KUMAR          | Mechanical Engineering |

|     |          |                          |                        |
|-----|----------|--------------------------|------------------------|
| 39. | U14ME006 | ABISHEK .N               | Mechanical Engineering |
| 40. | U14ME007 | ABI SHANTH.C             | Mechanical Engineering |
| 41. | U14ME161 | JYOTI RANJAN BADU        | Mechanical Engineering |
| 42. | U14ME162 | KANCHARLA HARISH         | Mechanical Engineering |
| 43. | U14ME168 | KARTHICK .S              | Mechanical Engineering |
| 44. | U14ME169 | KARUNAGARAN.K            | Mechanical Engineering |
| 45. | U14ME170 | KATTA.SAICHAND           | Mechanical Engineering |
| 46. | U14ME171 | KESHAVAN.R               | Mechanical Engineering |
| 47. | U14ME172 | KILLO SAI VIJENDRA PADAL | Mechanical Engineering |
| 48. | U14ME175 | KONISHETTY PHANEENDRA    | Mechanical Engineering |
| 49. | U14ME176 | KORADA PRABHAKAR RAO     | Mechanical Engineering |
| 50. | U14ME177 | KORNU YERRAMNAIDU        | Mechanical Engineering |
| 51. | U14ME717 | MOHANASUNDRAM M          | Mechanical Engineering |
| 52. | U14ME718 | SHOAIBAHMED WANTMORE     | Mechanical Engineering |
| 53. | U14ME719 | DILLIBABU P              | Mechanical Engineering |
| 54. | U14ME720 | BALASUBRAMANI S          | Mechanical Engineering |
| 55. | U14ME721 | AVINASH R                | Mechanical Engineering |
| 56. | U14ME722 | IMRAN KHAN Y             | Mechanical Engineering |



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## FEEDBACK FORM

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

Name of Department : *Mechanical Engineering*  
Date : *09/12/2015*  
Event / Speaker Name : *Skill development on core lathe M/C*

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

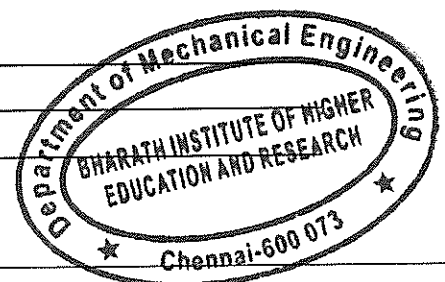
| S.NO | Parameters                                   | Below Average | Average | Good | Excellent | Outstanding |
|------|--|---------------|---------|------|-----------|-------------|
| 1.   | <b>The Topic</b>                             |               |         |      |           |             |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

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

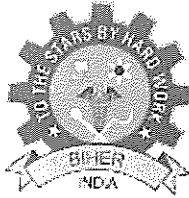
| 1. Below Average | 2. Average | 3. Good | 4. Excellent | 5. Outstanding |
|------------------|------------|---------|--------------|----------------|
|                  |            |         | ✓            |                |

- Comments (If any):

*good*







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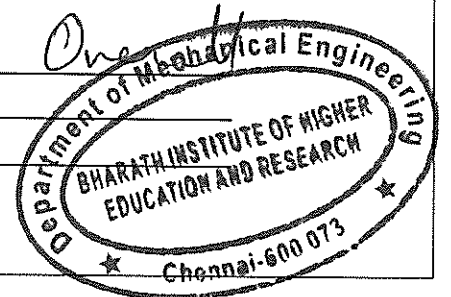
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|------|--|---------------|---------|------|-------------------------------------|-------------------------------------|
| 1.   | <b>The Topic</b>                             |               |         |      | <input checked="" type="checkbox"/> |                                     |
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| 1. Below Average | 2. Average | 3. Good | 4. Excellent | 5. Outstanding                      |
|------------------|------------|---------|--------------|-------------------------------------|
|                  |            |         |              | <input checked="" type="checkbox"/> |

- Comments (If any):

The presentation was One  
Very Good!



# Certificate



**Bharath Institute of Higher Education and  
Research**



DEPARTMENT OF MECHANICAL ENGINEERING

## *Certificate of Participation*

This is to certify that

*Abhilash . S*

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 December (9-15), 2015.



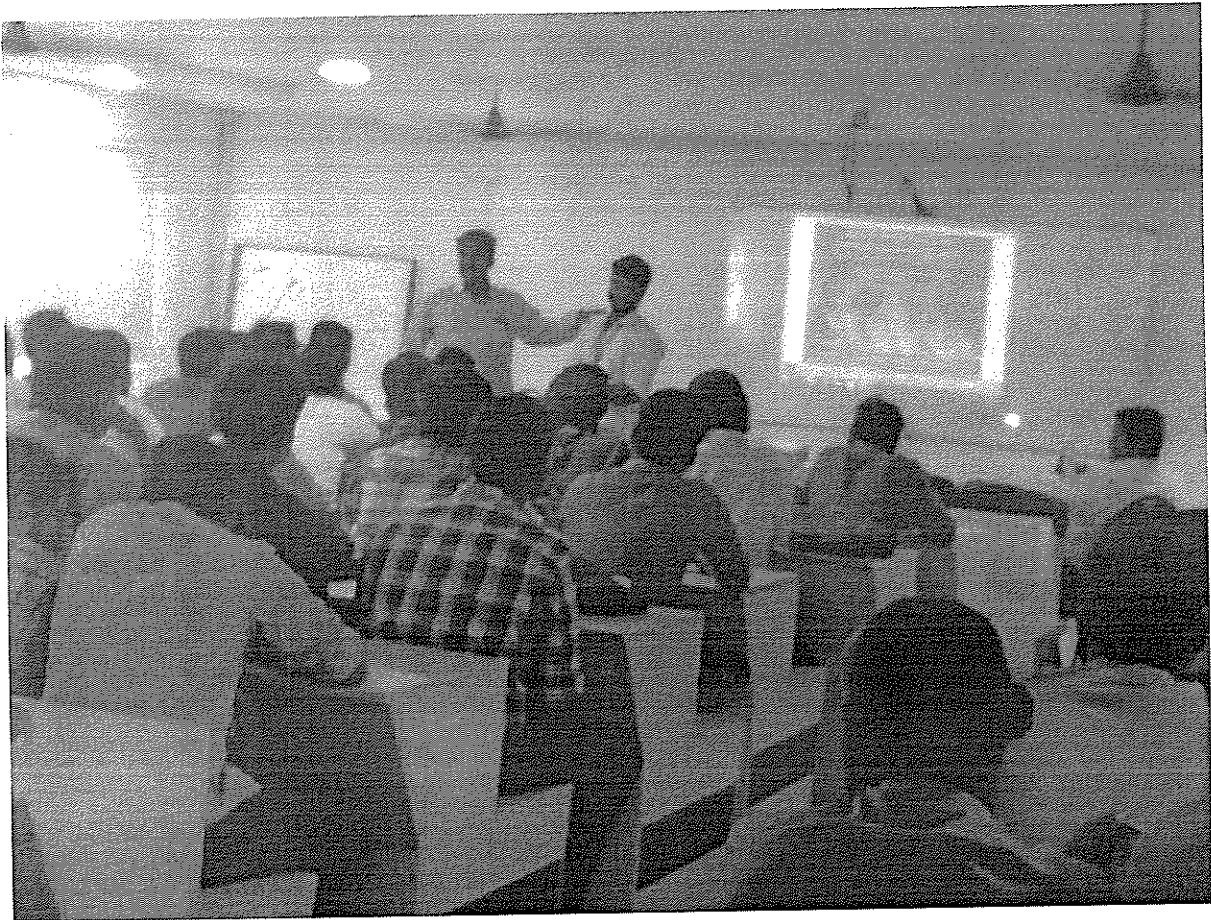
Mr. V.P. Durairaj : Mr. R.J. Golden Renjith  
Nimal  
Coordinators

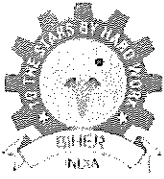
Mr. S. Thirumavalavan : Mr. S. Nakkeeran

Resource Persons



**Skill Development on CNC Lathe Machine – Image**





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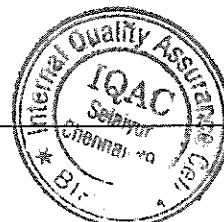
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### DOCUMENTS SUBMISSION FORM

|                    |  |
|--------------------|--|
| Date of Submission | 22/12/2015   |
| Type of Documents  | Value Added Course program Report                  |
| Description        | Introduction to AutoCAD in Geological Applications |
| Enclosures         | a) Requisition letter                              |
|                    | b) Circulars                                       |
|                    | c) Curriculum                                      |
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|                    | e) Attendance sheet                                |
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| No. of Pages       | 12   |
| Submitted By       | Name : R. HARIHARAN                                |
|                    | Designation : Associate professor                  |
|                    | Department : Mechanical Engineering                |
|                    | Signature :  |

### For Office Use Only

|              |                                     |       |                |
|--------------|-------------------------------------|-------|----------------|
| Verified By: | K. SAKHINEL                         | Sign: | Date: 22/12/15 |
| Uploaded By: | K. S. Senthil Kumar                 | Sign: | Date: 22/12/15 |
| File Name:   | MECH - ME - VAC - 2015 - 2016 - 002 |       |                |



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To

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Respected Sir,

Sub: Requisition for conducting Value added course – reg.

School of Mechanical Sciences has planned to conduct Value added course on “Introduction to AutoCAD in Geological Applications” on 9/12/2015. In this regard we kindly request you to grant permission for the same.

Thanking You

HOD/MECH

Head of the Department  
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Dean Engineering

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



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Date: 16.11.2015

**Department of Mechanical Engineering**

**Circular**

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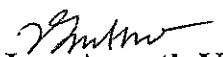

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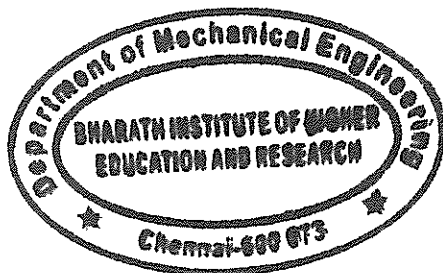
**Resource person: Mr.R.Hariharan and Mr.R J Golden Renjith Nimal**

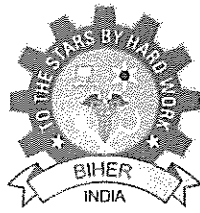
Maximum no. of registration Allowed – 60.

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

**Program coordinator**

  
**Mr.V.Jose Ananth Vino**  
  
**Mr.N. Lenin Rakesh**





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## Department of Mechanical Engineering

### Introduction to AutoCAD in Geological Applications

#### OBJECTIVE:

- To demonstrate understanding of computer science fundamentals.
- To demonstrate programming proficiency in a modern language.
- To demonstrate fundamental software engineering skills on a non-trivial project to the satisfaction of a client.
- To demonstrate the ability to communicate effectively.

#### MODULE I Introduction To Computer Graphics Fundamentals (5Hrs) [DAY: 1]

Output primitives (points, lines, curves etc.), 2-D & 3-D transformation (Translation, scaling, rotation) windowing - view ports - clipping transformation. Concepts in CAD - Elements needed for designing.

**Curves and Surfaces Modeling:** Introduction to curves - Analytical curves: line, circle and conics – synthetic curves: Hermite cubic spline- Bezier curve and B-Spline curve – curve manipulations. Introduction to surfaces - Analytical surfaces: Plane surface, ruled surface, surface of revolution and tabulated cylinder – synthetic surfaces: Hermite bicubic surface- Bezier surface and B-Spline surface- surface manipulations.

#### MODULE II Engineering Geology (5Hrs)

##### [DAY: 2]

Engineering geology in theory and practice. Geological structures and discontinuities, engineering properties of rocks, engineering properties of jointed rocks, geo mechanical classification of rock mass. Physic mechanical properties of building stones and aggregate, alkali aggregate reaction. Geotechnical investigation for dam site, reservoir site; geotechnical study for road alignment; geotechnical evaluation of tunnel alignment, methods of tunneling, classification of ground for tunneling purposes, various types of support system; geotechnical investigations for bridge foundation and building foundation; Rock burst and bumps.

#### MODULE III Coal Geology (5Hrs)

##### [DAY: 3]

Coal and its properties: Different varieties and ranks of coal. Origin of coal.Type of depositional processes.Coalification process and its causes.Introduction to Organic Petrology and Organic Geochemistry. Sediments closely associated with coal (coal balls, tonsteins, seat-earths, under-clays, fire-clays and soils). Lithotypes, microlithotypes and macerals: their physical, chemical

and optical properties. Maceral analysis of coal: Mineral and organic matter in coal. Petrographical methods and tools of examination. Application of coal geology in hydrocarbon exploration

**MODULE III Structural Geology**

**(5 Hrs)**

**[DAY: 4]**

Methods of constructing profiles of folds: Convolute and evolute methods, Concentric-arc method, Kink-style construction, Dip-isogon method, Down-plunge projection method  
Tectonites: Different types and their significance. Petrofabric analysis. Relationship between deformation and metamorphism and criteria for recognition. Relative dating of orogenic belts. Principles of Structural Analysis. Interference patterns in superposed folding and structural geometry in superposed folding. Behavior of lineations in superposed deformations. Use of foliations and lineations in tectonic analysis. Different phases of analysis, analysis of slate belts with simple and multiple deformations. Mapping in gneiss terranes. Migmatite complexes, reworking of basement rocks, mantled gneiss domes.

**MODULE IV**

**Paleontology**

**(5 Hrs)**

**[DAY: 5]**

Definition and scope of paleobiology, process of fossilization, preservation potential of organisms. Elementary ideas about origin of life, evolution and fossil record. Systematic classification of organisms – their characters, environmental factors. Ontogeny and variation in fossil assemblages. Identification of fossils: methods of description and illustration; taxonomic categories and codes of systematic nomenclature. Morphology, environment and geological distribution of brachiopoda, mollusca, echinodermata, arthropoda, and anthozoa. Introduction to Palynology and paleobotany; morphology of typical Gondwana flora.

**MODULE V**

**Economic Geology**

**(5 Hrs)**

**[DAY: 6]**

Terminology: Syngenetic/epigenetic, stratiform/stratabound ores, Hypogene and supergene ores, ore and gangue minerals, grade and Tenor. Mode of occurrence and controls of ore deposition. Temporal pattern and distribution of types of ores through geologic time. Distribution and brief geological aspects of important Indian metallic and non-metallic deposits.





**Department of Mechanical Engineering**  
**One Week Value added Program on “Introduction to AutoCAD in Geological Applications”**  
**9<sup>th</sup> Dec to 15<sup>th</sup> Dec 2015**

| Date                          | Morning Session (9 AM – 12 PM)  | Afternoon Session (1:30 PM – 3:30 PM)   |
|-------------------------------|---|---|
| 09 – 12 – 2015<br>(Wednesday) | <b>Program Inauguration</b><br><b>Mr.R.Hariharan</b><br><i>Introduction To Computer Graphics Fundamentals: Output primitives (points, lines, curves etc.), 2-D &amp; 3-D transformation (Translation, scaling, rotation) windowing - view ports - clipping transformation. Concepts in CAD - Elements needed for designing.</i>                     | <b>Mr.R J Golden Renjith Nimal</b><br><i>Curves and Surfaces Modeling: Introduction to curves - Analytical curves: line, circle and conics – synthetic curves: Hermite cubic spline- Bezier curve and B-Spline curve – curve manipulations. Introduction to surfaces.</i>             |
| 10 – 12 – 2015<br>(Thursday)  | <b>Mr.R J Golden Renjith Nimal</b><br><i>Engineering geology in theory and practice. Geological structures and discontinuities, engineering properties of rocks, engineering properties of jointed rocks, geo mechanical classification of rock mass. Physic mechanical properties of building stones and aggregate, alkali aggregate reaction.</i> | <b>Mr.R.Hariharan</b><br><i>geotechnical evaluation of tunnel alignment, methods of tunneling, classification of ground for tunneling purposes, various types of support system; geotechnical investigations for bridge foundation and building foundation; Rock burst and bumps.</i> |
| 11 – 12 – 2015<br>(Friday)    | <b>Mr.R.Hariharan</b><br><i>Coal and its properties: Different varieties and ranks of coal. Origin of coal.Type of depositional processes.Coalification process and its causes.Introduction to Organic Petrology and Organic Geochemistry.</i>  | <b>Mr.R J Golden Renjith Nimal</b><br><i>Lithotypes, microlithotypes and macerals: their physical, chemical and optical properties. Maceral analysis of coal: Mineral and organic matter in coal.</i>   |
| 12 – 12 – 2015<br>(Saturday)  | <b>Mr.R J Golden Renjith Nimal</b><br><i>Methods of constructing profiles of folds: Convolute and evolute methods, Concentric-arc method, Kink-style construction, Dip-isogon method, Down-plunge projection method Tectonites.</i>   | <b>Mr.R.Hariharan</b><br><i>Interference patterns in superposed folding and structural geometry in superposed folding. Behavior of lineations in superposed deformations. Use of foliations and lineations in tectonic analysis.</i>  |
| 14 – 12 – 2015<br>(Monday)    | <b>Mr.R.Hariharan</b><br><i>Definition and scope of paleobiology, process of fossilization, preservation potential of organisms. Elementary ideas about origin of life, evolution and fossil record. Systematic classification of organisms – their characters, environmental factors.</i>  | <b>Mr.R J Golden Renjith Nimal</b><br><i>Morphology, environment and geological distribution of brachiopoda, molhusca, echinodermata, arthropoda, and anthozoa. Introduction to Palynology and paleobotany; morphology of typical Gondwana flora.</i>                                 |
| 15 – 12 – 2016<br>(Tuesday)   | <b>Mr.R J Golden Renjith Nimal</b><br><b>Terminology:</b><br><i>Syngenetic/epigenetic, stratiform/stratabound ores, Hypogene and supergene ores, ore and gangue minerals, grade and Tenor. Mode of occurrence and controls of ore deposition.</i>   | <b>Mr.R.Hariharan</b><br><i>Temporal pattern and distribution of types of ores through geologic time. Distribution and brief geological aspects of important Indian metallic and non-metallic deposits.</i><br><br><i>Quiz/ Feedback / valedictory Session</i>                        |

**Program Coordinator:**

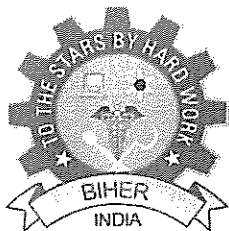
**Mr.V.Jose Ananth Vino**

**Mr.N. Lenin Rakesh**

Assistant Professor,

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

leninrakesh.mech@bharathuniv.ac.in



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09-12-2015

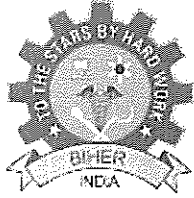
## Introduction to AutoCAD In Geological Applications

### Attendance sheet

| S.No | Reg.No   | Name                 | Department             |
|------|----------|----------------------|------------------------|
| 1.   | U13ME016 | AKHILESH KUMAR       | Mechanical Engineering |
| 2.   | U13ME017 | AKSAH KUMAR PATEL    | Mechanical Engineering |
| 3.   | U13ME018 | ALAKE DAHANGA        | Mechanical Engineering |
| 4.   | U13ME019 | ALI ASGAR KHAN       | Mechanical Engineering |
| 5.   | U13ME020 | ALKESH RAJ           | Mechanical Engineering |
| 6.   | U13ME048 | ASWIN K              | Mechanical Engineering |
| 7.   | U13ME049 | BALAJI P             | Mechanical Engineering |
| 8.   | U13ME050 | BHARATHKUMAR S       | Mechanical Engineering |
| 9.   | U13ME051 | BIJENDRA KUMAR SINGH | Mechanical Engineering |
| 10.  | U13ME052 | BIKASH CHANDRA ROY   | Mechanical Engineering |
| 11.  | U13ME094 | JOHN CHARLES         | Mechanical Engineering |
| 12.  | U13ME095 | JOHN VICTOR M        | Mechanical Engineering |
| 13.  | U13ME096 | JOSEPH ROSARIO J     | Mechanical Engineering |
| 14.  | U13ME097 | KALIRAJAN S          | Mechanical Engineering |
| 15.  | U13ME098 | KANNADHASAN K        | Mechanical Engineering |
| 16.  | U13ME142 | PARAMESHWAR S        | Mechanical Engineering |

|     |          |                           |                        |
|-----|----------|---------------------------|------------------------|
| 17. | U13ME143 | PAVITR KUMAR              | Mechanical Engineering |
| 18. | U13ME144 | PAWAN KUMAR SINGH         | Mechanical Engineering |
| 19. | U13ME145 | PIYUSH MOHAN              | Mechanical Engineering |
| 20. | U13ME146 | PRAKASH K                 | Mechanical Engineering |
| 21. | U13ME149 | PREETHAM ANANTHA PANDIAN  | Mechanical Engineering |
| 22. | U13ME150 | PRITAM SANKAR DHUPAL      | Mechanical Engineering |
| 23. | U13ME071 | DINESH KANNAN             | Mechanical Engineering |
| 24. | U13ME072 | DINESH.M                  | Mechanical Engineering |
| 25. | U13ME151 | PRIYADARSHINI G           | Mechanical Engineering |
| 26. | U14ME331 | SIVAKUMAR B               | Mechanical Engineering |
| 27. | U14ME332 | SIVARAMAN.T               | Mechanical Engineering |
| 28. | U14ME333 | SOMA SUNDARAM.L           | Mechanical Engineering |
| 29. | U14ME334 | SOMU VASU                 | Mechanical Engineering |
| 30. | U14ME335 | SONAL PATHAK              | Mechanical Engineering |
| 31. | U14ME520 | D HARSHA PRIYADARSHAN     | Mechanical Engineering |
| 32. | U14ME701 | DEEP JYOTHI BHATTACHARJEE | Mechanical Engineering |
| 33. | U14ME702 | RAJ KUMAR.D               | Mechanical Engineering |
| 34. | U14ME241 | PATNANA SAGAR             | Mechanical Engineering |
| 35. | U14ME242 | PAUL JOSHUA.J             | Mechanical Engineering |
| 36. | U14ME180 | KOTHA RAKESH              | Mechanical Engineering |
| 37. | U14ME181 | KOUSHIK.R                 | Mechanical Engineering |
| 38. | U14ME182 | KRISHNA KUMAR DIWAKAR     | Mechanical Engineering |

|     |          |                        |                        |
|-----|----------|------------------------|------------------------|
| 39. | U14ME183 | KUNDAN KUMAR GOND      | Mechanical Engineering |
| 40. | U14ME184 | LOKESH.K               | Mechanical Engineering |
| 41. | U14ME047 | ARUN.K                 | Mechanical Engineering |
| 42. | U14ME048 | MD ASGAR ANSARI        | Mechanical Engineering |
| 43. | U14ME049 | ASGHARIMAM             | Mechanical Engineering |
| 44. | U14ME050 | ASHOK KUMAR YADAV      | Mechanical Engineering |
| 45. | U14ME051 | ASHOK YADAV.L.         | Mechanical Engineering |
| 46. | U14ME052 | ASHUTOSH KUMAR JHA     | Mechanical Engineering |
| 47. | U14ME053 | ASHWINI KUMAR RATHORE  | Mechanical Engineering |
| 48. | U14ME054 | ASHWIN PRABHU.P        | Mechanical Engineering |
| 49. | U14ME055 | ASIF HODA              | Mechanical Engineering |
| 50. | U14ME056 | ATHIBAN BUCKLE DURAILA | Mechanical Engineering |
| 51. | U14ME011 | ADITYA RAJ             | Mechanical Engineering |
| 52. | U14ME012 | AFZAL IMAM             | Mechanical Engineering |



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## FEEDBACK FORM

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

Name of Department : ..... *Mechanical Engineering* .....

Date : ..... *9/12/2015* .....

Event / Speaker Name : ..... *Introduction to Auto-CAD in Geological Application* .....

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

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

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

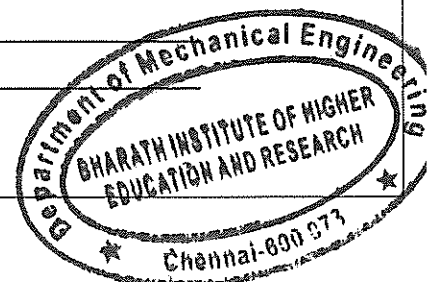
| 1. Below Average | 2. Average | 3. Good | 4. Excellent | 5. Outstanding |
|------------------|------------|---------|--------------|----------------|
|                  |            |         | ✓            |                |

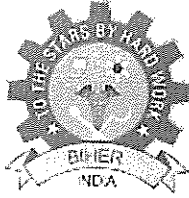
- Comments (If any):

..... *Lecture is very good.* .....

.....

.....





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## FEEDBACK FORM

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

Name of Department : Mechanical Engineering  
 Date : 9/12/2015  
 Event / Speaker Name : Introduction to AutoCAD Geometrical Applications

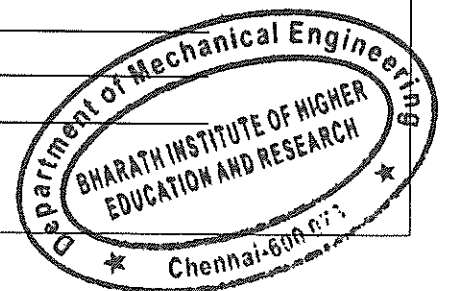
- Please rate the session on the scale indicated. Your comments are most appreciated.

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

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

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

- Comments (If any): very good session.



# Certificate



**Bharath Institute of Higher Education and Research**



DEPARTMENT OF MECHANICAL ENGINEERING

*Certificate of Participation*

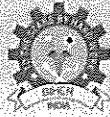
This is to certify that

*Somu Vasu*

has attended the value-added program on "Introduction to AutoCAD In Geological Applications" organized by the Department of Mechanical Engineering, Bharath Institute of Higher Education and Research, Chennai on December (9-15), 2015.

Mr. V. Jose  
Ananth Vins

Mr. N. Lenin Rakesh  
Coordinators



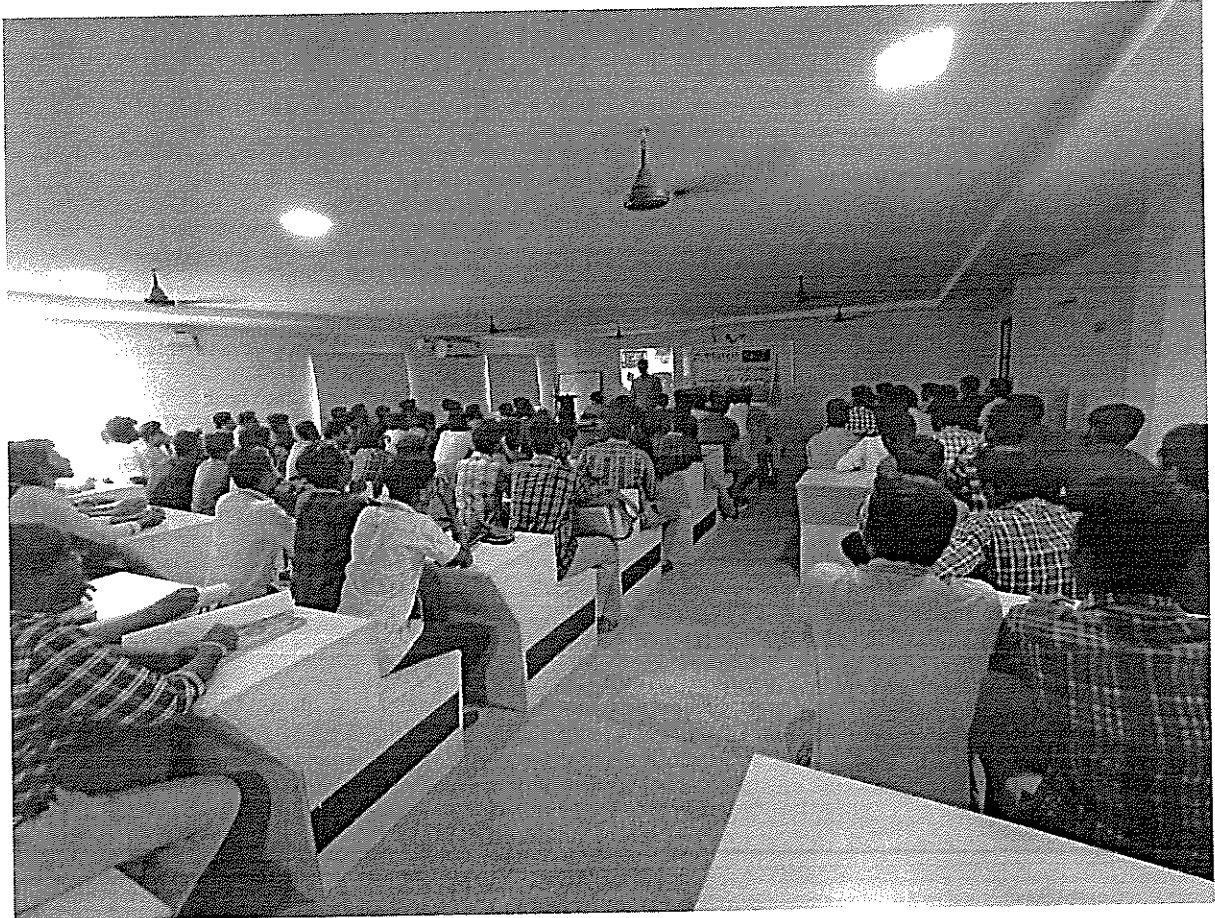
Mr. R. Hariharan

Mr. R. J. Golden Rengith  
Nimal  
Resource Persons



# Introduction to AutoCAD in Geological Applications

– Image







# Bharath Institute of Higher Education and Research

[Declared Under Section 3 of UGC Act, 1956]

Chennai – 600 073

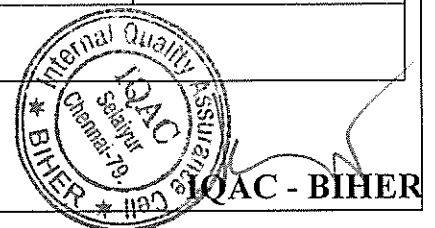
## INTERNAL QUALITY ASSURANCE CELL (IQAC)

### DOCUMENTS SUBMISSION FORM

|                    |   |
|--------------------|---|
| Date of Submission | 14/11/2016                                |
| Type of Documents  | Value Added Course program Report         |
| Description        | Setting up for PSCAD/MATLAB Co-simulation |
| Enclosures         | a) Requisition Letter                     |
|                    | b) Circulars                              |
|                    | c) Curriculars                            |
|                    | d) Schedule                               |
|                    | e) Attendance Sheet                       |
|                    | f) Feedback forms                         |
|                    | g) Certificates                           |
|                    | h) Image                                  |
| No. of Pages       | 12  |
| Submitted By       | Name : R. Hanuman                         |
|                    | Designation : Assistant professor         |
|                    | Department : Mechanical Engineering       |
|                    | Signature :                               |

### For Office Use Only

|              |                               |       |                  |
|--------------|-------------------------------|-------|------------------|
| Verified By: | K. Sankarivel                 | Sign: | Date: 14/11/2016 |
| Uploaded By: | K. S. Senthil Kumar           | Sign: | Date: 14/11/2016 |
| File Name:   | MECH - ME - 2015 - 2016 - 004 |       |                  |





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## Requisition Letter

Date: 14.10.2016

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 “Setting up for PSCAD/MATLAB Co-simulation” on 1/11/2016. 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  
(Declared as Deemed to be University U/S 3 of UGC Act.1956)  
Selaiyur, Chennai-600 073

Dean Engineering

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



**Bharath**  
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Date: 17.10.2016

**Department of Mechanical Engineering**

**Circular**

The of Department of Mechanical Engineering, BIHER glad to conduct on five days value added program on “*Setting up for PSCADMATLAB Co-simulation*” from 01.11.2016 for 30 hours. Those who are interested to participate do register your name to the program coordinator.

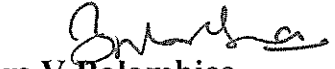
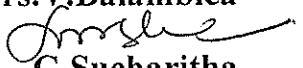
All reregistered students must attend all the classes without fail. The students who are completed the course successfully with good score will get the course completion certificate from the institute/Department.

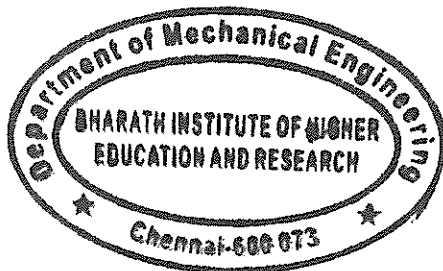
**Resource person: Mr.D.Ravi and Mrs.C.M.Meenakshi**

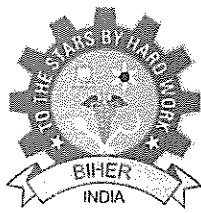
Maximum no. of registration Allowed – 60.

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

Program coordinator

  
Mrs.V.Balambica  
  
G.Sucharitha





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## Department of Mechanical Engineering

### Setting up for PSCAD/MATLAB Co-simulation

#### OBJECTIVE:

- To demonstrate understanding of PSCAD.
- To demonstrate basic instructions for PSCAD-MATLAB Interfacing

#### MODULE I PSCAD Help [DAY: 1]

(5Hrs)

Detailed Mat lab procedures may be found in the PSCAD User's Guide or PSCAD On-line help, which may be accessed by pressing F1 in the PSCAD workspace.

#### MODULE II Setting up for PSCAD/MATLAB Co-simulation [DAY: 2]

(10Hrs)

1. PSCAD-MATLAB interface is supported with the PSCAD Professional Edition and with the PSCAD Educational Edition.
2. The task of creating new components is supported with the PSCAD Professional Edition and the PSCAD Educational Edition.
3. MATLAB must be installed prior to PSCAD. If PSCAD was installed prior to MATLAB, PSCAD will likely need to be reinstalled so that it recognizes the links and dependencies to MATLAB, its libraries and paths.
4. A commercial compiler, such as the **Intel Fortran Compiler** (preferred) is required. The Intel Fortran Compiler also requires a suitable version of Microsoft Visual Studio. **Compaq Visual Fortran 6.0** or higher may be considered, however, this software has not been developed for years, so there might be some software compatibility and installation issues.

#### [DAY: 3]

5. A user-defined component must be created by the user, to use the MATLAB interface feature; a "MATLAB Interface" component is not available in the PSCAD Master Library.
6. Before starting to run a PSCAD-MATLAB interface simulation, PSCAD should be directed to the MATLAB shared library folder. The shared libraries of MATLAB R200X are located at: %MatlabRoot%\extern\lib\win32\microsoft .In order to specify the above path for PSCAD, select Version 5 under Workspace Settings | MATLAB | Installed Version. Then enter the **complete** path of the shared libraries. (e.g. C:\Program files\Matlab\R2008a\extern\lib\win32\microsoft) under 'Library Path'.

7. If you are creating a new model which uses the MATLAB interface function, your model must be linked to the installed MATLAB libraries by activating the corresponding checkbox on Project Settings

## **MODULE II Simple PSCAD-MATLAB Interfacing Examples**

**(10 Hrs)**

**[DAY: 4]**

A few PSCAD-MATLAB interfacing examples are provided in “%PSCAD FOLDER%\examples\matlab”. In each of those cases, locate a block specified as “New Matlab Interface”. The key subroutine for using the MATLAB interface feature is ‘MLAB\_INT’ (see PSCAD/EMTDC User’s Guide).

**[DAY: 5]**

Also, proper use of ‘STORF’ and ‘STORI’ is required for exchanging variables between EMTDC and the MATLAB workspace. I personally found the user’s guide and the provided examples very helpful when I was trying to create my first PSCAD-MATLAB Interface case. So, please first try the instructions and examples. I recommend that you explore the corresponding script code blocks in the given examples. If you still encounter ambiguities, our Support Desk will be glad to assist you ([support@pscad.com](mailto:support@pscad.com)).

## **MODULE III Applications**

**(5 Hrs)**

**[DAY: 6]**

**PSCAD Simulation:** This includes custom component design and assisting users with the analysis of specific simulation models.

- AC transients
- Fault and protection
- Transformer saturation
- Wind power
- FACTS
- Power quality



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**Department of Mechanical Engineering**  
**One Week Value added Program on “Setting up for PSCAD/MATLAB Co-simulation”**  
**1<sup>st</sup> Nov to 7<sup>th</sup> Nov 2016**

| Date                          | Morning Session (9 AM – 12 PM)  | Afternoon Session (1:30 PM – 3:30 PM)  |
|-------------------------------|---|--|
| 01 – 11 – 2016<br>(Tuesday)   | Program Inauguration<br>Mr.D.Ravi<br><i>Introduction to PSCAD</i>   | Mrs.C.M.Meenakshi<br><i>PSCAD Help: Detailed Mat lab procedures may be found in the PSCAD User's Guide or PSCAD On-line help, which may be accessed by pressing F1 in the PSCAD workspace.</i>   |
| 02 – 11 – 2016<br>(Wednesday) | Mrs.C.M.Meenakshi<br><b>Setting up for PSCAD/MATLAB Co-simulation:</b><br><i>1. PSCAD-MATLAB interface is supported with the PSCAD Professional Edition and with the PSCAD Educational Edition.</i><br><i>2. The task of creating new components is supported with the PSCAD Professional Edition and the PSCAD Educational Edition.</i>  | Mr.D.Ravi<br><i>3. MATLAB must be installed prior to PSCAD. If PSCAD was installed prior to MATLAB, PSCAD will likely need to be reinstalled so that it recognizes the links and dependencies to MATLAB, its libraries and paths.</i><br><i>4. A commercial compiler, such as the Intel Fortran Compiler (preferred) is required. The Intel Fortran Compiler also requires a suitable version of Microsoft Visual Studio. Compaq Visual Fortran 6.0 or higher may be considered, however, this software has not been developed for years, so there might be some software compatibility and installation issues.</i> |
| 03 – 11 – 2016<br>(Thursday)  | Mr.D.Ravi<br><i>5. A user-defined component must be created by the user, to use the MATLAB interface feature; a “MATLAB Interface” component is not available in the PSCAD Master Library.</i><br><i>6. Before starting to run a PSCAD-MATLAB interface simulation, PSCAD should be directed to the MATLAB shared library folder. The shared libraries of MATLAB R200X are located.</i> | Mrs.C.M.Meenakshi<br><i>7. If you are creating a new model which uses the MATLAB interface function, your model must be linked to the installed MATLAB libraries by activating the corresponding checkbox on Project Settings</i>  |
| 04 – 11 – 2016<br>(Friday)    | Mrs.C.M.Meenakshi<br><i>A few PSCAD-MATLAB interfacing examples are provided in “%PSCAD FOLDER%\examples\matlab”. In each of those cases, locate a block specified as “New Matlab Interface”.</i>   | Mr.D.Ravi<br><i>The key subroutine for using the MATLAB interface feature is ‘MLAB_INT’ (see PSCAD/EMTDC User's Guide).</i>  |
| 05 – 11 – 2016<br>(Saturday)  | Mr.D.Ravi<br><i>proper use of ‘STORF’ and ‘STORI’ is required for exchanging variables between EMTDC and the MATLAB workspace.</i>  | Mrs.C.M.Meenakshi<br><b>Practical Session- PSCAD</b>   |
| 07 – 11 – 2016<br>(Monday)    | Mrs.C.M.Meenakshi<br><i>PSCAD Simulation: This includes custom component design and assisting users with the analysis of specific simulation models.</i>  | <b>Quiz/ Feedback / valedictory Session</b>  |

**Program Coordinator:**

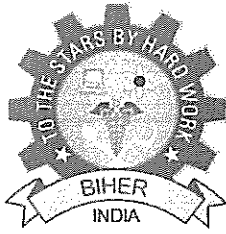
Mrs.V.Balambica

Mrs. G.Sucharitha

Assistant Professor,

E-Mail: balambicavenkatesan.d2624@gmail.com

saisuchi2002@gmail.com



01-11-2016

## Setting up for PSCAD/MATLAB Co-simulation

### Attendance sheet

| S.No | Reg.No   | Name                    | Department             |
|------|----------|-------------------------|------------------------|
| 1.   | U13ME022 | AMAN KUMAR              | Mechanical Engineering |
| 2.   | U13ME023 | AMARJEET KUMAR PATEL    | Mechanical Engineering |
| 3.   | U13ME024 | AMIT KUMAR PRASAD       | Mechanical Engineering |
| 4.   | U13ME026 | AMITH SHIL              | Mechanical Engineering |
| 5.   | U13ME088 | JACOB EVANSON SOLOMON E | Mechanical Engineering |
| 6.   | U13ME089 | JAGAN S                 | Mechanical Engineering |
| 7.   | U13ME090 | JAYAKRISHNAN K          | Mechanical Engineering |
| 8.   | U13ME091 | JEGAN A                 | Mechanical Engineering |
| 9.   | U13ME222 | UTTAM KUMAR             | Mechanical Engineering |
| 10.  | U13ME223 | VAKIL KUMAR             | Mechanical Engineering |
| 11.  | U14ME347 | SURAJ KUMAR PRASAD      | Mechanical Engineering |
| 12.  | U14ME348 | SURCHIT GUPTA           | Mechanical Engineering |
| 13.  | U14ME349 | SURESH KUMAR.M          | Mechanical Engineering |
| 14.  | U14ME350 | SURIYA.R.               | Mechanical Engineering |
| 15.  | U14ME351 | SURLA BHEEMESWARA RAO   | Mechanical Engineering |
| 16.  | U14ME420 | VIKASH YADAV            | Mechanical Engineering |

|     |          |                           |                        |
|-----|----------|---------------------------|------------------------|
| 17. | U14ME421 | VAIRAMANIKANDAN.G S       | Mechanical Engineering |
| 18. | U14ME422 | YADUVENDRA PRATAP SINGH   | Mechanical Engineering |
| 19. | U14ME501 | THILLAI CHANDRAN .R       | Mechanical Engineering |
| 20. | U14ME502 | VELIDI JNANA BHARGAV RAM  | Mechanical Engineering |
| 21. | U14ME724 | SOUNDARRAJAN S            | Mechanical Engineering |
| 22. | U14ME725 | JEGATHALAPRATHABAN L      | Mechanical Engineering |
| 23. | U14ME726 | ABDUL SAMAD               | Mechanical Engineering |
| 24. | U14ME407 | ZEYA MAHAMOOD             | Mechanical Engineering |
| 25. | U14ME408 | ZISHAN ALI KHAN           | Mechanical Engineering |
| 26. | U14ME409 | SHRI ANJAN TYOTI BORUAH   | Mechanical Engineering |
| 27. | U14ME410 | VIGNESH AUROSHIKHAN. P    | Mechanical Engineering |
| 28. | U14ME337 | SRAVAN KUMAR K            | Mechanical Engineering |
| 29. | U14ME338 | SRIN A TH PAPA RAO.P.V.N. | Mechanical Engineering |
| 30. | U14ME339 | SRINATH.K                 | Mechanical Engineering |
| 31. | U15ME003 | ABISHEK A                 | Mechanical Engineering |
| 32. | U15ME004 | ABISHEK AHI A             | Mechanical Engineering |
| 33. | U15ME005 | ADHAV KRISHNA B           | Mechanical Engineering |
| 34. | U15ME006 | ADHITHYAN V               | Mechanical Engineering |
| 35. | U15ME018 | ANISH A S                 | Mechanical Engineering |
| 36. | U15ME019 | ANKIT PAL                 | Mechanical Engineering |
| 37. | U15ME020 | ANUP KUMAR SRIVASTAWA     | Mechanical Engineering |
| 38. | U15ME083 | JAVID AMEEN A             | Mechanical Engineering |



|     |          |                          |                        |
|-----|----------|--------------------------|------------------------|
| 39. | U15ME239 | SRI HARI PRASATH R       | Mechanical Engineering |
| 40. | U15ME240 | SRIRAM K                 | Mechanical Engineering |
| 41. | U15AM028 | TARIGOPPALA NITHIN KUMAR | Automobile Engineering |
| 42. | U15AM029 | VIGNESH                  | Automobile Engineering |
| 43. | U15AM030 | VISHANTH                 | Automobile Engineering |
| 44. | U15AM031 | SURYA NARAYANAN          | Automobile Engineering |
| 45. | U15AM032 | SATHIYANARAYANAN         | Automobile Engineering |
| 46. | U15AM033 | PRAKASH                  | Automobile Engineering |
| 47. | U15AM034 | DERIN                    | Automobile Engineering |
| 48. | U15AM501 | MOHIT                    | Automobile Engineering |
| 49. | U15AM502 | AKASHARAVIND             | Automobile Engineering |
| 50. | U15AM503 | VISHNUPRIYAN             | Automobile Engineering |
| 51. | U15MT008 | OVIAN NICHOLA            | Mechatronics           |
| 52. | U15MT010 | TADIKONDA SAI TEJA       | Mechatronics           |
| 53. | U15MT011 | VIJAY                    | Mechatronics           |
| 54. | U15MT012 | MOHAMMED MOIDEEN RIYAZ   | Mechatronics           |
| 55. | U15MT013 | RAJ KUMAR                | Mechatronics           |



# Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH  
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## FEEDBACK FORM

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

Name of Department : MECHANICAL ENGINEERING  
 Date : 01.11.2016  
 Event / Speaker Name : Setting up for PS - CAD/ MATLAB Co-Simulation

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

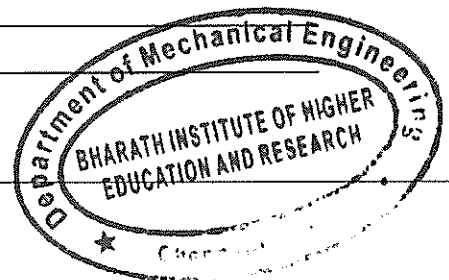
| S.NO | Parameters                                   | Below Average | Average | Good | Excellent | Outstanding |
|------|--|---------------|---------|------|-----------|-------------|
| 1.   | <b>The Topic</b>                             |               |         |      |           |             |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

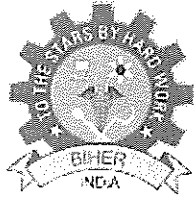
- Overall, how would you rate this Guest Lecture / Workshop / Seminar / Event/Value added course?

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

- Comments (If any):

Excellent presentation





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## FEEDBACK FORM

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

Name of Department : Mechanical Engineering

Date : 1/11/2016

Event / Speaker Name : Setting up for P.S - CAD / MATLAB Core Simulation

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

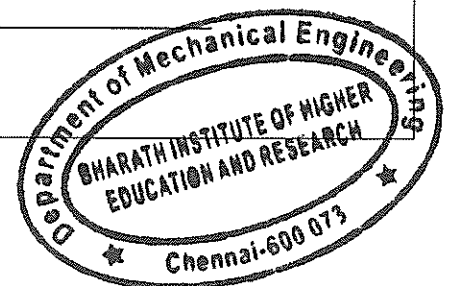
| S.NO | Parameters                                   | Below Average | Average | Good                                | Excellent                           | Outstanding |
|------|--|---------------|---------|-------------------------------------|-------------------------------------|-------------|
| 1.   | <b>The Topic</b>                             |               |         | <input checked="" type="checkbox"/> |                                     |             |
|      | The choice of topic was relevant to me       |               |         | <input checked="" type="checkbox"/> |                                     |             |
| 2.   | <b>The Lecturer / Speaker</b>                |               |         |                                     |                                     |             |
|      | Self-confidence                              |               |         | <input checked="" type="checkbox"/> |                                     |             |
|      | Communication skills                         |               |         | <input checked="" type="checkbox"/> |                                     |             |
|      | Doubts/ queries were answered satisfactorily |               |         |                                     | <input checked="" type="checkbox"/> |             |
| 3.   | <b>The Content (Topic)</b>                   |               |         |                                     |                                     |             |
|      | Refers to latest developments in the field   |               |         | <input checked="" type="checkbox"/> |                                     |             |
|      | Career oriented                              |               |         |                                     | <input checked="" type="checkbox"/> |             |
|      | Innovative learning, if any                  |               |         |                                     | <input checked="" type="checkbox"/> |             |

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

| 1. Below Average | 2. Average | 3. Good | 4. Excellent                        | 5. Outstanding |
|------------------|------------|---------|-------------------------------------|----------------|
|                  |            |         | <input checked="" type="checkbox"/> |                |

- Comments (If any):

The Lecture is good and is very relevant  
to our course.



# Certificate



**Bharath Institute of Higher Education and  
Research**




DEPARTMENT OF MECHANICAL ENGINEERING


## *Certificate of Participation*

This is to certify that

*Javid Ameen A*


has attended the value-added program on "Setting up for PSCAD/MATLAB Co-simulation"  
organized by the Department of Mechanical Engineering, Bharath Institute of Higher Education  
and Research, Chennai on November (1-7), 2016.

  
Mrs V. Balambica

  
Mrs G. Sucharitha



  
Mr D. Ravi

  
Mrs C.M. Meenakshi

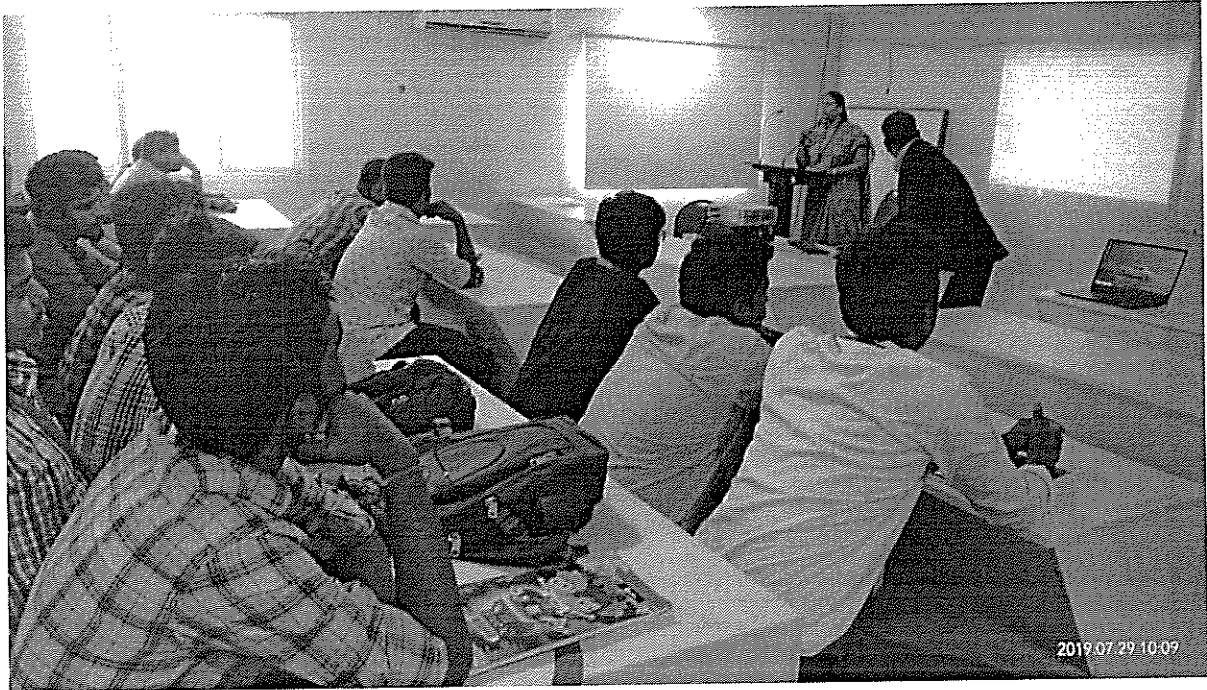
Coordinators

Resource Persons



# Setting up for PSCAD/MATLAB Co-simulation

– Image





# Bharath Institute of Higher Education and Research

[Declared Under Section 3 of UGC Act, 1956]

Chennai – 600 073

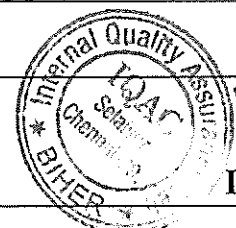
## INTERNAL QUALITY ASSURANCE CELL (IQAC)

### DOCUMENTS SUBMISSION FORM

|                    |  |
|--------------------|--|
| Date of Submission | 19/9/2016                                    |
| Type of Documents  | Value Added Course programme Report          |
| Description        | Introduction to CNC programming Using G-Code |
| Enclosures         | a) Requisition letter                        |
|                    | b) Syllabus                                  |
|                    | c) Curriculum                                |
|                    | d) Schedule                                  |
|                    | e) Attendance sheet                          |
|                    | f) Feedback form                             |
|                    | g) Certificate                               |
|                    | h) Image                                     |
| No. of Pages       | 13   |
| Submitted By       | Name : R. Haribaran                          |
|                    | Designation : Asst. Professor                |
|                    | Department : Mechanical Engineering          |
|                    | Signature :                                  |

### For Office Use Only

|              |                               |       |                 |
|--------------|-------------------------------|-------|-----------------|
| Verified By: | K. Sankthivel                 | Sign: | Date: 19/9/2016 |
| Uploaded By: | K. S. Senthil Kumar           | Sign: | Date: 19/9/2016 |
| File Name:   | MECH - ME - 2015 - 2016 - 003 |       |                 |



IQAC - BIHER



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INSTITUTE OF HIGHER EDUCATION AND RESEARCH  
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## Requisition Letter

Date: 12.08.2016

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 “Foundation to CNC Programming using GCODE” on 5/9/2016. 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  
(Declared as Deemed to be University under section 3 of UGC Act.1956)  
Selaiyur, Chennai-600 073

**Dean Engineering**

**DEAN**  
BHARATH INSTITUTE OF HIGHER EDUCATION & RESEARCH  
(Declared as Deemed to be University under section 3 of UGC Act. 1956)  
Chennai - 600 073, INDIA.



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

Date: 15.08.2016

**Department of Mechanical Engineering**

**Circular**

The of Department of Mechanical Engineering, BIHER glad to conduct on five days value added program on “*Foundation to CNC Programming using GCODE*” from 05.09.2016 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: Mr.S.Thirumavalavan and Mr.V.Srinivasan**

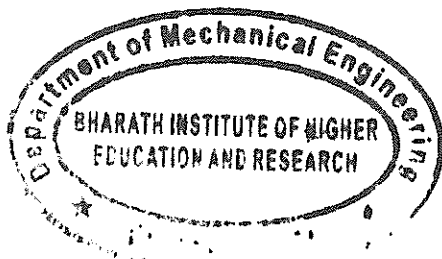
Maximum no. of registration Allowed – 60.

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

**Program coordinator**

  
**Mr.R.Hariharan**

  
**Mr.S.Manavalan**







**Bharath**  
INSTITUTE OF HIGHER EDUCATION AND RESEARCH  
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**Department of Mechanical Engineering**

**Foundation to CNC Programming using GCODE**

**OBJECTIVE:**

- ✓ 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

(15Hrs)

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] G-Code at a Glance

Manufacturers all around the world use CNC programming to control a machine's tools to produce parts. At the heart of this automated manufacturing process is a set of instructions that tells a CNC machine where – and how – to move. These instructions are called G-Code. Individual pieces of code, that make up this machine-based language start with the letter G.

#### [DAY: 5] G-Code Blocks

The G-code standard was published back in the days when machines had small amounts of memory. Because of this memory limitation, G-code is an extremely compact and concise language that might almost seem archaic at first glance. Take, for example, this line of code:

```
G01 X1 Y1 F20 T01 M03 S500
```

**In this single line, we're giving the machine a series of instructions:**

- G01 – Perform a linear feed move
- X1/Y1 – Move to these X and Y coordinates
- F20 – Move at a feed rate of 20
- T01 – Use Tool 1 to get the job done
- M03 – Turn the spindle on
- S500 – Set a spindle speed of 500

[DAY: 6]

### MODULE IV G-Code Programs

(5Hrs)

The goal of every G-code program is to produce parts in the safest and most efficient way possible. To achieve this, you'll typically find G-code blocks arranged in a particular order like this:

1. Start the CNC program.
2. Load the required tool.
3. Turn the spindle on.
4. Turn the coolant on.
5. Move to a position above a part.
6. Start the machining process.

7. Turn the coolant off.
8. Turn the spindle off.
9. Move away from the part to a safe location.
10. End the CNC program.

- **Modals and Address Codes**
- **G-Codes & M-Codes Explained**

**[DAY: 7]**

**Practical Session for CNC Programming using GCODE**



**Department of Mechanical Engineering**  
**One Week Value added Program on “Foundation to CNC Programming using GCODE”**  
**5<sup>th</sup> Sep to 12<sup>th</sup> Sep 2016**

| Date                          | Morning Session (9 AM – 12 PM)  | Afternoon Session (1:30 PM – 3:30 PM)   |
|-------------------------------|---|---|
| 05 – 09 – 2016<br>(Monday)    | <p><b>Program Inauguration</b><br/><b>Mr.S.Thirumavalavan</b><br/><i>Industrial Safety Practices: Introduction – Safe guarding methods – Safety in Workshop - Common methods of protection in workshop.</i></p>   | <p><b>Mr.V.Srinivasan</b><br/><i>Engineering Drawing &amp; Shop Theory:</i><br/><i>Engineering drawing – Limits, fits and Tolerance (Dimensional and Geometrical tolerance), Surface finish representation. Symbolic representation of Wheels, Gears etc Basics on Orthographic views</i></p> |
| 06 – 09 – 2016<br>(Tuesday)   | <p><b>Mr.V.Srinivasan</b><br/><i>Marking tools: Introduction to marking tools, Divider, Scriber, Surface Gauge, V-Block, Parallel Block, Surface Plate, Angle Plate &amp; Punches Measuring Tools:</i></p>  | <p><b>Mr.S.Thirumavalavan</b><br/><i>Lathe Machine: Lathe: Specification - Types - Mechanisms - Operations - Calculations - Capstan and turret lathe – Tooling with examples - Copy turning lathe</i></p>   |
| 07 – 09 – 2016<br>(Wednesday) | <p><b>Mr.S.Thirumavalavan</b><br/><i>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.</i></p>  | <p><b>Mr.V.Srinivasan</b><br/><i>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.</i></p>   |
| 08 – 09 – 2016<br>(Thursday)  | <p><b>Mr.V.Srinivasan</b><br/><i>Manufacturers all around the world use CNC programming to control a machine's tools to produce parts. At the heart of this automated manufacturing process is a set of instructions that tells a CNC machine where – and how – to move.</i></p>  | <p><b>Mr.S.Thirumavalavan</b><br/><i>G-Code at a Glance</i><br/><i>Individual pieces of code, that make up this machine-based language start with the letter G.</i><br/><i>Video Session</i></p>  |
| 09 – 11 – 2016<br>(Friday)    | <p><b>Mr.S.Thirumavalavan</b><br/><i>The G-code standard was published back in the days when machines had small amounts of memory. Because of this memory limitation, G-code is an extremely compact and concise language that might almost seem archaic at first glance. Take, for example, this line of code:</i><br/><i>G01 X1 Y1 F20 T01 M03 S500</i></p> | <p><b>Mr.V.Srinivasan</b><br/>➤ <i>Machine a series of instructions</i></p>   |
| 10 – 09 – 2016<br>(Saturday)  | <p><b>Mr.V.Srinivasan</b><br/><i>G-Code Programs: The goal of every G-code program is to produce parts in the safest and most efficient way possible. To achieve this, you'll typically find G-code blocks arranged in a particular order</i></p>   | <p><b>Mr.S.Thirumavalavan</b><br/>➤ <i>Programming session</i></p>  |
| 12 – 09 – 2016<br>(Monday)    | <p><b>Mr.S.Thirumavalavan</b><br/>➤ <i>Practical Session for CNC Programming using GCODE</i></p>  | <p><i>Quiz/ Feedback / valedictory Session</i></p>  |

**Program Coordinator:**

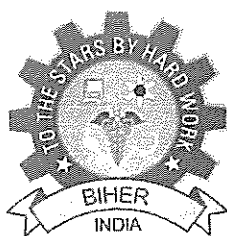
**Mr.R.Hariharan**

**Mr.S.Manavalan**

Assistant Professor,

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

manavalan.mech@bharathuniv.ac.in



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05-09-2016

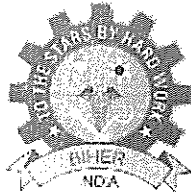
## Foundation to CNC Programming using GCODE

### Attendance sheet

| S.No | Reg.No   | Name             | Department             |
|------|----------|------------------|------------------------|
| 1.   | U13ME002 | ABHIJIT PAUL     | Mechanical Engineering |
| 2.   | U13ME003 | ABHISHEK KUMAR   | Mechanical Engineering |
| 3.   | U13ME004 | ABHISHEK KUMAR   | Mechanical Engineering |
| 4.   | U13ME068 | DHIRAJ DEB       | Mechanical Engineering |
| 5.   | U13ME069 | DILIP SINGH      | Mechanical Engineering |
| 6.   | U13ME188 | SATHISHKUMAR S   | Mechanical Engineering |
| 7.   | U13ME189 | SATHYA S         | Mechanical Engineering |
| 8.   | U13ME190 | SATYAJIT KUMAR   | Mechanical Engineering |
| 9.   | U13ME191 | SAURABH SINGH    | Mechanical Engineering |
| 10.  | U13ME192 | SEKAR P          | Mechanical Engineering |
| 11.  | U13ME508 | GRICXWIN S EDWIN | Mechanical Engineering |
| 12.  | U13ME509 | VIGNESHWAREN.G   | Mechanical Engineering |
| 13.  | U14ME316 | SHAIK.YASEEN     | Mechanical Engineering |
| 14.  | U14ME317 | SHAJK FAYAZ      | Mechanical Engineering |
| 15.  | U14ME319 | SHASHIKANT KUMAR | Mechanical Engineering |
| 16.  | U14ME320 | SHAURYA PRASAD   | Mechanical Engineering |

|     |          |                                       |                        |
|-----|----------|---------------------------------------|------------------------|
| 17. | U14ME321 | SHAYAN DUYPURKAYASTHA                 | Mechanical Engineering |
| 18. | U14ME286 | RISHY KESH.D                          | Mechanical Engineering |
| 19. | U14ME287 | ROHIT SHARMA                          | Mechanical Engineering |
| 20. | U14ME288 | ROHITH KUMAR.A                        | Mechanical Engineering |
| 21. | U14ME289 | ROUSHAN BHARTI                        | Mechanical Engineering |
| 22. | U14ME290 | SACHIN KUMAR                          | Mechanical Engineering |
| 23. | U14ME291 | SAI KIRN CH                           | Mechanical Engineering |
| 24. | U14ME292 | SAI RAM PRASAD.B                      | Mechanical Engineering |
| 25. | U14ME293 | SAI SREEKAR.M                         | Mechanical Engineering |
| 26. | U15ME057 | ESAKKI P                              | Mechanical Engineering |
| 27. | U15ME058 | ESWAR K                               | Mechanical Engineering |
| 28. | U15ME059 | FEHATH BASHA S                        | Mechanical Engineering |
| 29. | U15ME060 | GAMBALI SANTHAN                       | Mechanical Engineering |
| 30. | U15ME061 | GANESH KUMAR E                        | Mechanical Engineering |
| 31. | U15ME011 | AKIRI VENKATESH                       | Mechanical Engineering |
| 32. | U15ME012 | AKTHAR A                              | Mechanical Engineering |
| 33. | U15ME013 | AKULA ANJI BABU                       | Mechanical Engineering |
| 34. | U15ME014 | ALLAPURAM AKHIL<br>BALANARAYANA REDDY | Mechanical Engineering |
| 35. | U15ME015 | ALTAF HUSAIN                          | Mechanical Engineering |
| 36. | U15MT001 | AJITH                                 | Mechatronics           |
| 37. | U15MT002 | BALAJI                                | Mechatronics           |
| 38. | U15MT003 | INAYAT ULLA RABBANI                   | Mechatronics           |

|     |          |                          |                        |
|-----|----------|--------------------------|------------------------|
| 39. | U15MT004 | INAYATHULLA              | Mechatronics           |
| 40. | U15MT005 | KARTHIGAYAN              | Mechatronics           |
| 41. | U15AM012 | MANIKANDAN               | Automobile Engineering |
| 42. | U15AM013 | MARIA SUBITCHAM VINITH   | Automobile Engineering |
| 43. | U15AM014 | MATHAN KUMAR             | Automobile Engineering |
| 44. | U15AM015 | MOHAMED ASHIF            | Automobile Engineering |
| 45. | U15AM017 | MUTUM NAOBA SINGH        | Automobile Engineering |
| 46. | U15AM018 | NELLUBALLI CHAITANYA     | Automobile Engineering |
| 47. | U15AM019 | PERIMIREDDY NAVEEN KUMAR | Automobile Engineering |
| 48. | U15AM020 | PIHE                     | Automobile Engineering |
| 49. | U15AM021 | PREM                     | Automobile Engineering |
| 50. | U15AM022 | RAJU                     | Automobile Engineering |
| 51. | U15AM705 | SHANMUKA KIRAN           | Automobile Engineering |
| 52. | U15AM706 | REMILAN                  | Automobile Engineering |



# Bharath

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

## FEEDBACK FORM

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

Name of Department : Mechanical Engineering

Date : 05.09.2016

Event / Speaker Name : foundations to cnc using G'Code

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

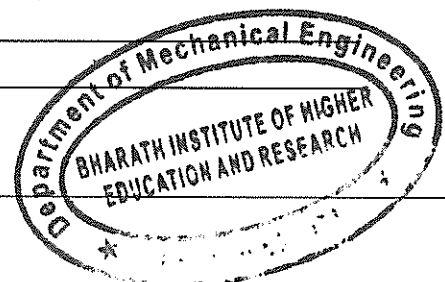
| S.NO | Parameters                                   | Below Average | Average | Good | Excellent | Outstanding |
|------|--|---------------|---------|------|-----------|-------------|
| 1.   | <b>The Topic</b>                             |               |         |      |           |             |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

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

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

- Comments (If any):

Spce / ont







# Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH  
(Declared as Deemed - to - be - University under section 3 of UGC Act 1955)

## FEEDBACK FORM

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

Name of Department : Mechanical Engineering

Date : 05.09.2016

Event / Speaker Name : Foundation to cnc programming using a code

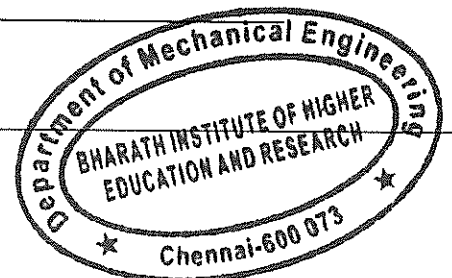
- Please rate the session on the scale indicated. Your comments are most appreciated.

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

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

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

- Comments (If any): Very Excellent Presentation.



# Certificate



**Bharath Institute of Higher Education and  
Research**



DEPARTMENT OF MECHANICAL ENGINEERING

*Certificate of Participation*

This is to certify that

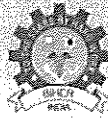
*Grixwin S Edwin*

has attended the value-added program on "Foundation to CNC Programming using GCODE"  
organized by the Department of Mechanical Engineering, Bharath Institute of Higher Education  
and Research, Chennai on September (5-12), 2016.

Mr. R. Hariharan

Coordinators

Mr. S. Manavalan



Mr. S. Thirumavalavan

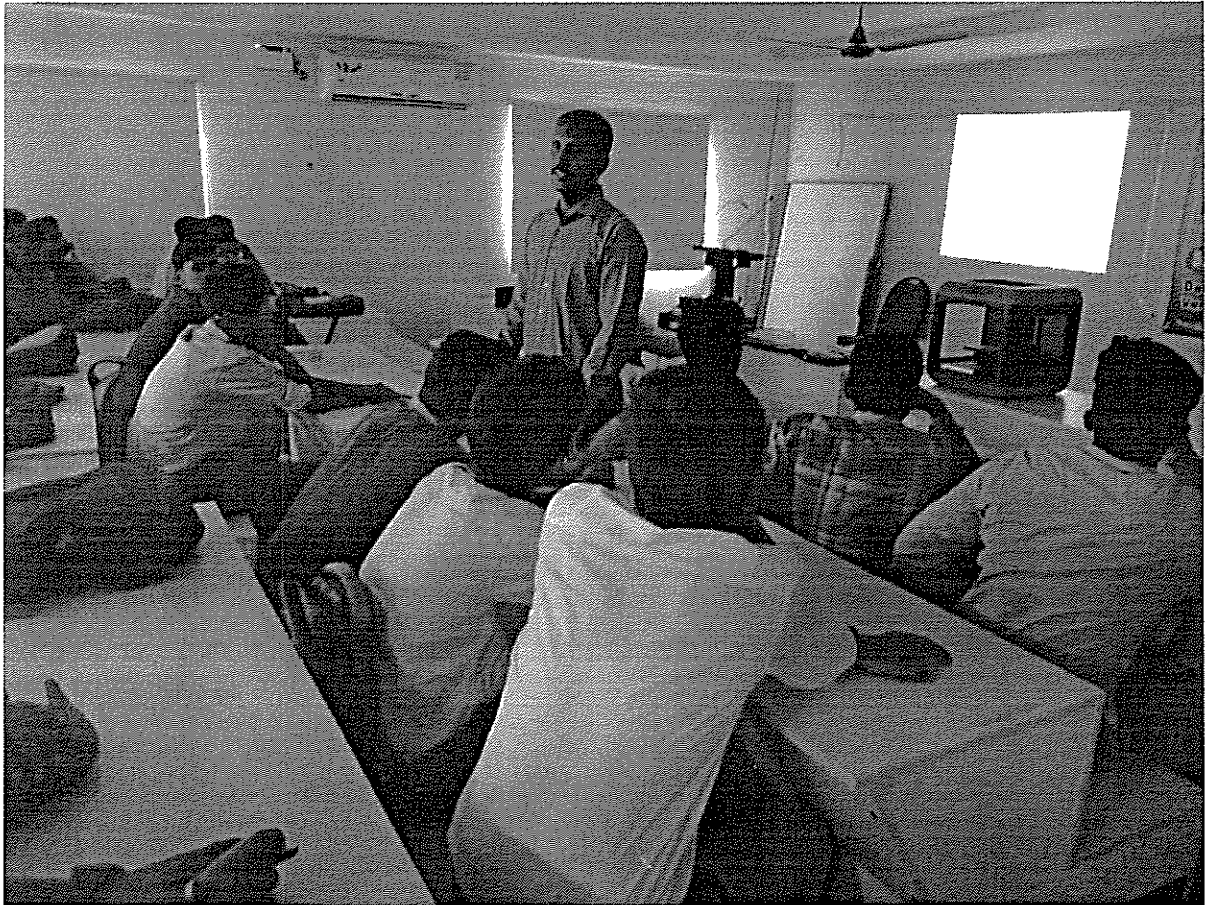
Resource Persons

Mr. V. Srinivasan



# Foundation to CNC Programming using GCODE

– Image







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



Requisition Letter

2.02.2015

FROM

THE HOD

Department of Mechatronics

Bharath Institute of Higher Education and Research

Selayur-Chennai- 73

TO

THE DEAN ENGINEERING

Bharath Institute of Higher Education and Research

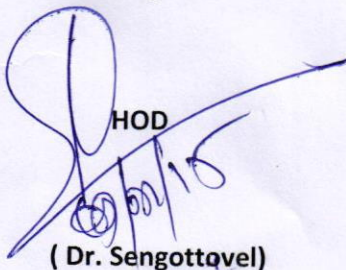
Selayur-Chennai- 73

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 "ANDROID COMPONENTS & BUILDING BLOCKS" dated from 7.02.2015 to 11.02.2015. In this regard, I request you to kindly grant permission for conducting the same.

Thanking You

  
HOD  
( Dr. Sengottavel)

Dept. of Mechatronics

Dean Engineering

  
( Dr.J.Hameed Hussain)





Date: 2.02.2015

**Department of Mechatronics**

**Circular**

The Department of Mechatronics, BIHER is glad to conduct a 5 - day Value Added Program on “**ANDROID COMPONENTS & BUILDING BLOCKS**” dated from 7.02.2015 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. SIVARAMAKRISHNAN**  
**Department of Production,**  
**MIT,Chennai**

Maximum No. of registration Allowed – 56

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

**Program Coordinator:**

Mr.MUTHUKUMARAN

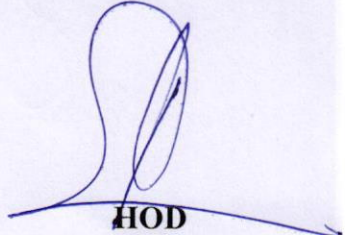
Assistant Professor

Mrs.V.G.VIJAYA

Assistant Professor,

**E-Mail: vijayasaravanan84@gmail.com**

**Mobile: 8870136732**



**HOD**





# Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH  
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## Department of Mechatronics

### ANDROID COMPONENTS & BUILDING BLOCKS

#### OBJECTIVES:

This course will show An android **component** is simply a piece of code that has a well defined life cycle e.g. Activity, Receiver, Service etc.

The core building blocks or fundamental components of android are activities, views, intents, services, content providers, fragments and AndroidManifest.xml.

#### [DAY: 1]

- **MODULE I Start the service (5 Hrs)**
- Service is a background process that can run for a long time.
- There are two types of services local and remote. Local service is accessed from within the application whereas remote service is accessed remotely from other applications running on the same device.

#### [DAY: 2]

- **MODULE II Launch an activity (5 Hrs)**

Content Providers are used to share data between the applications.

#### [DAY: 3]

- **MODULE III Display a web page (5 Hrs)**
- Fragments are like parts of activity. An activity can display one or more fragments on the screen at the same time.



- **[DAY: 4]**

- **MODULE IV Display a list of contacts (5 Hrs)**

- It contains informations about activities, content providers, permissions etc. It is like the web.xml file in Java EE.

**[DAY: 5]**

- **MODULE V : Broadcast a message (5 Hrs)**

It is used to test the android application without the need for mobile or tablet etc. It can be created in different configurations to emulate different types of real devices.





# Sharath

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 - ANDROID COMPONENTS & BUILDING BLOCKS

#### PARTICIPANTS LIST

| S.No | Reg.No   | Name                     | Department             |
|------|----------|--------------------------|------------------------|
| 1.   | U16AM010 | JAI KUMAR VERMA          | Automobile Engineering |
| 2.   | U16AM012 | MOHAMED IMTHIYAZ M       | Automobile Engineering |
| 3.   | U16AM015 | PARIMI SAI SURYA VAMSI . | Automobile Engineering |
| 4.   | U16AM017 | AMAL PHILIP GEORGE .     | Automobile Engineering |
| 5.   | U16AM018 | ROSHAN ROMARIO FRANCIS   | Automobile Engineering |
| 6.   | U16AM019 | ANTHAM JEEVAN REDDY .    | Automobile Engineering |
| 7.   | U16AM001 | RAMACHANDRAN M           | Automobile Engineering |
| 8.   | U16AM002 | LIBIN BOBBY              | Automobile Engineering |
| 9.   | U16AM004 | NANDA KUMAR K            | Automobile Engineering |
| 10.  | U16AM005 | VASANTHKUMAR R           | Automobile Engineering |
| 11.  | U16ME012 | MOHANRAJ R               | Automobile Engineering |
| 12.  | U16ME014 | RAVIRAJAN S              | Mechanical Engineering |
| 13.  | U16ME023 | ARAVINDAN K              | Mechanical Engineering |



|     |          |                           |                        |
|-----|----------|---------------------------|------------------------|
| 14. | U16ME029 | DINESH KUMAR M            | Mechanical Engineering |
| 15. | U16ME031 | ZHAKIRHUSSAIN S           | Mechanical Engineering |
| 16. | U16ME101 | VIJAY M                   | Mechanical Engineering |
| 17. | U16ME104 | MULLAGURA BHARATH KUMAR . | Mechanical Engineering |
| 18. | U16ME105 | CHALLA CHARANKUMAR .      | Mechanical Engineering |
| 19. | U16ME106 | RAJEEV KUMAR .            | Mechanical Engineering |
| 20. | U16ME107 | MANOJ .                   | Mechanical Engineering |
| 21. | U16MT001 | PRADEEPAN S               | Mechanical Engineering |
| 22. | U16MT002 | RAAHUL GANESH R           | Mechanical Engineering |
| 23. | U16MT003 | DINESH J                  | Mechatronics           |
| 24. | U16MT004 | SRINATH B                 | Mechatronics           |
| 25. | U16MT005 | DHANASEKAR R              | Mechatronics           |
| 26. | U16MT006 | GOUTHAM M                 | Mechatronics           |
| 27. | U16MT007 | SATHIYASEELAN S           | Mechatronics           |
| 28. | U16MT008 | RAKESH P                  | Mechatronics           |
| 29. | U16MT009 | ABDUL FAHEEM S            | Mechatronics           |
| 30. | U16MT010 | SAKTHI R                  | Mechatronics           |
| 31. | U16MT011 | MELVINE ROHAN R           | Mechatronics           |
| 32. | U16MT014 | SARATHKUMAR D             | Mechatronics           |
| 33. | U16MT015 | SOMENDRAN A               | Mechatronics           |
| 34. | U16MT018 | RATHISH KRISHNAN R        | Mechatronics           |
| 35. | U16ME119 | PALAPALA KOTESWARARAO     | Mechanical Engineering |



|     |          |                                |                        |
|-----|----------|--------------------------------|------------------------|
| 36. | U16ME120 | MADDIKARA<br>SRIKAMTHREDDY     | Mechanical Engineering |
| 37. | U16ME121 | MUKESH K                       | Mechanical Engineering |
| 38. | U16ME129 | DEEPAK RAJAN D                 | Mechanical Engineering |
| 39. | U16ME131 | VIJAY M                        | Mechanical Engineering |
| 40. | U16ME133 | AKASH SAHA                     | Mechanical Engineering |
| 41. | U16ME134 | ARANYA JASH                    | Mechanical Engineering |
| 42. | U16ME140 | MO WASEEM .                    | Mechanical Engineering |
| 43. | U16ME504 | MASAPALLI GURUTEJA             | Mechanical Engineering |
| 44. | U16ME505 | KONDURU VENKATESWARA<br>PRASAD | Mechanical Engineering |
| 45. | U16ME506 | ARUN GOSH P A                  | Mechanical Engineering |
| 46. | U16ME510 | Selva Kumar M                  | Mechanical Engineering |
| 47. | U16ME513 | CHINTALA RAMESH DORAUV         | Mechanical Engineering |
| 48. | U16ME516 | KARTHIKEYAN K                  | Mechanical Engineering |
| 49. | U16ME520 | PAVITHRAN OMEZHILAN            | Mechanical Engineering |
| 50. | U16ME522 | I S V SAI DATTHA SHARAN        | Mechanical Engineering |
| 51. | U16ME572 | RANJITH VIGNESHWAR A           | Mechanical Engineering |
| 52. | U16ME602 | SHAIK MAHAMMED HANEEF          | Mechanical Engineering |
| 53. | U16ME603 | SHAIK RIYAZ                    | Mechanical Engineering |
| 54. | U16AM703 | LAGHYVARAPU SAI SATISH .       | Automobile Engineering |
| 55. | U16AM704 | GUNTAMUKKALA THILAK            | Automobile Engineering |
| 56. | U16AM705 | KUTO CHUZHO                    | Automobile Engineering |



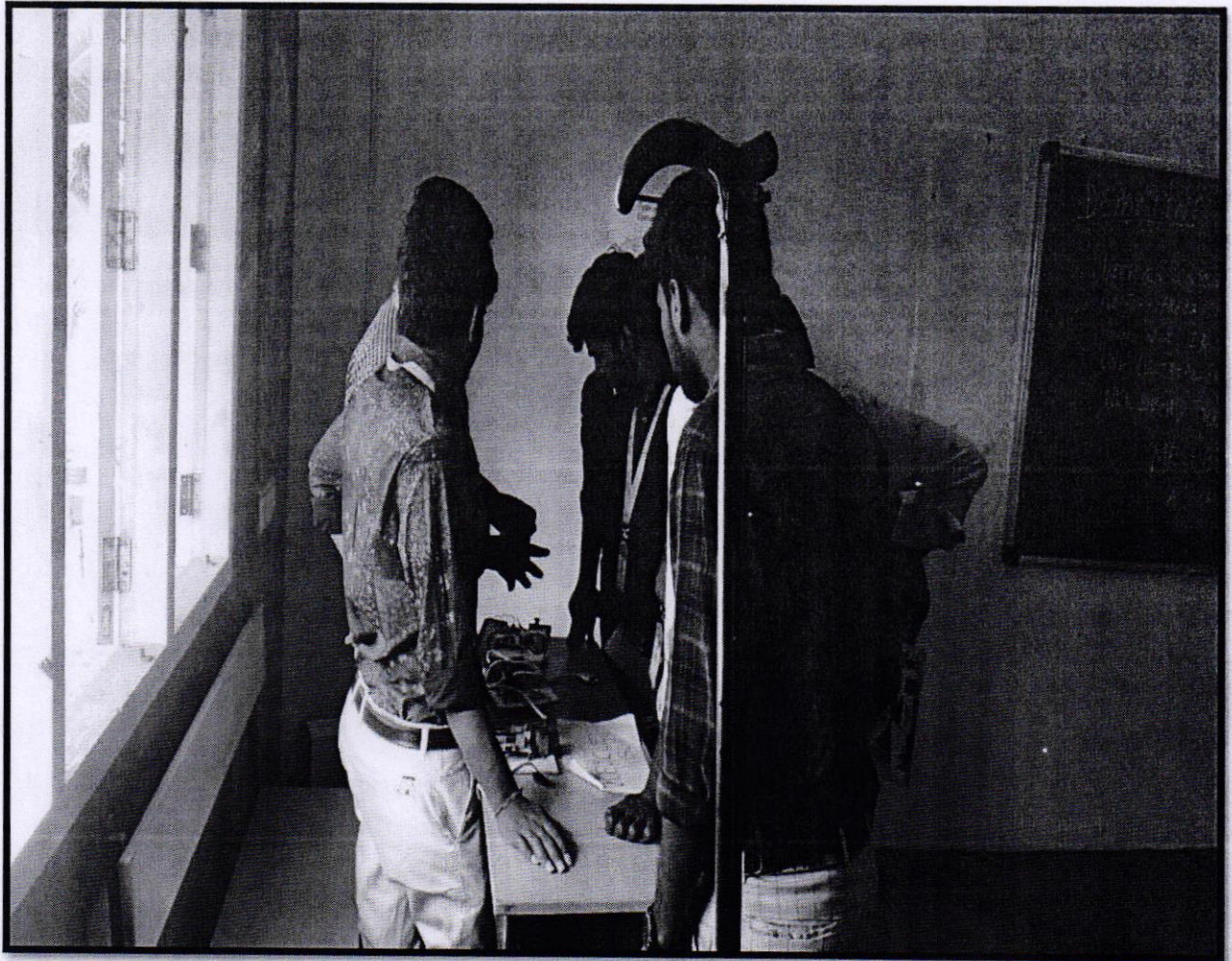


# Bharath

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

## Department of Mechatronics

**ANDROID COMPONENTS & BUILDING BLOCKS Value added course  
conducted by Mr. Sivaramakrishnan, Department of Production,  
MIT, Chennai.**







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**BHARATH INSTITUTE OF SCIENCE & TECHNOLOGY**

Selaiyur, Chennai - 73.

## DEPARTMENT OF MECHATRONICS

### VALVE ADDED COURSE FEEDBACK FORM

Date: 7/2/2015

|   |                                       |      |      |           |           |
|---|---------------------------------------|------|------|-----------|-----------|
| NAME                                    | LIBIN BOBBY                           |      |      |           |           |
| REGISTER.NO                             | U16AM002                              |      |      |           |           |
| COURSE TITLE                            | ANDROID Components & Building blocks. |      |      |           |           |
|   | POOR                                  | FAIR | GOOD | VERY GOOD | EXCELLENT |
| OVERALL PROGRAM                         |                                       |      | ✓    |           |           |
| THE SPEAKER                             |                                       |      | ✓    |           |           |
| AUDIO,VISIAL<br>AIDS,TECHNOLOGY<br>USED |                                       |      | ✓    | ✓         |           |
| PRESENTATION<br>HAND OUTS               |                                       |      | ✓    |           |           |

Bobby  
7/2



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**BHARATH INSTITUTE OF SCIENCE & TECHNOLOGY**

Selaiyur, Chennai - 73.

## DEPARTMENT OF MECHATRONICS

### VALVE ADDED COURSE FEEDBACK FORM

Date: 7/2/2015

|   |                                       |      |      |           |           |
|---|---------------------------------------|------|------|-----------|-----------|
| NAME                                    | Srinath                               |      |      |           |           |
| REGISTER.NO                             | U16MT004.                             |      |      |           |           |
| COURSE TITLE                            | Android components & Building Blocks. |      |      |           |           |
|   | POOR                                  | FAIR | GOOD | VERY GOOD | EXCELLENT |
| OVERALL PROGRAM                         |                                       |      |      |           |           |
| THE SPEAKER                             |                                       |      |      |           | ✓         |
| AUDIO,VISIAL<br>AIDS,TECHNOLOGY<br>USED |                                       |      |      | ✓         | ✓         |
| PRESENTATION<br>HAND OUTS               |                                       |      |      |           | ✓         |

*Srinath*



**BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY  
DEPARTMENT OF MECHATRONICS**

**CERTIFICATE OF PARTICIPATION**

This is to certify that

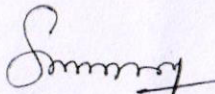
**RAMACHANDRAN .M**

of **Bharath Institute of Science and Technology**

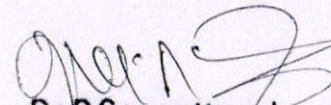
had attended the 5 day Value Added Program on **ANDROID COMPONENTS &  
BUILDING BLOCKS**

organized by the Department of Mechatronics-

Bharath Institute of Higher Education and Research, Chennai on **7/2/2015 TO 11/2/2015**

  
*Mr. Muthukumaran/Mrs. V.G. Vijaya*

**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)



Requisition Letter

5.2.2015

FROM

THE HOD

Department of Mechatronics

Bharath Institute of Higher Education and Research

Selayur-Chennai- 73

TO

THE DEAN ENGINEERING

Bharath Institute of Higher Education and Research

Selayur-Chennai- 73

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 **"CERTIFICATE COURSE ON HUMANOID ROBOTICS"** dated from **7.2.2015 to 11.2.2015** . In this regard, I request you to kindly grant permission for conducting the same.

Thanking You

HOD

( Dr. Sengottavel)

Dept. of Mechatronics

Dean Engineering

( Dr.J.Hameed Hussain)





Date: 5.2.2015

**Department of Mechatronics**

**Circular**

The Department of Mechatronics, BIHER is glad to conduct a 5 - day Value Added Program on “**CERTIFICATE COURSE ON HUMANOID ROBOTICS**” dated from 7.2.2015 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

**Dr.D.Dinakaran,**  
Centre for Automation & Robotics,  
Chennai.

Maximum No. of registration Allowed – 60

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

**Program Coordinator:**

Mrs.V.G.VIJAYA  
Assistant Professor

Mr.JAIRAJESH  
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

### CERTIFICATE COURSE ON HUMANOID ROBOTICS

#### OBJECTIVES:

This course will show The course aims at giving the students a basic understanding of the theory of humanoid robots, i.e. bipedal walking robots with an approximately humanlike shape, and practical knowledge concerning humanoid robots, through a robot construction project.

**[DAY: 1]**

#### **MODULE I Developing Kinematic Model (5 Hrs)**

Create a General solution of forward kinematics for serial chains

[DAY: 2]

#### **MODULE II From Joints to TCP (5 Hrs)**

Solving the forward kinematics of a 6-axes robot in 6 steps

**[DAY: 3]**

#### **MODULE III Test (5 Hrs)**

Test your code against this example

**[DAY: 4]**

#### **MODULE IV Base Frame and Tool (5 Hrs)**

Add a base frame and a tool to the forward kinematics solution

**[DAY: 5]**



**MODULE V : Coupling (5 Hrs)**

Introduce mechanical coupling between joint axes





# 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 - CERTIFICATE COURSE ON HUMANOID ROBOTICS

#### PARTICIPANTS LIST

| S.No | Reg.No   | Name               | Department   |
|------|----------|--------------------|--------------|
| 1.   | U17MT056 | SURYA PRAKASH      | Mechatronics |
| 2.   | U17MT055 | YOKESH RAJ         | Mechatronics |
| 3.   | U17MT054 | VASANTH            | Mechatronics |
| 4.   | U17MT053 | GOKULAKRISHNAN     | Mechatronics |
| 5.   | U17MT052 | SATHISH KUMAR      | Mechatronics |
| 6.   | U17MT051 | BOLLEDDU RAVI TEJA | Mechatronics |
| 7.   | U17MT050 | THIRUMURUGAN       | Mechatronics |
| 8.   | U17MT049 | NIKHILANTONY       | Mechatronics |
| 9.   | U17MT048 | PALANIYAPPAN       | Mechatronics |
| 10.  | U17MT046 | VIGNESHWARAN       | Mechatronics |
| 11.  | U17MT045 | ABDUL RAHAMAN      | Mechatronics |
| 12.  | U17MT044 | BADDITI            | Mechatronics |
| 13.  | U17MT042 | METHIL KRISHNAN    | Mechatronics |
| 14.  | U17MT040 | NIZAMUDEEN         | Mechatronics |
| 15.  | U17MT039 | SAGADEVAN          | Mechatronics |



|     |          |                    |                        |
|-----|----------|--------------------|------------------------|
| 16. | U17MT038 | DHARANIDHARAN      | Mechatronics           |
| 17. | U17MT037 | DINESH             | Mechatronics           |
| 18. | U17MT036 | SUSHIL KUMAR       | Mechatronics           |
| 19. | U17MT035 | HARIHARAN          | Mechatronics           |
| 20. | U17MT061 | MOHAMMED ABBAS     | Mechatronics           |
| 21. | U17MT060 | DINESHKUMAR        | Mechatronics           |
| 22. | U17MT059 | RAKKESH ARAVIND    | Mechatronics           |
| 23. | U17MT058 | NAGARAJ            | Mechatronics           |
| 24. | U17MT057 | SREE MUKESH        | Mechatronics           |
| 25. | U17MT056 | SURYA PRAKASH      | Mechatronics           |
| 26. | U17MT055 | YOKESH RAJ         | Mechatronics           |
| 27. | U17MT054 | VASANTH            | Mechatronics           |
| 28. | U17MT053 | GOKULAKRISHNAN     | Mechatronics           |
| 29. | U17MT052 | SATHISH KUMAR      | Mechatronics           |
| 30. | U17MT051 | BOLLEDDU RAVI TEJA | Mechatronics           |
| 31. | U17MT050 | THIRUMURUGAN       | Mechatronics           |
| 32. | U17MT049 | NIKHILANTONY       | Mechatronics           |
| 33. | U17MT048 | PALANIYAPPAN       | Mechatronics           |
| 34. | U17MT046 | VIGNESHWARAN       | Mechatronics           |
| 35. | U17MT045 | ABDUL RAHAMAN      | Mechatronics           |
| 36. | U16ME035 | PARTHAN V          | Mechanical Engineering |
| 37. | U16ME041 | SUVODEEP RAKSHIT   | Mechanical Engineering |
| 38. | U16ME049 | MOHAMED ABDULLAH K | Mechanical Engineering |
| 39. | U16ME055 | DEEPAK H           | Mechanical Engineering |



|     |          |                                 |                        |
|-----|----------|---------------------------------|------------------------|
| 40. | U16ME056 | YOGESH P                        | Mechanical Engineering |
| 41. | U16ME059 | JEFRON G                        | Mechanical Engineering |
| 42. | U16ME062 | DANIEL N P                      | Mechanical Engineering |
| 43. | U16ME066 | VASANTH KUMAR R                 | Mechanical Engineering |
| 44. | U16ME078 | KAMASANI SURESH                 | Mechanical Engineering |
| 45. | U16ME080 | MAJID ALI                       | Mechanical Engineering |
| 46. | U16ME082 | HARISH S                        | Mechanical Engineering |
| 47. | U16ME087 | ANAND KUMAR .                   | Mechanical Engineering |
| 48. | U16ME093 | MACHUNURU PRASAD KUMAR<br>REDDY | Mechanical Engineering |
| 49. | U16ME094 | GOPAL KUMAR .                   | Mechanical Engineering |
| 50. | U16ME098 | PRAJEESH S NAIR .               | Mechanical Engineering |
| 51. | U16MT004 | SRINATH B                       | Mechatronics           |
| 52. | U16MT005 | DHANASEKAR R                    | Mechatronics           |
| 53. | U16MT006 | GOUTHAM M                       | Mechatronics           |
| 54. | U16MT007 | SATHIYASEELAN S                 | Mechatronics           |
| 55. | U16MT008 | RAKESH P                        | Mechatronics           |
| 56. | U16MT009 | ABDUL FAHEEM S                  | Mechatronics           |
| 57. | U16MT010 | SAKTHI R                        | Mechatronics           |
| 58. | U16MT011 | MELVINE ROHAN R                 | Mechatronics           |
| 59. | U16MT014 | SARATHKUMAR D                   | Mechatronics           |
| 60. | U16MT002 | RAAHUL GANESH R                 | Mechatronics           |



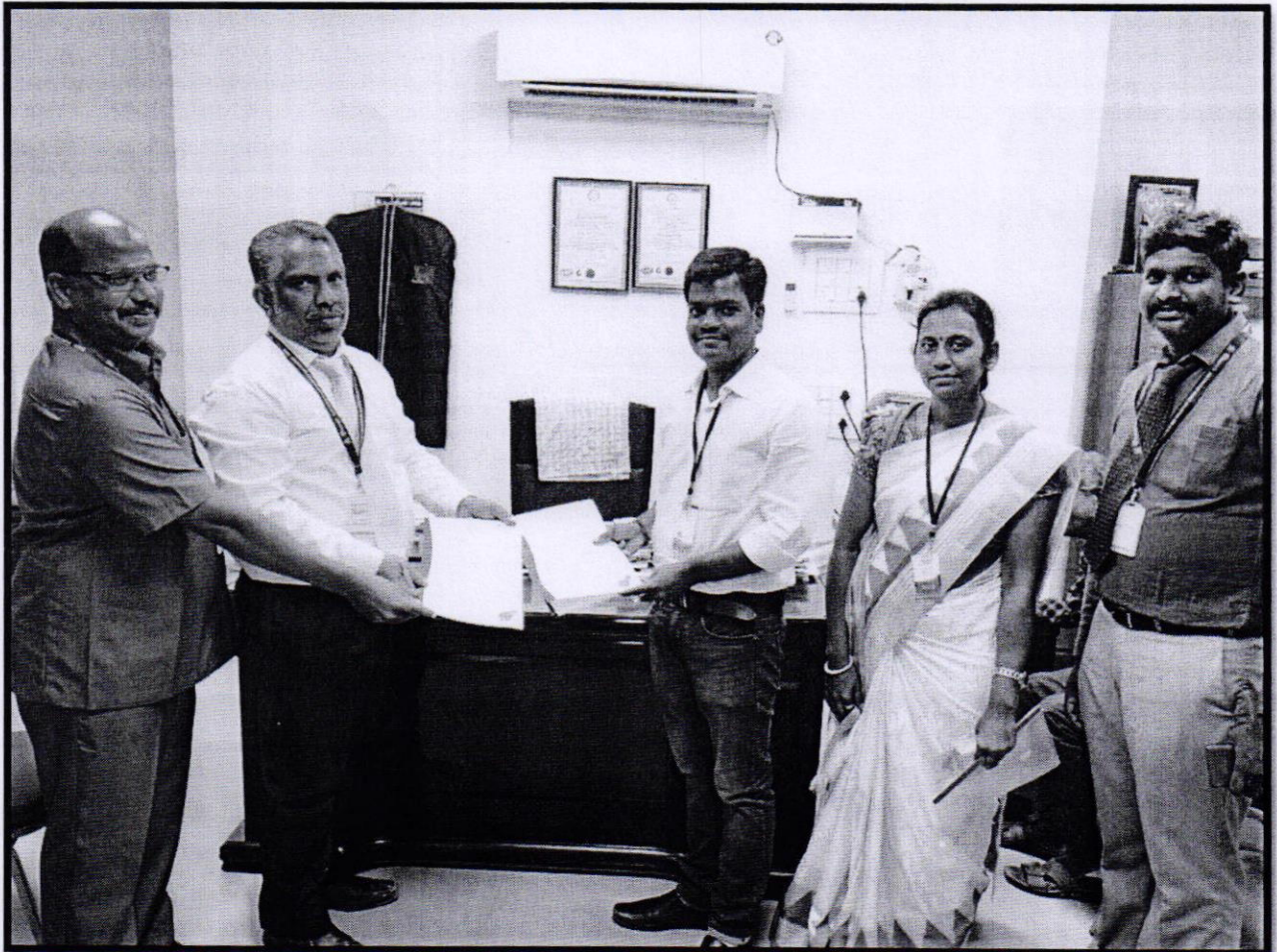


# Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH  
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## Department of Mechatronics

**CERTIFICATE COURSE ON HUMANOID ROBOTICS** Value added  
course conducted by **Dr.D.Dinakaran**, Centre for Automation & Robotics,  
Chennai.







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**BHARATH INSTITUTE OF SCIENCE & TECHNOLOGY**

Selaiyur, Chennai - 73.

**DEPARTMENT OF MECHATRONICS**

**VALVE ADDED COURSE**  
**FEEDBACK FORM**

Date: 7/2/2015

|   |   |      |      |           |           |
|---|---|------|------|-----------|-----------|
| NAME                                    | U17MT042                                |      |      |           |           |
| REGISTER.NO                             | MITHAL Krishnan.                        |      |      |           |           |
| COURSE TITLE                            | CERTIFICATE COURSE ON HUMANOID ROBOTICS |      |      |           |           |
|   | POOR                                    | FAIR | GOOD | VERY GOOD | EXCELLENT |
| OVERALL PROGRAM                         |   |      |      |           | ✓         |
| THE SPEAKER                             |   |      |      | ✓         |           |
| AUDIO,VISIAL<br>AIDS,TECHNOLOGY<br>USED |   |      | ✓    |           |           |
| PRESENTATION<br>HAND OUTS               |   |      |      |           | ✓         |

*Mithal Krishnan*  
TR



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**BHARATH INSTITUTE OF SCIENCE & TECHNOLOGY**

Selaiyur, Chennai - 73.

## DEPARTMENT OF MECHATRONICS

### VALVE ADDED COURSE FEEDBACK FORM

Date: 7/2/2015

|   |  |      |      |           |           |
|---|--|------|------|-----------|-----------|
| NAME                                    | U17MT045                                 |      |      |           |           |
| REGISTER.NO                             | Abdul Rahman.                            |      |      |           |           |
| COURSE TITLE                            | Certificate course on Humanoideid Robots |      |      |           |           |
|   | POOR                                     | FAIR | GOOD | VERY GOOD | EXCELLENT |
| OVERALL PROGRAM                         |  |      |      | ✓         |           |
| THE SPEAKER                             |  |      | ✓    |           |           |
| AUDIO,VISIAL<br>AIDS,TECHNOLOGY<br>USED |  |      |      | ✓         |           |
| PRESENTATION<br>HAND OUTS               |  |      |      | ✓         |           |

Abdul  
7/2



BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY  
DEPARTMENT OF MECHATRONICS

**CERTIFICATE OF PARTICIPATION**

This is to certify that

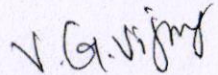
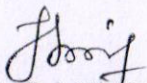
**SATHISHKUMAR**

of Bharath Institute of Science and Technology

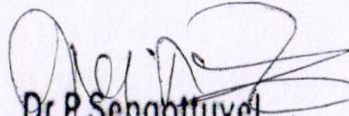
had attended the 5 day Value Added Program on " *CERTIFICATE COURSE ON  
HUMANOID ROBOTICS*

organized by the Department of Mechatronics-

Bharath Institute of Higher Education and Research, Chennai on *7/2/2015 TO 11/2/2015*

  
  
**V.G.VIJAYA/J.JAIRAJESH**

**Coordinators**

  
**Dr. P. Sengottuvel**  
**Resource Person**





# Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH  
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Requisition Letter

30.06.2016

FROM

THE HOD

Department of Mechatronics

Bharath Institute of Higher Education and Research

Selayur-Chennai- 73

TO

THE DEAN ENGINEERING

Bharath Institute of Higher Education and Research

Selayur-Chennai- 73

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 WORLD OF ROBOTICS**" dated from **3.07.2016 to 7.07.2016**. In this regard, I request you to kindly grant permission for conducting the same.

Thanking You

HOD

( Dr. Sengottovel)

Dept. of Mechatronics

Dean Engineering

( Dr.J.Hameed Hussain)





Date: 30.6.2016

**Department of Mechatronics**

**Circular**

The Department of Mechatronics, BIHER is glad to conduct a 5 - day Value Added Program on “**COURSE ON WORLD OF ROBOTICS**” dated from 3.07.2016 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. Vinod Kumar,**  
Associate Professor,  
Hindustan college of Engineering,  
Chennai.

Maximum No. of registration Allowed – 42

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

**Program Coordinator:**

Mrs.V.G.VIJAYA

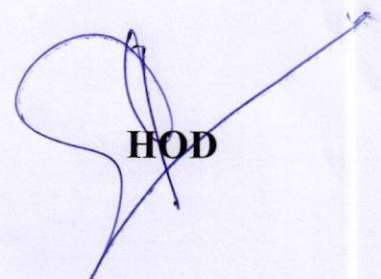
Assistant Professor

Mr.J.DHANASEKAR

Assistant Professor,

**E-Mail: vijayasaravanan84@gmail.com**

**Mobile: 8870136732**

  
**HOD**





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INSTITUTE OF HIGHER EDUCATION AND RESEARCH  
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## Department of Mechatronics

### COURSE ON WORLD OF ROBOTICS

#### OBJECTIVES:

This course will show you allow you to know and specialize in this area. From theoretical bases to practice, discover thanks to the Massive Open Online Courses, the world of robotics. You can learn and understand machine design, the operation of artificial intelligence and a robot.

**[DAY: 1]**

#### MODULE I Introduction to Robotics (5 Hrs)

The purpose of this course is to introduce you to basics of modeling, design, planning, and control of robot systems. In essence, the material treated in this course is a brief survey of relevant results from geometry, kinematics, statics, dynamics, and control.

**[DAY: 2]**

#### MODULE II Robot anatomy (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 ROBOT simulation (5 Hrs)

To introduce the concept of dynamical composition, reviewing two types: a composition in time that we term "sequential"; and composition in space that we call "parallel." We'll put a bit more focus into that last concept, parallel composition and review what has been done historically,

**[DAY: 4]**



## **MODULE IV Robot application (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: 5]**

## **MODULE V : Robot applications-ACTIVITY (5 Hrs)**

We develop an approach to composing simple dynamical abstractions that partially automate the generation of complicated sensor motor programs. Specific topics that will be covered include: mobility in animals and robots, kinematics and dynamics of legged machines, and design of dynamical behavior via energy landscapes.





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## Department of Mechatronics

### Value Added Course - COURSE ON WORLD OF ROBOTICS

#### PARTICIPANTS LIST

| S.No | Reg.No   | Name                                  | Department             |
|------|----------|---------------------------------------|------------------------|
| 1.   | U17ME068 | CHALLA GIRREESH GIREESH               | Mechanical Engineering |
| 2.   | U17ME069 | VEMPULURU RAKESH                      | Mechanical Engineering |
| 3.   | U17ME070 | MARRIPATI BHARGAV                     | Mechanical Engineering |
| 4.   | U17ME072 | CHITTIREDDY PAVAN                     | Mechanical Engineering |
| 5.   | U17ME075 | VEDURUPARTHY KANAKA<br>VENKATA SURESH | Mechanical Engineering |
| 6.   | U18MT021 | M LAKHAN PUROHIT                      | Mechatronics           |
| 7.   | U18MT020 | DOSURI VENKATA NAGA<br>RAMA NIRMAL    | Mechatronics           |
| 8.   | U18MT019 | VASANTH G                             | Mechatronics           |
| 9.   | U18MT018 | YOGESH M                              | Mechatronics           |
| 10.  | U18MT017 | KURAPATI JAGADEESH                    | Mechatronics           |
| 11.  | U18MT016 | EMAYAVARMAN P K                       | Mechatronics           |
| 12.  | U18MT015 | ROHITH V S                            | Mechatronics           |
| 13.  | U18MT014 | SATHISH KUMAR B                       | Mechatronics           |
| 14.  | U18MT013 | E MAGESHWARI                          | Mechatronics           |
| 15.  | U18MT012 | BRIGHT SELVA KUMARAN A                | Mechatronics           |



|     |          |  |                        |
|-----|----------|--|------------------------|
| 16. | U18MT010 | MOHAMMED SHARJUN K                         | Mechatronics           |
| 17. | U18MT009 | SANJAY C                                   | Mechatronics           |
| 18. | U18MT008 | VASANTHRADEVI R                            | Mechatronics           |
| 19. | U18MT007 | JEBULTONE A                                | Mechatronics           |
| 20. | U18MT006 | SANTHOSHKUMAR M                            | Mechatronics           |
| 21. | U18MT005 | PRAVEENKUMAR V                             | Mechatronics           |
| 22. | U18MT004 | JAGADEESH KUMAR P                          | Mechatronics           |
| 23. | U18MT003 | PRAVIN KUMAR V                             | Mechatronics           |
| 24. | U18MT002 | ARUN KUMAR S                               | Mechatronics           |
| 25. | U17ME059 | BALAJI P                                   | Mechanical Engineering |
| 26. | U17ME062 | PAKAM SARATH KUMAR                         | Mechanical Engineering |
| 27. | U17ME066 | YETTELLA BHUVANESWARA REDDY .              | Mechanical Engineering |
| 28. | U17ME068 | CHALLA GIRREESH GIREESH                    | Mechanical Engineering |
| 29. | U17ME069 | VEMPULURU RAKESH                           | Mechanical Engineering |
| 30. | U17ME075 | VEDURUPARTHY<br>KANAKA VENKATA<br>SURESH . | Mechanical Engineering |
| 31. | U17ME083 | MOPURI RAMESH REDDY .                      | Mechanical Engineering |
| 32. | U17ME089 | KALLOL<br>CHAKRABORTY                      | Mechanical Engineering |
| 33. | U17ME090 | LOKIREDDY VENKATA<br>SHIVA KUMAR REDDY     | Mechanical Engineering |
| 34. | U17ME093 | ANIPEDDI DEEKSHITH                         | Mechanical Engineering |
| 35. | U17ME096 | SOMASEKHAR KAVATI<br>SOMASEKHAR            | Mechanical Engineering |
| 36. | U17ME099 | DANGETI SATISH                             | Mechanical Engineering |



|     |          |                                   |                        |
|-----|----------|-----------------------------------|------------------------|
| 37. | U17ME100 | MARTHALA KARTHIK<br>KUMAR REDDY . | Mechanical Engineering |
| 38. | U17ME101 | KATTA GOPI KRISHNA                | Mechanical Engineering |
| 39. | U17ME021 | DARAM PRITHVI RAJ .               | Mechanical Engineering |
| 40. | U17ME035 | DAMARLA SAI SANTHOSH .            | Mechanical Engineering |
| 41. | U17ME036 | FEROZ AKHTAR M A                  | Mechanical Engineering |
| 42. | U17ME038 | HARIRAM K                         | Mechanical Engineering |





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## Department of Mechatronics

**COURSE ON WORLD OF ROBOTICS** Value added course conducted by  
Mr. Vinod Kumar, Associate Professor, Hindustan college of Engineering,  
Chennai.







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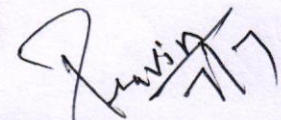
Selaiyur, Chennai - 73.

**DEPARTMENT OF MECHATRONICS**

**VALVE ADDED COURSE**  
**FEEDBACK FORM**

Date: 7/7/2016

|   |                   |      |      |           |           |
|---|-------------------|------|------|-----------|-----------|
| NAME                                    | U18MT003          |      |      |           |           |
| REGISTER.NO                             | PRAVIN KUMAR      |      |      |           |           |
| COURSE TITLE                            | WORLD OF ROBOTICS |      |      |           |           |
|   | POOR              | FAIR | GOOD | VERY GOOD | EXCELLENT |
| OVERALL PROGRAM                         |                   |      |      |           | ✓         |
| THE SPEAKER                             |                   |      |      | ✓         | ✓         |
| AUDIO,VISIAL<br>AIDS,TECHNOLOGY<br>USED |                   |      |      |           | ✓         |
| PRESENTATION<br>HAND OUTS               |                   |      |      |           | ✓         |

  
STUDENT SIGNATURE



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(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: 7/7/2016

|   |                   |      |      |           |           |
|---|-------------------|------|------|-----------|-----------|
| NAME                                    | BALAJI. P         |      |      |           |           |
| REGISTER.NO                             | U17ME059          |      |      |           |           |
| COURSE TITLE                            | WORLD OF ROBOTICS |      |      |           |           |
|   | POOR              | FAIR | GOOD | VERY GOOD | EXCELLENT |
| OVERALL PROGRAM                         |                   | ✓    |      |           |           |
| THE SPEAKER                             |                   |      | ✓    |           |           |
| AUDIO,VISIAL<br>AIDS,TECHNOLOGY<br>USED |                   |      |      | ✓         |           |
| PRESENTATION<br>HAND OUTS               |                   |      |      | ✓         |           |

Balaji  
7/7



**BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY  
DEPARTMENT OF MECHATRONICS**

**CERTIFICATE OF PARTICIPATION**

This is to certify that

**CHITTIREDDY BHAVAN**

of Bharath Institute of Science and Technology

had attended the 5 day Value Added Program on

**COURSE ON WORLD OF ROBOTICS**

organized by the Department of Mechatronics-

Bharath Institute of Higher Education and Research, Chennai on **3/7/2016 TO 7/7/2016**

*V.G. Vijaya*  
**V.G. VIJAYA/J.DHANASEKAR**

Coordinators

*Dr. P. Sengottuvel*  
**Dr. P. Sengottuvel**

Resource Person





# Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH  
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Requisition Letter

02.11.2016

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

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 SIXTH SENSE ROBOTICS FOR ENGINEERING"** dated from **4.11.2016 to 8.11.2016**. In this regard, I request you to kindly grant permission for conducting the same.

Thanking You

HOD

( Dr. Sengottivel)

Dept. of Mechatronics

Dean Engineering

( Dr.J.Hameed Hussain)





**Department of Mechatronics**

**Circular**

Date: 2.11.2016

The Department of Mechatronics, BIHER is glad to conduct a 5 - day Value Added Program on “**COURSE ON SIXTH SENSE ROBOTICS FOR ENGINEERING**” dated from 4.11.2016 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. Chandrasekar.R,**  
Prag Robotics,  
Chennai.

Maximum No. of registration Allowed – 38

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

**Program Coordinator:**

Mrs.VASUMATHI  
Assistant Professor

Mr.J.DHANASEKAR  
Assistant Professor,

**E-Mail: dhanasekar81@gmail.com**

**Mobile: 9841259514**

  
**HOD**





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**Department of Mechatronics**

**COURSE ON SIXTH SENSE ROBOTICS FOR ENGINEERING OBJECTIVES:**

This course introduces you to the amazing world of sixth sense technology and its fascinating applications. Using an Arduino board and other electronic components, you will develop a robot that can be controlled through digital information. The digital information is processed using the image processing technique which takes the input data from the user who can give commands using hand gestures.

**[DAY: 1]**

- **MODULE I Introduction to Sixth sense Technology (5 Hrs)**

Sixth Sense' is a wearable gesture interface that augments the physical world around us with digital information and lets us use natural hand gestures to interact with that information. This technology will definitely give the user a new way of seeing the world with information at their fingertips it has been classified under the category 'wearable computing'.

**[DAY: 2]**

- **MODULE II Introduction to Image Processing and application (5 Hrs)**

Image processing is a method to perform some operations on an image, in order to get an enhanced image or to extract some useful information from it. It is a type of signal processing in which input is an image and output may be image or characteristics/features associated with that image.

**[DAY: 3]**

- **MODULE III Open CV and Python programming (5 Hrs)**

**OpenCV** is a huge open-source library for computer vision, machine learning, and image processing. OpenCV supports a wide variety of programming languages like Python, C++, Java, etc.



**[DAY: 4]**

- **MODULE IV** Edge detection and image enhancement **(5 Hrs)**

Edge detection includes a variety of mathematical methods that aim at identifying points in a digital image at which the image brightness changes sharply or, more formally, has discontinuities. The points at which image brightness changes sharply are typically organized into a set of curved line segments termed edges

**[DAY: 5]**

- **MODULE V** : Programming the Robot using Python Open CV and Arduino **(5 Hrs)**

You can use OpenCV, Python, and Arduino to detect and track faces. Face tracking can be used in a variety of robotics projects and applications.





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INSTITUTE OF HIGHER EDUCATION AND RESEARCH  
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**Department of Mechatronics**

**Value Added Course - COURSE ON SIXTH SENSE ROBOTICS FOR  
ENGINEERING**

**PARTICIPANTS LIST**

| S.No | Reg.No   | Name                         | Department             |
|------|----------|------------------------------|------------------------|
| 1.   | U16AM015 | PARIMI SAI SURYA VAMSI .     | Automobile Engineering |
| 2.   | U16AM017 | AMAL PHILIP GEORGE .         | Automobile Engineering |
| 3.   | U16AM018 | ROSHAN ROMARIO FRANCIS       | Automobile Engineering |
| 4.   | U16AM019 | ANTHAM JEEVAN REDDY .        | Automobile Engineering |
| 5.   | U16AM001 | RAMACHANDRAN M               | Automobile Engineering |
| 6.   | U16AM002 | LIBIN BOBBY                  | Automobile Engineering |
| 7.   | U16AM004 | NANDA KUMAR K                | Automobile Engineering |
| 8.   | U16AM005 | VASANTHKUMAR R               | Automobile Engineering |
| 9.   | U16ME012 | MOHANRAJ R                   | Automobile Engineering |
| 10.  | U16ME014 | RAVIRAJAN S                  | Mechanical Engineering |
| 11.  | U16ME023 | ARAVINDAN K                  | Mechanical Engineering |
| 12.  | U16ME029 | DINESH KUMAR M               | Mechanical Engineering |
| 13.  | U16ME031 | ZHAKIRHUSSAIN S              | Mechanical Engineering |
| 14.  | U16ME101 | VIJAY M                      | Mechanical Engineering |
| 15.  | U16ME104 | MULLAGURA BHARATH<br>KUMAR . | Mechanical Engineering |
| 16.  | U16ME105 | CHALLA CHARANKUMAR .         | Mechanical Engineering |



|     |          |                    |                        |
|-----|----------|--------------------|------------------------|
| 17. | U16ME106 | RAJEEV KUMAR .     | Mechanical Engineering |
| 18. | U16ME107 | MANOJ .            | Mechanical Engineering |
| 19. | U16MT001 | PRADEEPAN S        | Mechanical Engineering |
| 20. | U16MT002 | RAAHUL GANESH R    | Mechanical Engineering |
| 21. | U16MT003 | DINESH J           | Mechatronics           |
| 22. | U16MT004 | SRINATH B          | Mechatronics           |
| 23. | U16MT005 | DHANASEKAR R       | Mechatronics           |
| 24. | U16MT006 | GOUTHAM M          | Mechatronics           |
| 25. | U16MT007 | SATHIYASEELAN S    | Mechatronics           |
| 26. | U16MT008 | RAKESH P           | Mechatronics           |
| 27. | U16MT009 | ABDUL FAHEEM S     | Mechatronics           |
| 28. | U16MT010 | SAKTHI R           | Mechatronics           |
| 29. | U16MT011 | MELVINE ROHAN R    | Mechatronics           |
| 30. | U16MT014 | SARATHKUMAR D      | Mechatronics           |
| 31. | U16MT015 | SOMENDRAN A        | Mechatronics           |
| 32. | U16MT018 | RATHISH KRISHNAN R | Mechatronics           |
| 33. | U16MT501 | MUGILAN M          | Mechatronics           |
| 34. | U16MT502 | VIGNESHWAR C B     | Mechatronics           |
| 35. | U16MT503 | KARUPHIN KAWIN J   | Mechatronics           |
| 36. | U16MT701 | CHANDRASEKAR D G   | Mechatronics           |
| 37. | U16MT702 | CHIRANJEEVI G      | Mechatronics           |
| 38. | U16MT703 | VIGNESH A          | Mechatronics           |





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INSTITUTE OF HIGHER EDUCATION AND RESEARCH  
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## Department of Mechatronics

**COURSE ON SIXTH SENSE ROBOTICS FOR ENGINEERING Value added course conducted by Mr. Chandrasekar.R, Prag Robotics, Chennai.**







# Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH  
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**BHARATH INSTITUTE OF SCIENCE & TECHNOLOGY**

Selaiyur, Chennai - 73.

**DEPARTMENT OF MECHATRONICS**

VALVE ADDED COURSE  
FEEDBACK FORM

Date: 8/11/16

|   |                                |      |      |           |           |
|---|--------------------------------|------|------|-----------|-----------|
| NAME                                    | CHIRANJEEV (U)                 |      |      |           |           |
| REGISTER.NO                             | U16MT702                       |      |      |           |           |
| COURSE TITLE                            | SIXTH SENSE ROBOTICS FOR ENDUR |      |      |           |           |
|   | POOR                           | FAIR | GOOD | VERY GOOD | EXCELLENT |
| OVERALL PROGRAM                         |                                | ✓    |      |           |           |
| THE SPEAKER                             |                                |      | ✓    |           |           |
| AUDIO,VISIAL<br>AIDS,TECHNOLOGY<br>USED |                                |      |      |           | ✓         |
| PRESENTATION<br>HAND OUTS               |                                |      |      | ✓         |           |

Chiranjeevi  
8/11



# 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

Selayur, Chennai - 73.

## DEPARTMENT OF MECHATRONICS

### VALVE ADDED COURSE FEEDBACK FORM

Date: 8/4/16

|   |                               |      |      |           |           |
|---|-------------------------------|------|------|-----------|-----------|
| NAME                                    | Sakthi                        |      |      |           |           |
| REGISTER.NO                             | V16MT010                      |      |      |           |           |
| COURSE TITLE                            | SIXTH SENSE ROBOTICS FOR ENGG |      |      |           |           |
|   | POOR                          | FAIR | GOOD | VERY GOOD | EXCELLENT |
| OVERALL PROGRAM                         |                               |      |      | ✓         |           |
| THE SPEAKER                             |                               |      |      | ✓         |           |
| AUDIO,VISIAL<br>AIDS,TECHNOLOGY<br>USED |                               |      |      |           | ✓         |
| PRESENTATION<br>HAND OUTS               |                               |      |      |           | ✓         |

Sakthi  
8/4/16



**BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY**  
**DEPARTMENT OF MECHATRONICS**

**CERTIFICATE OF PARTICIPATION**

This is to certify that

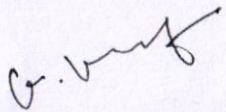
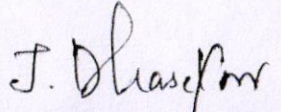
**MOHANRAJ**


of **Bharath Institute of Science and Technology**

had attended the 5 day Value Added Program on **COURSE ON SIXTH  
SENSE ROBOTICS FOR ENGINEERING**

organized by the Department of Mechatronics-

Bharath Institute of Higher Education and Research, Chennai on **4/11/2016 TO 8/11/2016**

  
  
**G.VASUMATHI/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)



Requisition Letter

1.09.2016

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

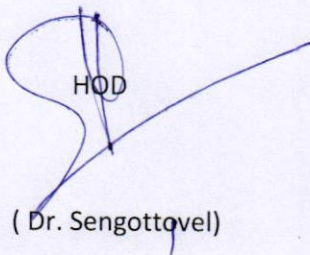
Selaiyur-Chennai- 73

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 "CERTIFICATION COURSE ON ROBO DUINO- GRAVITY" dated from 5.9.2016 to 9.9.2016. In this regard, I request you to kindly grant permission for conducting the same.

Thanking You

  
HOD  
( Dr. Sengottavel)

Dept. of Mechatronics

Dean Engineering

  
( Dr.J.Hameed Hussain)





Date: 1.9.2016

**Department of Mechatronics**

**Circular**

The Department of Mechatronics, BIHER is glad to conduct a 5 - day Value Added Program on “**CERTIFICATION COURSE ON ROBO DUINO- GRAVITY**” dated from 5.9.2016 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. Chandrasekar.R,**  
Prag Robotics,  
Chennai.

Maximum No. of registration Allowed – 33

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

**Program Coordinator:**

Mrs.V.G.VIJAYA

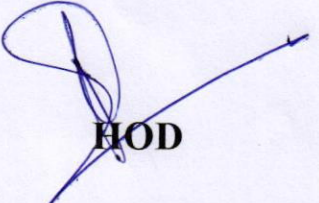
Assistant Professor

Mr.MUTHUKUMARAN

Assistant Professor,

**E-Mail: vijayasaravanan84@gmail.com**

**Mobile: 8870136732**

  
**HOD**





# Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH  
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## Department of Mechatronics

### **CERTIFICATION COURSE ON ROBO DUINO- GRAVITY**

#### **OBJECTIVES:**

This course will show you how RoboMind Academy trains Computational Thinking: an essential 21st century skill. By programming a virtual robot, the student is introduced to logic, automation and technology. Logical thinking is directly connected to solving real world challenges.

#### **[DAY: 1]**

#### **MODULE I Introduction To Robotics (5 Hrs)**

The Introduction to Robotics Specialization introduces you to the concepts of robot flight and movement,.

#### **[DAY: 2]**

#### **MODULE II Robot anatomy (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 ROBOT simulation (5 Hrs)**

To introduce the concept of dynamical composition, reviewing two types: a composition in time that we term "sequential"; and composition in space that we call "parallel." We'll put a bit more focus into that last concept, parallel composition and review what has been done historically,

#### **[DAY: 4]**

#### **MODULE IV Robot application (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: 5]**



## **MODULE V : Robot applications-ACTIVITY (5 Hrs)**

We develop an approach to composing simple dynamical abstractions that partially automate the generation of complicated sensor motor programs. Specific topics that will be covered include: mobility in animals and robots, kinematics and dynamics of legged machines, and design of dynamical behavior via energy landscapes.





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## Department of Mechatronics

### CERTIFICATION COURSE ON ROBO DUINO- GRAVITY

#### PARTICIPANTS LIST

| S.No | Reg.No   | Name               | Department   |
|------|----------|--------------------|--------------|
| 1.   | U17MT058 | NAGARAJ            | Mechatronics |
| 2.   | U17MT057 | SREE MUKESH        | Mechatronics |
| 3.   | U17MT056 | SURYA PRAKASH      | Mechatronics |
| 4.   | U17MT055 | YOKESH RAJ         | Mechatronics |
| 5.   | U17MT054 | VASANTH            | Mechatronics |
| 6.   | U17MT053 | GOKULAKRISHNAN     | Mechatronics |
| 7.   | U17MT052 | SATHISH KUMAR      | Mechatronics |
| 8.   | U17MT051 | BOLLEDDU RAVI TEJA | Mechatronics |
| 9.   | U17MT050 | THIRUMURUGAN       | Mechatronics |
| 10.  | U17MT049 | NIKHILANTONY       | Mechatronics |
| 11.  | U17MT048 | PALANIYAPPAN       | Mechatronics |
| 12.  | U17MT046 | VIGNESHWARAN       | Mechatronics |
| 13.  | U17MT045 | ABDUL RAHAMAN      | Mechatronics |
| 14.  | U17MT044 | BADDITI            | Mechatronics |
| 15.  | U17MT042 | METHIL KRISHNAN    | Mechatronics |
| 16.  | U17MT040 | NIZAMUDEEN         | Mechatronics |



|     |           |                                  |                        |
|-----|-----------|----------------------------------|------------------------|
| 17. | U17MT023  | PRAVEEN                          | Mechatronics           |
| 18. | U17MT022  | GULAMGHOUSE                      | Mechatronics           |
| 19. | U17ME066  | YETTELLA<br>BHUVANESWARA REDDY . | Mechanical Engineering |
| 20. | U17ME068  | CHALLA GIRREESH<br>GIREESH       | Mechanical Engineering |
| 21. | U17ME069  | VEMPULURU RAKESH                 | Mechanical Engineering |
| 22. | U17ME070  | MARRIPATI BHARGAV                | Mechanical Engineering |
| 23. | U17ME072  | CHITTIREDDY PAVAN                |                        |
| 24. | U17ME073  | VARDA SAI<br>SREEKANTH REDDY S   | Mechanical Engineering |
| 25. | U17ME066  | YETTELLA<br>BHUVANESWARA REDDY . | Mechanical Engineering |
| 26. | U17ME068  | CHALLA GIRREESH<br>GIREESH       | Mechanical Engineering |
| 27. | U17AM015  | KUTHE SOURABHSURESH              | Automobile Engineering |
| 28. | U17AM009  | KARTHICK Y                       | Automobile Engineering |
| 29. | U17AM014  | KUMBHAR RAHUL                    | Automobile Engineering |
| 30. | U17AM016- | SHAJAHAN S                       | Automobile Engineering |
| 31. | U17AM018  | DEVANATHA M                      | Automobile Engineering |
| 32. | U17AM020- | RITHISHKRISHNA D V               | Automobile Engineering |
| 33. | U17AM021  | -SHAIK REHAMAN                   | Automobile Engineering |





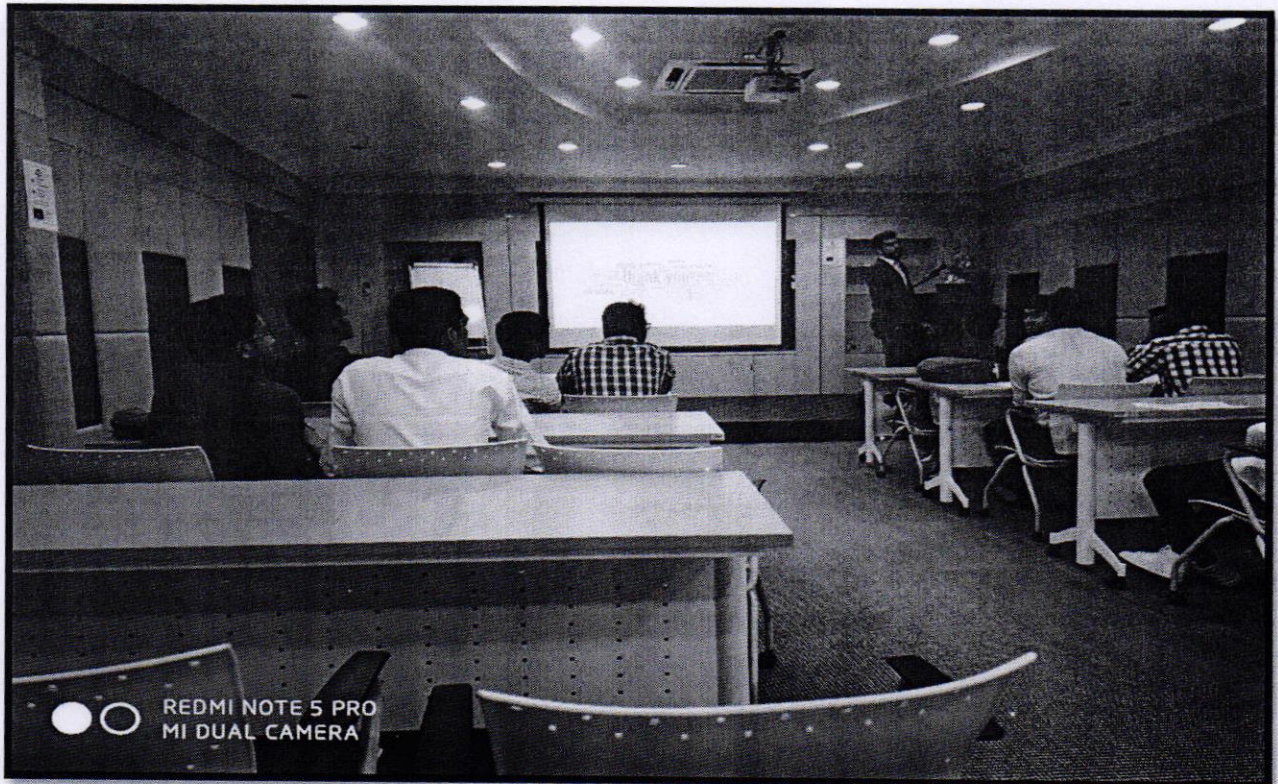
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INSTITUTE OF HIGHER EDUCATION AND RESEARCH  
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## Department of Mechatronics

### CERTIFICATION COURSE ON ROBO DUINO- GRAVITY

Value added course conducted by Mr. Chandrasekar.R, Prag Robotics,  
Chennai.







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## BHARATH INSTITUTE OF SCIENCE & TECHNOLOGY

Selayur, Chennai - 73.

### DEPARTMENT OF MECHATRONICS

#### VALVE ADDED COURSE FEEDBACK FORM

Date: 9/9/2016

|   |  |      |      |           |           |
|---|--|------|------|-----------|-----------|
| NAME                                    | KARTHICK Y                                   |      |      |           |           |
| REGISTER.NO                             | U17AM 009                                    |      |      |           |           |
| COURSE TITLE                            | Certification Course on Robo dwinio (grants) |      |      |           |           |
|   | POOR   | FAIR | GOOD | VERY GOOD | EXCELLENT |
| OVERALL PROGRAM                         |  |      |      | ✓         |           |
| THE SPEAKER                             |  |      |      | ✓         |           |
| AUDIO,VISIAL<br>AIDS,TECHNOLOGY<br>USED |  |      |      | ✓         | ✓         |
| PRESENTATION<br>HAND OUTS               |  |      |      | ✓         |           |

*Karthick*  
9/9

STUDENT SIGNATURE



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**BHARATH INSTITUTE OF SCIENCE & TECHNOLOGY**

Selayur, Chennai - 73.

**DEPARTMENT OF MECHATRONICS**

**VALVE ADDED COURSE**  
**FEEDBACK FORM**

Date: 9/9/2016

|   |  |      |      |           |           |
|---|--|------|------|-----------|-----------|
| NAME                                    | shajahan                               |      |      |           |           |
| REGISTER.NO                             | U17A016                                |      |      |           |           |
| COURSE TITLE                            | Verification course Robo duino gravity |      |      |           |           |
|   | POOR                                   | FAIR | GOOD | VERY GOOD | EXCELLENT |
| OVERALL PROGRAM                         |  |      |      | ✓         |           |
| THE SPEAKER                             |  |      |      |           | ✓         |
| AUDIO,VISIAL<br>AIDS,TECHNOLOGY<br>USED |  |      |      | ✓         |           |
| PRESENTATION<br>HAND OUTS               |  |      | ✓    |           |           |

*Shaw*  
9/9  
STUDENT SIGNATURE



**BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY**  
**DEPARTMENT OF MECHATRONICS**

**CERTIFICATE OF PARTICIPATION**

This is to certify that

**NAGARAJ**

of Bharath Institute of Science and Technology

had attended the 5 day Value Added Program on

**CERTIFICATION COURSE ON ROBO DUINO GRAVITY**

organized by the Department of Mechatronics-

Bharath Institute of Higher Education and Research, Chennai on **5/9/2016 TO 9/9/2016**

*V.G. Vijaya*

**V.G. VIJAYA/MUTHUKUMARAN**

Coordinators

*Samy*

*Dr. P. Sengottuvel*

Dr. P. Sengottuvel  
Resource Person





**Bharath**  
INSTITUTE OF HIGHER EDUCATION AND RESEARCH  
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Requisition Letter

1.09.2016

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

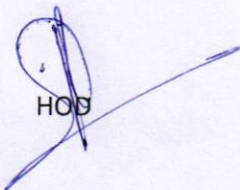
Selaiyur-Chennai- 73

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 **"ARDUINO RTOS FROM GROUND UP BUILD REAL TIME"** dated from **5.9.2016 to 9.9.2016**. In this regard, I request you to kindly grant permission for conducting the same.

Thanking You

  
HOD

( Dr. Sengottavel)

Dept. of Mechatronics

Dean Engineering



( Dr.J.Hameed Hussain)





Date: 1.9.2016

**Department of Mechatronics**

**Circular**

The Department of Mechatronics, BIHER is glad to conduct a 5 - day Value Added Program on “**ARDUINO RTOS FROM GROUND UP BUILD REAL TIME PROJECTS**” dated from 5.9.2016 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.R.RAJA,**  
**UNIKERZ Technologies,**  
**Chennai.**

Maximum No. of registration Allowed – 53

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

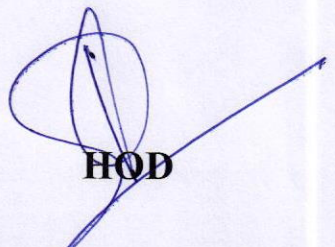
**Program Coordinator:**

Mrs.G.VASUMATHI  
Assistant Professor

Mrs.V.G.VIJAYA  
Assistant Professor,

**E-Mail: vijayasaravanan84@gmail.com**

**Mobile: 8870136732**

  
**HOD**





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## Department of Mechatronics

### ARDUINO RTOS FROM GROUND UP BUILD REAL TIME PROJECTS

#### OBJECTIVES:

This course will show you how to his course teaches you the foundations of real-time systems and how to build real-time applications using FreeRTOS on Arduino boards. The course gives a detailed overview of the characteristics of the FreeRTOS real-time kernel, provides a detailed tutorial on the APIs required to implement the various features of **FreeRTOS** on Arduino and then goes on to build about **30 real-time projects** .

#### [DAY: 1]

- **MODULE I Build a Real-Time OS from scratch (5 Hrs)**

Build Your Own RealTime OS (RTOS) From Ground Up <sup>TM</sup> on ARM 1 is the name of a training course from the Udemy site that teaches you how to create a Real-Time operating system with a variety of theoretical and practical exercises

#### [DAY: 2]

- **MODULE II Build collaborative timing (5 Hrs)**

In this course you will learn about all aspects of the Real-Time operating system, its different parts, how it works, and how to build it, and learn how to work with scheduling algorithms and interdisciplinary tools. .

#### [DAY: 3]

- **MODULE III Create alternate and rotating shift schedules (5 Hrs)**



you will be able to create your own operating system, create a turn-by-turn scheduler, calculate CPU utilization, and create an OS Kernel.

**[DAY: 4]**

- **MODULE IV Write assembly code (5 Hrs)**
- Having basic C programming skills is a plus point in this course.

**[DAY: 5]**

- **MODULE V : Build a Backup Package (5 Hrs)**
- Build a library and add custom palettes to share code and create add-ons.  
Calculates CPU usage Write assembly code





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## Department of Mechatronics

### Value Added Course - ARDUINO RTOS FROM GROUND UP BUILD REAL TIME PROJECTS

#### PARTICIPANTS LIST

| S.No | Reg.No   | Name                                    | Department             |
|------|----------|---|------------------------|
| 1.   | U17ME001 | MADHAVAN H                              | Mechanical Engineering |
| 2.   | U17ME006 | STEPHEN CHITARANJAN B                   | Mechanical Engineering |
| 3.   | U17ME019 | EDLA MANISH                             | Mechanical Engineering |
| 4.   | U17ME021 | DARAM PRITHVI RAJ .                     | Mechanical Engineering |
| 5.   | U17ME035 | DAMARLA SAI SANTHOSH .                  | Mechanical Engineering |
| 6.   | U17ME036 | FEROZ AKHTAR M A                        | Mechanical Engineering |
| 7.   | U17ME038 | HARIRAM K                               | Mechanical Engineering |
| 8.   | U17ME045 | JEYABHARATHI R                          | Mechanical Engineering |
| 9.   | U17ME047 | THIRUGNANA SAMMANDAM R                  | Mechanical Engineering |
| 10.  | U17ME056 | KAMPARAJU RAM SRINIVAS RAJU<br>.        | Mechanical Engineering |
| 11.  | U17ME059 | BALAJI P                                | Mechanical Engineering |
| 12.  | U17ME062 | PAKAM SARATH KUMAR .                    | Mechanical Engineering |
| 13.  | U17ME066 | YETTELLA BHUVANESWARA<br>REDDY .        | Mechanical Engineering |
| 14.  | U17ME068 | CHALLA GIRREESH GIREESH                 | Mechanical Engineering |
| 15.  | U17ME069 | VEMPULURU RAKESH                        | Mechanical Engineering |
| 16.  | U17ME075 | VEDURUPARTHY KANAKA<br>VENKATA SURESH . | Mechanical Engineering |
| 17.  | U17ME083 | MOPURI RAMESH REDDY .                   | Mechanical Engineering |



|     |          |                                     |                        |
|-----|----------|-------------------------------------|------------------------|
| 18. | U17ME089 | KALLOL CHAKRABORTY                  | Mechanical Engineering |
| 19. | U17ME090 | LOKIREDDY VENKATA SHIVA KUMAR REDDY | Mechanical Engineering |
| 20. | U17ME093 | ANIPEDDI DEEKSHITH                  | Mechanical Engineering |
| 21. | U17ME096 | somasekhar kavati SOMASEKHAR        | Mechanical Engineering |
| 22. | U17ME099 | DANGETI SATISH                      | Mechanical Engineering |
| 23. | U17ME100 | MARTHALA KARTHIK KUMAR REDDY .      | Mechanical Engineering |
| 24. | U17ME101 | KATTA GOPI KRISHNA                  | Mechanical Engineering |
| 25. | U17ME102 | HARISH DEWANGAN                     | Mechanical Engineering |
| 26. | U17ME103 | SRIPAD SAMEER MUNGIKAR .            | Mechanical Engineering |
| 27. | U17ME104 | BOMMU SATYA BHANU PRASADA REDDY     | Mechanical Engineering |
| 28. | U17ME105 | AVULA SAI KUMAR REDDY .             | Mechanical Engineering |
| 29. | U17ME107 | KOTAKONDA MANOJ MANOJ               | Mechanical Engineering |
| 30. | U17ME119 | CHELLUBOINA SAI KUMAR .             | Mechanical Engineering |
| 31. | U17ME120 | SUDDAPALLI JASWANTH SAI KUMAR .     | Mechanical Engineering |
| 32. | U17ME125 | BURRAREDDYPALLE RAJU                | Mechanical Engineering |
| 33. | U17AM002 | PRAVEEN KUMAR G                     | Automobile Engineering |
| 34. | U17AM003 | ALIHUSSAINMURTAZA                   | Automobile Engineering |
| 35. | U17AM004 | NAVEEN KUMAR U                      | Automobile Engineering |
| 36. | U17AM004 | NAVEEN KUMAR U                      | Automobile Engineering |
| 37. | U17AM006 | RANJITH R                           | Automobile Engineering |
| 38. | U17AM007 | YOGESHWARAN K                       | Automobile Engineering |



|     |          |                  |                        |
|-----|----------|------------------|------------------------|
| 39. | U17AM009 | KARTHICK Y       | Automobile Engineering |
| 40. | U17AM011 | GUTTULA DEEPAK   | Automobile Engineering |
| 41. | U17AM012 | ABINASH N        | Automobile Engineering |
| 42. | U17MT018 | DINESH           | Mechatronics           |
| 43. | U17MT017 | DINESHKUMAR      | Mechatronics           |
| 44. | U17MT016 | MANOJ KUMAR      | Mechatronics           |
| 45. | U17MT015 | BAGIYARAJ        | Mechatronics           |
| 46. | U17MT014 | MOHAN PIRASATH   | Mechatronics           |
| 47. | U17MT013 | ARUN KUMAR       | Mechatronics           |
| 48. | U17MT012 | TAMILSELVAN      | Mechatronics           |
| 49. | U17MT010 | HARI NI          | Mechatronics           |
| 50. | U17MT009 | SUDAKAR          | Mechatronics           |
| 51. | U17MT008 | ARAVINTHRAJ      | Mechatronics           |
| 52. | U17MT007 | SELVAKUMARI      | Mechatronics           |
| 53. | U17MT003 | SAGAR AMIRDHARAJ | Mechatronics           |





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INSTITUTE OF HIGHER EDUCATION AND RESEARCH  
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## Department of Mechatronics

**ARDUINO RTOS FROM GROUND UP BUILD REAL TIME  
PROJECTS** Value added course conducted by Mr.R.RAJA,  
UNIKERZ Technologies, Chennai.







# 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: 5/9/2016

|   |   |      |      |           |           |
|---|---|------|------|-----------|-----------|
| NAME                                    | Ranjith   |      |      |           |           |
| REGISTER.NO                             | U17AM006  |      |      |           |           |
| COURSE TITLE                            | Arduino RTOS From Ground up build Real Time Project |      |      |           |           |
|   | POOR  | FAIR | GOOD | VERY GOOD | EXCELLENT |
| OVERALL PROGRAM                         |   |      | ✓    |           |           |
| THE SPEAKER                             |   |      |      | ✓         |           |
| AUDIO,VISIAL<br>AIDS,TECHNOLOGY<br>USED |   |      |      |           | ✓         |
| PRESENTATION<br>HAND OUTS               |   |      |      | ✓         |           |

Ranjith  
5/9





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**BHARATH INSTITUTE OF SCIENCE & TECHNOLOGY**

Selaiyur, Chennai - 73.

## DEPARTMENT OF MECHATRONICS

### VALVE ADDED COURSE FEEDBACK FORM

Date: 5.9.2016.

|   |  |      |      |           |                    |
|---|--|------|------|-----------|--------------------|
| NAME                                    | U17ME059                                   |      |      |           |                    |
| REGISTER.NO                             | BALAJI.P.                                  |      |      |           |                    |
| COURSE TITLE                            | ARDUINO RTOS From GROUND UP BUILD REALTIME |      |      |           |                    |
|   | POOR                                       | FAIR | GOOD | VERY GOOD | EXCELLENT PROJECTS |
| OVERALL PROGRAM                         |  |      | ✓    |           |                    |
| THE SPEAKER                             |  |      |      | ✓         |                    |
| AUDIO,VISIAL<br>AIDS,TECHNOLOGY<br>USED |  |      |      |           | ✓                  |
| PRESENTATION<br>HAND OUTS               |  |      |      | ✓         |                    |

Balaji.P  
5/9



**BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY**  
**DEPARTMENT OF MECHATRONICS**

**CERTIFICATE OF PARTICIPATION**

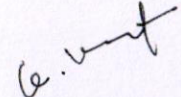
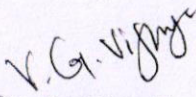
This is to certify that

**NAVEENKUMAR.U**

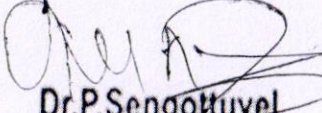
of Bharath Institute of Science and Technology

had attended the 5 day Value Added Program on "**ARDUINO RTOS FROM  
GROUND UP BUILD REAL TIME**"

organized by the Department of Mechatronics- **5/9/2016 TO 9/9/2016**  
Bharath Institute of Higher Education and Research, Chennai on

  
  
**G.VASUMATHI/V.G.VUAYA**

**Coordinators**

  
**Dr.P.Sengottuvel**  
**Resource Person**





**Bharath**  
INSTITUTE OF HIGHER EDUCATION AND RESEARCH  
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Requisition Letter

1.09.2016

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

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 "EMBEDDED SOFTWARE DEVELOPMENT CONCEPTS" dated from 5.9.2016 to 9.9.2016. In this regard, I request you to kindly grant permission for conducting the same.

Thanking You

HOD

( Dr. Sengottivel)

Dept. of Mechatronics

Dean Engineering

( Dr.J.Hameed Hussain)





Date: 1.9.2016

**Department of Mechatronics**

**Circular**

The Department of Mechatronics, BIHER is glad to conduct a 5 - day Value Added Program on “EMBEDDED SOFTWARE DEVELOPMENT CONCEPTS” dated from 5.9.2016 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

**Dr.R.Srinivasan,**  
Software Trainer,Unikerz Technologies,  
Chennai.

Maximum No. of registration Allowed – 57

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

**Program Coordinator:**

Mrs.V.G.VIJAYA

Assistant Professor

Mr.J.DHANASEKAR

Assistant Professor,

**E-Mail: vijayasaravanan84@gmail.com**

**Mobile: 8870136732**

  
**HOD**





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## Department of Mechatronics

### EMBEDDED SOFTWARE DEVELOPMENT CONCEPTS

#### **OBJECTIVES:**

This course will show you how to Use embedded software so special as compared to common application software? Well, the most critical features of embedded systems are their greater reliability, accuracy, and performance speed enabling real-time computing. Besides, they have smaller size and lower power consumption, which opens for them a wider variety of applications.

**[DAY: 1]**

#### **MODULE I Stability (5 Hrs)**

Stability is of paramount importance. Unexpected behavior from an embedded system is inadmissible and poses serious risks. End users demand that embedded systems must have uniform behavior under all circumstances and be able to operate durably without service.

**[DAY: 2]**

#### **MODULE II Compatibility and Integrity (5 Hrs)**

With all their probable expertise in software development, many of them lack hands-on experience in implementing and updating their applications in IoT environment, especially with regard to security implications.

**[DAY: 3]**

#### **MODULE III Debugging (5 Hrs)**

Debugging is a general issue growing together with the number of connected devices – time and effort for debugging grows in parallel.

**[DAY: 4]**



#### **MODULE IV Launch Phase (5 Hrs)**

Time-to-market and time-to-revenue have always been tough indicators in embedded system development, especially in the IoT segment.

**[DAY: 5]**

#### **MODULE V : Design Limitations (5 Hrs)**

The challenges in design of embedded systems have always been in the same limiting requirements for decades: Small form factor; Low energy; Long-term stable performance without maintenance. The market demands from designers to pack more processing power and longer battery life into smaller spaces, which is often a tradeoff. Finally, depending on applications in IoT, there is a growing demand for manufacture of very scalable processor families ranging from cheap and ultra-low-power to maximum performance and highly configurable processors with forward-compatible instruction set.





## Department of Mechatronics

### Value Added Course - EMBEDDED SOFTWARE DEVELOPMENT CONCEPTS

#### PARTICIPANTS LIST

| S.No | Reg.No   | Name               | Department   |
|------|----------|--------------------|--------------|
| 1.   | U17MT703 | KOLLATI NAGA SIVA  | Mechatronics |
| 2.   | U17MT701 | KEERTHIVASAN       | Mechatronics |
| 3.   | U17MT504 | ARAVIND            | Mechatronics |
| 4.   | U17MT503 | DISHAN ASIR RAJ    | Mechatronics |
| 5.   | U17MT502 | MUTHU VIJAY RAJA   | Mechatronics |
| 6.   | U17MT501 | ADITHIYA           | Mechatronics |
| 7.   | U17MT061 | MOHAMMED ABBAS     | Mechatronics |
| 8.   | U17MT060 | DINESHKUMAR        | Mechatronics |
| 9.   | U17MT059 | RAKKESH ARAVIND    | Mechatronics |
| 10.  | U17MT058 | NAGARAJ            | Mechatronics |
| 11.  | U17MT057 | SREE MUKESH        | Mechatronics |
| 12.  | U17MT056 | SURYA PRAKASH      | Mechatronics |
| 13.  | U17MT055 | YOKESH RAJ         | Mechatronics |
| 14.  | U17MT054 | VASANTH            | Mechatronics |
| 15.  | U17MT053 | GOKULAKRISHNAN     | Mechatronics |
| 16.  | U17MT052 | SATHISH KUMAR      | Mechatronics |
| 17.  | U17MT051 | BOLLEDDU RAVI TEJA | Mechatronics |
| 18.  | U17MT050 | THIRUMURUGAN       | Mechatronics |



|     |          |                                   |              |
|-----|----------|-----------------------------------|--------------|
| 19. | U17MT049 | NIKHILANTONY                      | Mechatronics |
| 20. | U17MT048 | PALANIYAPPAN                      | Mechatronics |
| 21. | U17MT046 | VIGNESHWARAN                      | Mechatronics |
| 22. | U17MT045 | ABDUL RAHAMAN                     | Mechatronics |
| 23. | U17MT044 | BADDITI                           | Mechatronics |
| 24. | U17MT042 | METHIL KRISHNAN                   | Mechatronics |
| 25. | U17MT040 | NIZAMUDEEN                        | Mechatronics |
| 26. | U17MT039 | SAGADEVAN                         | Mechatronics |
| 27. | U17MT038 | DHARANIDHARAN                     | Mechatronics |
| 28. | U17MT037 | DINESH                            | Mechatronics |
| 29. | U17MT036 | SUSHIL KUMAR                      | Mechatronics |
| 30. | U17MT035 | HARIHARAN                         | Mechatronics |
| 31. | U17MT034 | JONNALAGADDA GOPALA KRISHNA MOHAN | Mechatronics |
| 32. | U17MT033 | KARTHIK                           | Mechatronics |
| 33. | U17MT032 | LAKKIREDDY PAVAN KALYAN           | Mechatronics |
| 34. | U17MT031 | SYED SAMSUDEEN                    | Mechatronics |
| 35. | U17MT029 | PRAKASH RAJ                       | Mechatronics |
| 36. | U17MT028 | HEMALATHA                         | Mechatronics |
| 37. | U17MT703 | KOLLATI NAGA SIVA                 | Mechatronics |
| 38. | U17MT701 | KEERTHIVASAN                      | Mechatronics |
| 39. | U17MT504 | ARAVIND                           | Mechatronics |
| 40. | U17MT503 | DISHAN ASIR RAJ                   | Mechatronics |
| 41. | U17MT502 | MUTHU VIJAY RAJA                  | Mechatronics |
| 42. | U17MT501 | ADITHIYA                          | Mechatronics |



|     |           |                                  |                        |
|-----|-----------|----------------------------------|------------------------|
| 43. | U17MT061  | MOHAMMED ABBAS                   | Mechatronics           |
| 44. | U17ME069  | VEMPULURU RAKESH                 | Mechanical Engineering |
| 45. | U17ME070  | MARRIPATI BHARGAV                | Mechanical Engineering |
| 46. | U17ME072  | CHITTIREDDY PAVAN                |                        |
| 47. | U17ME073  | VARDA SAI<br>SREEKANTH REDDY S   | Mechanical Engineering |
| 48. | U17ME066  | YETTELLA<br>BHUVANESWARA REDDY . | Mechanical Engineering |
| 49. | U17ME068  | CHALLA GIRREESH<br>GIREESH       | Mechanical Engineering |
| 50. | U17AM015  | KUTHE SOURABHSURESH              | Automobile Engineering |
| 51. | U17AM009  | KARTHICK Y                       | Automobile Engineering |
| 52. | U17AM014  | KUMBHAR RAHUL                    | Automobile Engineering |
| 53. | U17AM020- | RITHISHKRISHNA D V               | Automobile Engineering |
| 54. | U17AM021  | -SHAIK REHAMAN                   | Automobile Engineering |
| 55. | U17MT023  | PRAVEEN                          | Mechatronics           |
| 56. | U17ME069  | VEMPULURU RAKESH                 | Mechanical Engineering |
| 57. | U17ME070  | MARRIPATI BHARGAV                | Mechanical Engineering |





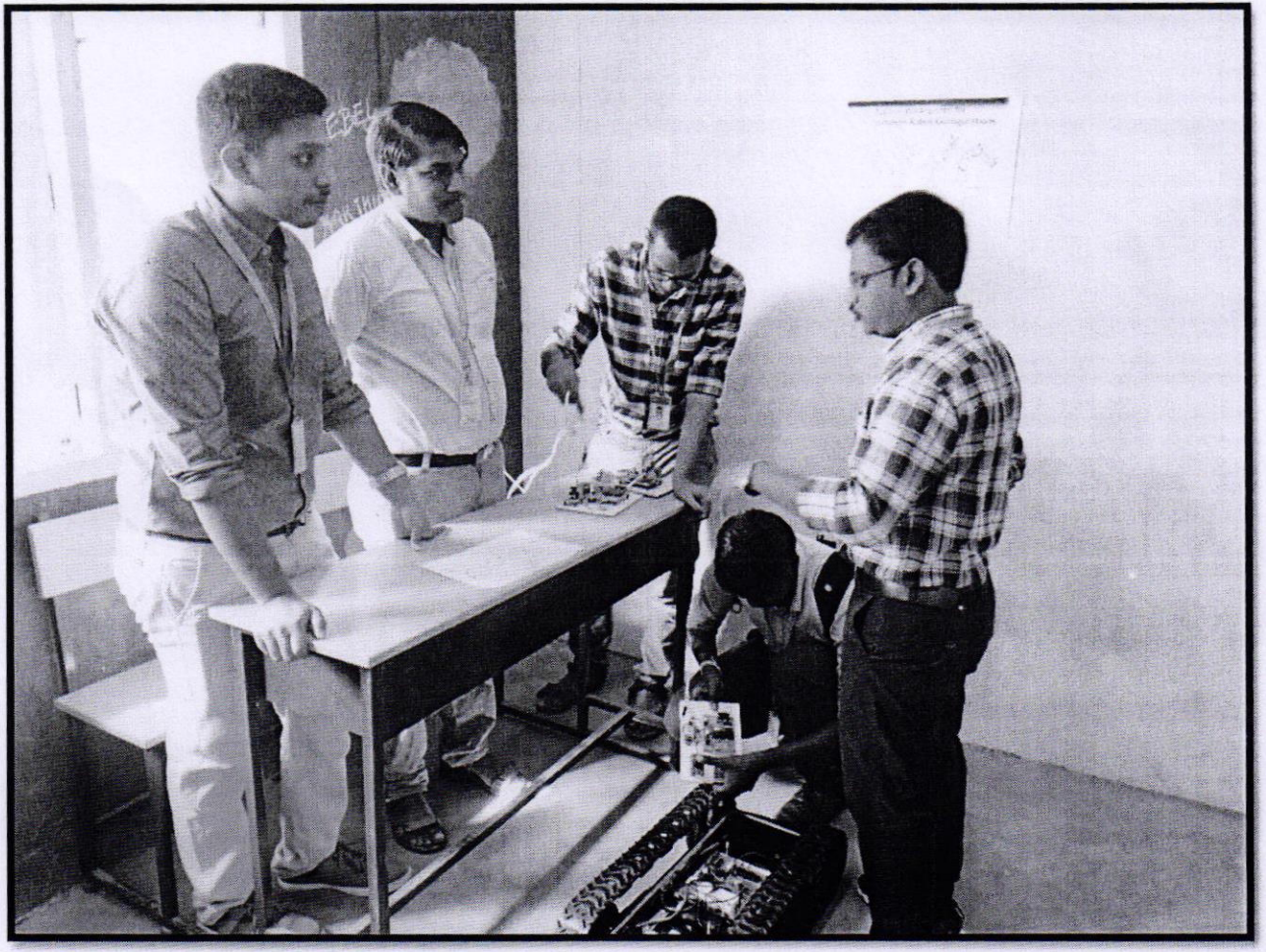
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## Department of Mechatronics

### EMBEDDED SOFTWARE DEVELOPMENT CONCEPTS

Value added course conducted by Dr.R.Srinivasan, Software Trainer, Unikerz Technologies, Chennai.







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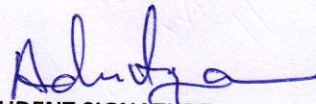
Selaiyur, Chennai - 73.

**DEPARTMENT OF MECHATRONICS**

**VALVE ADDED COURSE**  
**FEEDBACK FORM**

Date: 9/9/2016

|   |  |      |      |           |           |
|---|--|------|------|-----------|-----------|
| NAME                                    | ADITHYA.                               |      |      |           |           |
| REGISTER.NO                             | U17MT501                               |      |      |           |           |
| COURSE TITLE                            | EMBEDDED SOFTWARE DEVELOPMENT CONCEPTS |      |      |           |           |
|   | POOR                                   | FAIR | GOOD | VERY GOOD | EXCELLENT |
| OVERALL PROGRAM                         |  | ✓    |      |           |           |
| THE SPEAKER                             |  |      | ✓    |           | ✓         |
| AUDIO,VISIAL<br>AIDS,TECHNOLOGY<br>USED |  |      |      | ✓         | ✓         |
| PRESENTATION<br>HAND OUTS               |  |      |      |           | ✓         |

  
STUDENT SIGNATURE



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Selaiyur, Chennai - 73.

**DEPARTMENT OF MECHATRONICS**

VALVE ADDED COURSE

FEEDBACK FORM

Date: 9/9/2016.

|   |   |      |      |           |           |
|---|---|------|------|-----------|-----------|
| NAME                                    | Yogesh Raj                              |      |      |           |           |
| REGISTER.NO                             | U17MT055                                |      |      |           |           |
| COURSE TITLE                            | Embedded Software Development Concepts. |      |      |           |           |
|   | POOR                                    | FAIR | GOOD | VERY GOOD | EXCELLENT |
| OVERALL PROGRAM                         |   |      | ✓    |           |           |
| THE SPEAKER                             |   |      | ✓    |           |           |
| AUDIO,VISIAL<br>AIDS,TECHNOLOGY<br>USED |   |      | ✓    |           |           |
| PRESENTATION<br>HAND OUTS               |   |      | ✓    |           |           |

Yogesh Raj  
STUDENT SIGNATURE



BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY  
DEPARTMENT OF MECHATRONICS

**CERTIFICATE OF PARTICIPATION**

This is to certify that  
**DINESH**

of Bharath Institute of Science and Technology

had attended the 5 day Value Added Program on  
**EMBEDDED SOFTWARE DEVELOPMENT CONCEPTS**

organized by the Department of Mechatronics-

Bharath Institute of Higher Education and Research, Chennai on **5/9/2016 TO 9/9/2016**

*V.G. Vijaya*  
*J. Dhasekaran*  
**V.G.VIJAYA/J.DHANASEKAR**

Coordinators

*Dr. P. Sengottuvel*  
**Dr. P. Sengottuvel**  
Resource Person



**Bharath**  
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Date: 18.06.2015

**Department of Automobile Engineering**  
**Circular**

The Department of Automobile Engineering, BIHER glad to conduct on six days value added program on "***Unmanned Vehicle Navigation***" from 02.07.2015 for 30 hours. Those who are interested to participate do register your name to the program coordinator.

**Resource persons:**

**Dr.P.Naveenchandran**

Prof. & Head

Dept. of Auto. Engg.

BIHER

**Mr.C.Thamotharan**

Associate Professor,

Dept. of Auto. Engg.

BIHER

  
**Program Coordinator:**

Mr. E. Raja

Asst. Professor

[rajaaerospace@gmail.com](mailto:rajaaerospace@gmail.com)

  
(HOD-Auto)





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**Department of Automobile Engineering**

**Course on “Unmanned Vehicle Navigation”**

**OBJECTIVES:**

- To introduce the parts and functions of UAV
- To explain the concepts of Aerodynamics, Propulsion & Structures of Model
- To enable the students to understand the working principle and components of UAV
- To Demonstrate the design process of UAV and create confidence in exploring

**[DAY: 1]**

**MODULE 1 Introduction to Aerial Robotics (5 Hrs)**

**[DAY: 2]**

**MODULE 2 Geometry and Mechanics of UAV (5 Hrs)**

**[DAY: 3]**

**MODULE 3 Pay Load for UAV (5 Hrs)**

**[DAY: 4]**

**MODULE 4 Launching systems of UAV (5 Hrs)**

**[DAY: 5]**

**MODULE 5: Navigation and Guidance of UAV (5 Hrs)**

**[DAY: 6]**

**Practical Session for using Unmanned Vehicle Models (5 Hrs)**



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**Department of Automobile Engineering**  
**Value Added Course – Unmanned Vehicle Model**  
**(02.07.2015 to 09.07.2015)**

**PARTICIPANTS LIST**

| S.NO | REG.NO   | NAME                       | DEPARTMENT |
|------|----------|----------------------------|------------|
| 1    | U14AM001 | ABDUL KHADAR BASHA M       | Automobile |
| 2    | U14AM002 | ABHISHEK SINGH KUSHWAHA    | Automobile |
| 3    | U14AM006 | ANDREW AGGAS.I.C.          | Automobile |
| 4    | U14AM007 | ANTHONY RAJ.J              | Automobile |
| 5    | U14AM008 | AṘAVIND REDDY.M            | Automobile |
| 6    | U14AM010 | CHADUNUPALLI SRIKANTH      | Automobile |
| 7    | U14AM012 | DEVA KUMAR.R               | Automobile |
| 8    | U14AM015 | GULSHAN KUMAR              | Automobile |
| 9    | U14AM016 | HAARIS SATHEESH            | Automobile |
| 10   | U14AM017 | HARIOM PARMAR              | Automobile |
| 11   | U14AM020 | KANUGONDA HARI KIRAN REDDY | Automobile |
| 12   | U14AM023 | LENIN .R                   | Automobile |
| 13   | U14AM025 | MOHAMED ANSAR.S            | Automobile |
| 14   | U14AM027 | MUTHU MANIKKAMOORITHY.R    | Automobile |
| 15   | U14AM028 | NAVEEN KUMAR .V            | Automobile |
| 16   | U14AM033 | PRITHIVIRAJ K.             | Automobile |
| 17   | U14AM035 | RAGHAVENDRAN . S.D         | Automobile |
| 18   | U14AM036 | RAKTIM PAL                 | Automobile |
| 19   | U14AM038 | REUBAN DAVID.D             | Automobile |
| 20   | U14AM042 | SIBBALA NIKHIL RAM         | Automobile |



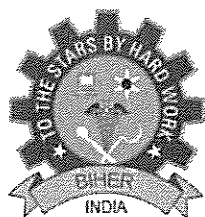


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**Department of Automobile Engineering**  
**Value Added Course – Unmanned Vehicle Model**  
**(02.07.2015 to 09.07.2015)**

**PARTICIPANTS LIST**

| S.NO | REG.NO   | NAME                | DEPARTMENT |
|------|----------|---------------------|------------|
| 21   | U14ME005 | ABHISHEK KUMAR      | Mechanical |
| 22   | U14ME009 | ADDURI PAVAN KUMAR  | Mechanical |
| 23   | U14ME014 | AJAY KUMAR SHARMA   | Mechanical |
| 24   | U14ME018 | AJITHKUMAR.P        | Mechanical |
| 25   | U14ME019 | AKHLAK ANSARI       | Mechanical |
| 26   | U14ME022 | ALLWYN EPHRAIM.S.   | Mechanical |
| 27   | U14ME026 | AMIT KUMAR PANDEY   | Mechanical |
| 28   | U14ME029 | ANAND.U             | Mechanical |
| 29   | U14ME031 | ANGADI DINESH KUMAR | Mechanical |
| 30   | U14ME032 | AGNEL WILFRED .A    | Mechanical |
| 31   | U14ME034 | ANIL KUMAR          | Mechanical |
| 32   | U14ME037 | ANUJ KUMAR          | Mechanical |
| 33   | U14ME040 | ARAVIND.V           | Mechanical |
| 34   | U14ME042 | ARAVINDHAN.B        | Mechanical |
| 35   | U14ME043 | ARSHAD JAMAL        | Mechanical |
| 36   | U14ME044 | ARUN .H             | Mechanical |
| 37   | U14ME046 | ARUN KUMAR .D       | Mechanical |
| 38   | U14ME048 | MD ASGAR ANSARI     | Mechanical |



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**Department of Automobile Engineering**  
**Value Added Course – Unmanned Vehicle Model**  
**(02.07.2015 to 09.07.2015)**

**PARTICIPANTS LIST**

| S.NO | REG.NO   | NAME                           | DEPARTMENT   |
|------|----------|--------------------------------|--------------|
| 39   | U14MT004 | ARULSELVAN.A                   | Mechatronics |
| 40   | U14MT012 | NIVIN DEVASSY                  | Mechatronics |
| 41   | U14MT021 | SARAVANAN.P                    | Mechatronics |
| 42   | U14MT024 | VANNIYAR MANIKANDAN<br>PERUMAL | Mechatronics |
| 43   | U14MT026 | VIGNESH.R                      | Mechatronics |
| 44   | U14MT701 | YUVARAJ.S                      | Mechatronics |
| 45   | U14MT707 | PATIL TEJAS SUNIL              | Mechatronics |
| 46   | U14MT710 | CHANDRAN.R                     | Mechatronics |





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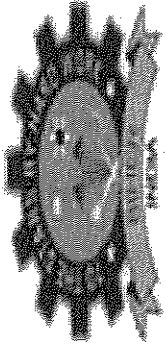
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**Department of Automobile Engineering**

**Value Added Course – Unmanned Vehicle Model- conducted  
by Dr. P. Naveenchandran on 03.07.2015**

**SNAP SHOT**





**Bharath**

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**BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY**

No.173, Agharam Road, Selaiyur, Chennai - 600 073.

*Department of Automobile Engineering*

# Participation Certificate

*This is to certify that*

**DEVAKUMAR R (U14AM012)**

has attended the value added program on " Unmanned  
Vehicle Navigation" organized by Department of Automobile  
Engineering, Bharath Institute of Higher Education and Research,  
Chennai, on 02-07-2015 to 09-07-2015

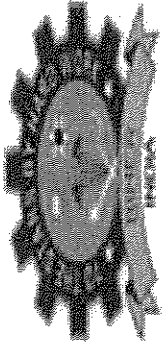
  
Mr. E. Raja

Co-ordinator



Dr. P. Naveen Chandran  
Prof. & Head





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**BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY**

No.173, Agharam Road, Selalpur, Chennai - 600 073.

*Department of Automobile Engineering*

# Participation Certificate

*This is to certify that*

**AJAY KUMAR SHARMA (U14ME014)**

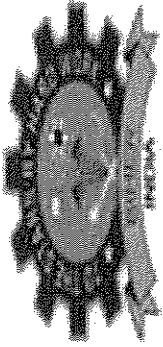
has attended the value added program on " Unmanned  
Vehicle Navigation" organized by Department of Automobile  
Engineering, Bharath Institute of Higher Education and Research,  
Chennai, on 02-07-2015 to 09-07-2015

  
Mr. E. Raja

Co-ordinator



Dr. P. Naveen Chandran  
Prof. & Head



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**BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY**

No.173, Agharam Road, Selayur, Chennai - 600 073.

*Department of Automobile Engineering*

# Participation Certificate

*This is to certify that*

**SARAVANAN P (U14MT021)**

has attended the value added program on " Unmanned  
Vehicle Navigation" organized by Department of Automobile  
Engineering, Bharath Institute of Higher Education and Research,  
Chennai, on 02-07-2015 to 09-07-2015

  
Mr. E. Raja

Co-ordinator



Dr. P. Naveenchandran  
Prof. & Head





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**Bharath Institute of Higher Education and Research, Chennai-600073**

## STUDENT FEEDBACK FORM FOR VALUE ADDED COURSES

School : School of Mechanical Engineering  
Department : Automobile Engineering  
Name /code of the value added course offered: Unmanned Vehicle Navigation  
Semester : III Sem.  
Period of Batch : 2014-2018  
Register Number : U14AM007  
Staff Coordinator : Mr. E. Raja  
Staff Handling : Dr. P. Naveen Chandran

## STUDENT FEEDBACK

Dear Student,

You are required to give your feedback on the following aspects. Please tick in the respective column.

| S.No | Criteria                              | Rating    |           |         |      |              |
|------|---------------------------------------|-----------|-----------|---------|------|--------------|
|      |                                       | Excellent | Very good | Good    | Fair | Satisfactory |
| 1    | Course content                        | ✓         |           |         |      |              |
| 2    | Skill development                     |           |           |         |      |              |
| 3    | Motivation                            |           | ✓         |         |      |              |
| 4    | Regularity and punctuality of teacher |           | ✓         |         |      |              |
| 5    | Coverage of syllabus                  |           | ✓         |         |      |              |
| 6    | Interaction                           | ✓         |           |         |      |              |
| 7    | Individual attention                  | ✓         |           |         |      |              |
| 8    | Outcome                               |           | ✓         |         |      |              |
| 9    | Other suggestions                     |           |           | — nil — |      |              |



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**Bharath Institute of Higher Education and Research, Chennai-600073**

## STUDENT FEEDBACK FORM FOR VALUE ADDED COURSES

School : Mechanical Engineering  
Department : Mechanical  
Name /code of the value added course offered: Unmanned vehicle navigation.  
Semester : IV  
Period of Batch : 2014 - 2018  
Register Number : U14ME022  
Staff Coordinator : M.V. S. RAJA  
Staff Handling : Dr. P. Naveen Chandran, S. Hanumantharao

## STUDENT FEEDBACK

Dear Student,

You are required to give your feedback on the following aspects. Please tick in the respective column.

| S.No | Criteria                              | Rating    |           |      |      |              |
|------|---------------------------------------|-----------|-----------|------|------|--------------|
|      |                                       | Excellent | Very good | Good | Fair | Satisfactory |
| 1    | Course content                        | ✓         |           |      |      |              |
| 2    | Skill development                     | ✓         | ✓         |      |      |              |
| 3    | Motivation                            | ✓         | ✓         |      |      |              |
| 4    | Regularity and punctuality of teacher | ✓         |           |      |      |              |
| 5    | Coverage of syllabus                  | ✓         |           |      |      |              |
| 6    | Interaction                           | ✓         |           |      |      |              |
| 7    | Individual attention                  |           | ✓         |      |      |              |
| 8    | Outcome                               |           | ✓         |      |      |              |
| 9    | Other suggestions                     | ✓         | ✓         | ✓    | ✓    | ✓            |





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**Bharath Institute of Higher Education and Research, Chennai-600073**

## STUDENT FEEDBACK FORM FOR VALUE ADDED COURSES

School : Mechanical engg  
Department : Mechanics  
Name /code of the value added course offered: un named vehicle navigation.  
Semester : 3rd  
Period of Batch : 2014-2018  
Register Number : UHAMT024  
Staff Coordinator : E. RAY  
Staff Handling : Dr-P. Naveen Chandram

## STUDENT FEEDBACK

Dear Student,

You are required to give your feedback on the following aspects. Please tick in the respective column.

| S.No | Criteria                              | Rating    |           |      |      |              |
|------|---------------------------------------|-----------|-----------|------|------|--------------|
|      |                                       | Excellent | Very good | Good | Fair | Satisfactory |
| 1    | Course content                        |           | /         |      |      |              |
| 2    | Skill development                     |           |           | /    |      |              |
| 3    | Motivation                            |           | /         | X    |      |              |
| 4    | Regularity and punctuality of teacher | /         |           |      |      |              |
| 5    | Coverage of syllabus                  |           | /         |      |      |              |
| 6    | Interaction                           |           |           | /    |      |              |
| 7    | Individual attention                  |           |           |      |      |              |
| 8    | Outcome                               |           |           |      |      |              |
| 9    | Other suggestions                     |           |           |      |      |              |



# Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH  
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Date: 04.02.2016

**Department of Automobile Engineering**  
**Circular**

The of Department of Automobile Engineering, BIHER glad to conduct on six days value added program on "***Automotive Chassis Design***" from 15.02.2016 for 30 hours. Those who are interested to participate do register your name to the program coordinator.

**Resource persons:**

**Dr.P.Naveenchandran**

Prof. & Head

Dept. of Auto. Engg.

BIHER

**Mr.C.Thamotharan**

Associate Professor,

Dept. of Auto. Engg.

BIHER

  
**Program Coordinator:**

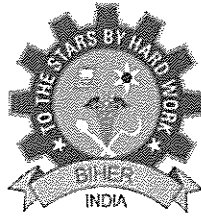
Mr.E.Raja

Asst. Professor

[rajaerospace@gmail.com](mailto:rajaerospace@gmail.com)

  
(HOD-Auto)





**Bharath**  
INSTITUTE OF HIGHER EDUCATION AND RESEARCH  
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**Department of Automobile Engineering**

**Course on “Automotive Chassis Design”**

**OBJECTIVES:**

- To make students familiar with the constructional details of chassis and body
- To understand about various steering systems, steering linkages and steering gear boxes and power steering
- To study the different components in the drive line and types of final drive.
- To introduce students to the rear axles and types of suspension systems
- To introduce students to braking systems, wheels and tyres

**[DAY: 1]**

**MODULE 1 Constructional details of chassis and body (5 Hrs)**

**[DAY: 2]**

**MODULE 2 Steering systems, linkages and gear boxes (5 Hrs)**

**[DAY: 3]**

**MODULE 3 Different components in the drive line and types of final drive (5 Hrs)**

**[DAY: 4]**

**MODULE 4 Study of rear axles and types of suspension systems (5 Hrs)**

**[DAY: 5]**

**MODULE 5: Study of braking systems, wheels and tyres (5 Hrs)**

**[DAY: 6]**

**MODULE 6: Practical Design of Automotive Chassis Design (5 Hrs)**



# Bharath

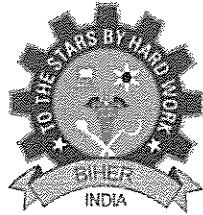
INSTITUTE OF HIGHER EDUCATION AND RESEARCH  
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**Department of Automobile Engineering**  
**Value Added Course - Automotive Chassis Design**  
**(15.02.2016 to 20.02.2016)**

**PARTICIPANTS LIST**

| S.NO | REG.NO   | NAME                         | DEPARTMENT |
|------|----------|------------------------------|------------|
| 1    | U15AM001 | ABHIJIT ARYA                 | Automobile |
| 2    | U15AM004 | ASWIN S                      | Automobile |
| 3    | U15AM005 | BHARANIDHARAN C              | Automobile |
| 4    | U15AM007 | EDULA VISHNU GOVARDHAN REDDY | Automobile |
| 5    | U15AM008 | GANNI VINEETH SREE SAI       | Automobile |
| 6    | U15AM009 | GOKULPRASHANTH V             | Automobile |
| 7    | U15AM011 | INNAMULHASAN S               | Automobile |
| 8    | U15AM012 | MANIKANDAN A                 | Automobile |
| 9    | U15AM014 | MATHAN KUMAR S               | Automobile |
| 10   | U15AM017 | MUTUM NAOBA SINGH            | Automobile |
| 11   | U15AM020 | PIHE SHIU                    | Automobile |
| 12   | U15AM021 | PREM KUMAR                   | Automobile |
| 13   | U15AM022 | RAJU BARMAN                  | Automobile |
| 14   | U15AM023 | RAMA KRISHNAN V K            | Automobile |





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## Department of Automobile Engineering

### Value Added Course - Automotive Chassis Design (15.02.2016 to 20.02.2016)

#### PARTICIPANTS LIST

| S.NO | REG.NO   | NAME                    | DEPARTMENT |
|------|----------|-------------------------|------------|
| 15   | U15ME007 | AGASH RAJ R             | Mechanical |
| 16   | U15ME011 | AKIRI VENKATESH         | Mechanical |
| 17   | U15ME016 | AMBATI ADI ESWAR REDDY. | Mechanical |
| 18   | U15ME020 | ANUP KUMAR SRIVASTAWA   | Mechanical |
| 19   | U15ME024 | ARUN KUMAR              | Mechanical |
| 20   | U15ME077 | HULENDRA KUMAR          | Mechanical |
| 21   | U15ME095 | KARRI YASWANTH SRINIVAS | Mechanical |
| 22   | U15ME164 | NEHAL AHMAD             | Mechanical |
| 23   | U15ME177 | PRABHU G                | Mechanical |
| 24   | U15ME274 | YOGARAJ R               | Mechanical |
| 25   | U15ME290 | SHAIK SHAHEEN           | Mechanical |
| 26   | U15ME702 | SARAVANAN M             | Mechanical |
| 27   | U15ME715 | GAIOS SOHSHANG          | Mechanical |



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## Department of Automobile Engineering

### Value Added Course - Automotive Chassis Design (15.02.2016 to 20.02.2016)

#### PARTICIPANTS LIST

| S.NO | REG.NO   | NAME                          | DEPARTMENT   |
|------|----------|-------------------------------|--------------|
| 28   | U15MT002 | BALAJI N                      | Mechatronics |
| 29   | U15MT005 | KARTHIGAYAN P                 | Mechatronics |
| 30   | U15MT007 | MOHAMMED IDRIS S              | Mechatronics |
| 31   | U15MT011 | VIJAY S                       | Mechatronics |
| 32   | U15MT014 | PADIYACHI MONISH<br>DANASEKAR | Mechatronics |
| 33   | U15MT703 | MOHANAKUMARESAN B             | Mechatronics |
| 34   | U15MT705 | JAI HARISH M                  | Mechatronics |

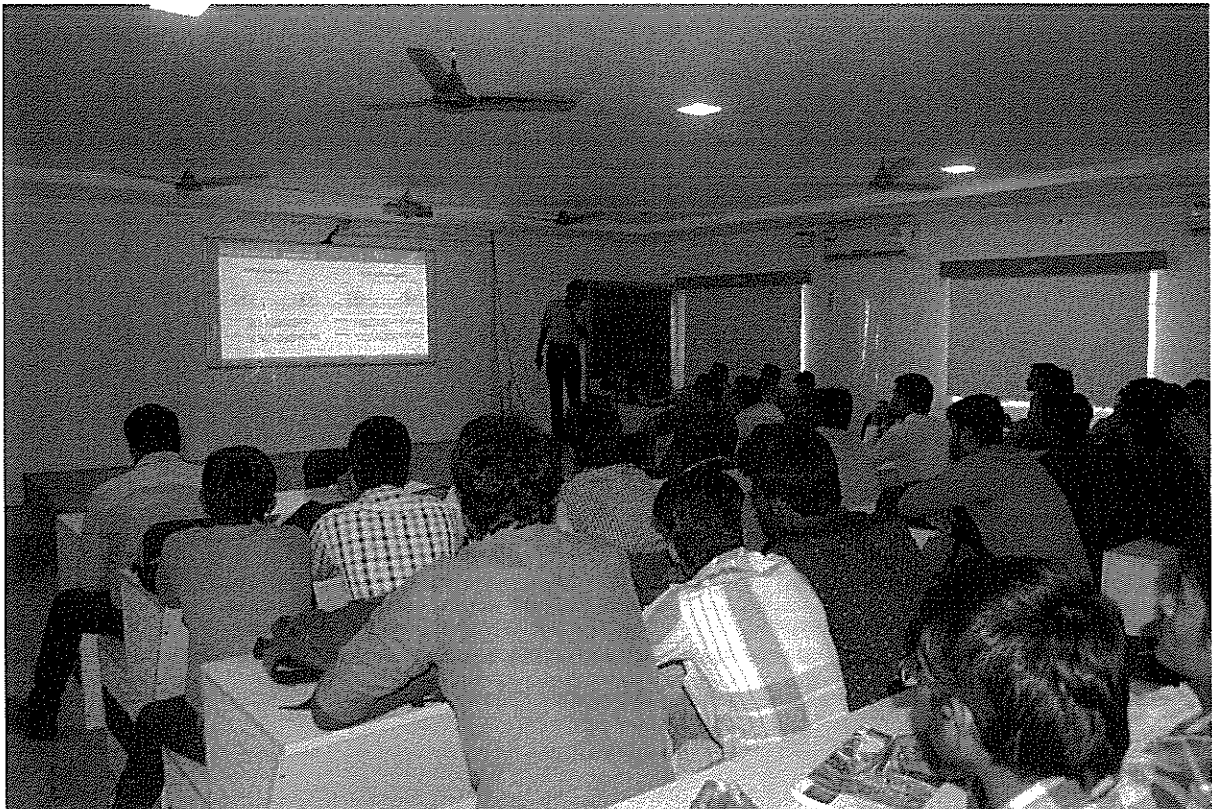


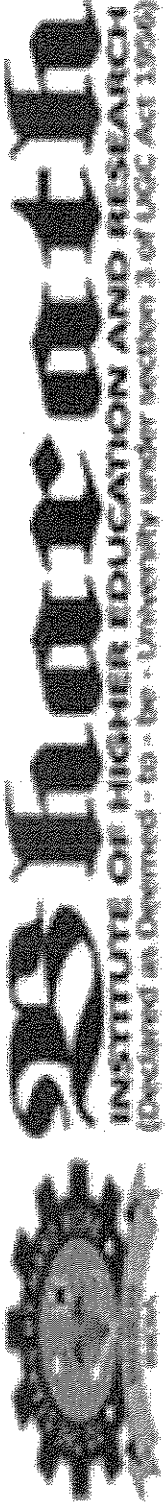


**Bharath**  
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**Department of Automobile Engineering**  
**Value Added Course – Automotive Chassis Design -**  
**conducted by Dr. P. Naveenchandran on 16.02.2016**

**SNAP SHOT**





**BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY**

No.173, Agharam Road, Selahyur, Chennai - 600 073.

**Department of Automobile Engineering**

# Participation Certificate

*This is to certify that*

**BHARANIDHARAN C (U15AM005)**

*has attended the value added program on "Automotive Chassis Design" organized by Department of Automobile Engineering, Bharath Institute of Higher Education and Research, Chennai, on 15-02-2016 to 20-02-2016.*

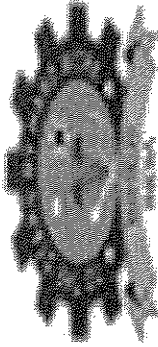


**Mr. E. Raja**  
Co-ordinator



**Dr. P. Naveen Chandran**  
Prof. & Head





**Bharath Institute of Higher Education and Research**

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**BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY**

No.173, Aghuram Road, Seshiyur, Chennai - 600 073.

**Department of Automobile Engineering**

# **Participation Certificate**

*This is to certify that*

**YOGARAJ R (U15ME274)**

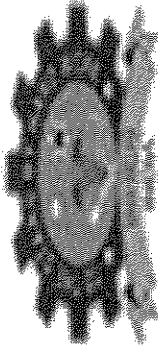
*has attended the value added program on "Automotive Chassis Design" organized by Department of Automobile Engineering, Bharath Institute of Higher Education and Research, Chennai, on 15-02-2016 to 20-02-2016.*



**Mr. E. Raja**  
**Co-ordinator**



**Dr. P. Naveen Chandran**  
**Prof. & Head**



**25th Anniversary**  
INSTITUTE OF HIGHER EDUCATION AND RESEARCH  
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**BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY**

No.173, Agharam Road, Selaiyur, Chennai - 600 073.

**Department of Automobile Engineering**

# Participation Certificate

*This is to certify that*

**VIJAY S (U15MT011)**

**has attended the value added program on "Automotive Chassis Design" organized by Department of Automobile Engineering, Bharath Institute of Higher Education and Research, Chennai, on 15-02-2016 to 20-02-2016.**



**Mr. E. Raja**  
Co-ordinator



**Dr. P. Naveenchandran**  
Prof. & Head





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**Bharath Institute of Higher Education and Research, Chennai-600073**

## STUDENT FEEDBACK FORM FOR VALUE ADDED COURSES

School : Mechanical  
Department : Automobile  
Name /code of the value added course offered: Automotive Chassis design.  
Semester : II  
Period of Batch : 2018 - 2019  
Register Number : UISAM024  
Staff Coordinator : E. RAJA  
Staff Handling : Dr. p. n. venkatesh chandran, C. Thangamurugesu.

## STUDENT FEEDBACK

Dear Student,

You are required to give your feedback on the following aspects. Please tick in the respective column.

| S.No | Criteria                              | Rating                              |                                     |                          |                          |                          |
|------|---------------------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|
|      |                                       | Excellent                           | Very good                           | Good                     | Fair                     | Satisfactory             |
| 1    | Course content                        | <input checked="" type="checkbox"/> |                                     |                          |                          |                          |
| 2    | Skill development                     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                          |                          |                          |
| 3    | Motivation                            | <input checked="" type="checkbox"/> |                                     |                          |                          |                          |
| 4    | Regularity and punctuality of teacher | <input checked="" type="checkbox"/> |                                     |                          |                          |                          |
| 5    | Coverage of syllabus                  | <input checked="" type="checkbox"/> |                                     |                          |                          |                          |
| 6    | Interaction                           | <input checked="" type="checkbox"/> |                                     |                          |                          |                          |
| 7    | Individual attention                  | <input checked="" type="checkbox"/> |                                     |                          |                          |                          |
| 8    | Outcome                               |                                     | <input checked="" type="checkbox"/> |                          |                          |                          |
| 9    | Other suggestions                     | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |



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**Bharath Institute of Higher Education and Research, Chennai-600073**

## STUDENT FEEDBACK FORM FOR VALUE ADDED COURSES

School : Mechanical  
Department : Mechanical

Name /code of the value added course offered: Automotive Chassis Design  
Semester : 3<sup>rd</sup> Sem.  
Period of Batch : 2015-2019  
Register Number : V15 ME 274  
Staff Coordinator : M.V. E. Raja  
Staff Handling : Dr. P. Navaneethan Chandran & Mr. C. Phamothias

## STUDENT FEEDBACK

Dear Student,

You are required to give your feedback on the following aspects. Please tick in the respective column.

| S.No | Criteria                              | Rating    |           |      |      |              |
|------|---------------------------------------|-----------|-----------|------|------|--------------|
|      |                                       | Excellent | Very good | Good | Fair | Satisfactory |
| 1    | Course content                        | ✓         |           |      |      |              |
| 2    | Skill development                     |           | ✓         |      |      |              |
| 3    | Motivation                            |           | ✓         |      |      |              |
| 4    | Regularity and punctuality of teacher |           | ✓         |      |      |              |
| 5    | Coverage of syllabus                  | ✓         |           |      |      |              |
| 6    | Interaction                           |           | ✓         |      |      |              |
| 7    | Individual attention                  |           |           | ✓    |      |              |
| 8    | Outcome                               | ✓         |           |      |      |              |
| 9    | Other suggestions                     | —         | —         | —    | —    | —            |





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**Bharath Institute of Higher Education and Research, Chennai-600073**

## STUDENT FEEDBACK FORM FOR VALUE ADDED COURSES

School : Mechanical Engg  
Department : Mechanics  
Name /code of the value added course offered: Automotive chassis design  
Semester : 3<sup>rd</sup>  
Period of Batch : 2014-2018  
Register Number : V15MT011  
Staff Coordinator : E. RAJA  
Staff Handling : Dr. P. NAVSEEN CHANDRAN

### STUDENT FEEDBACK

Dear Student,

You are required to give your feedback on the following aspects. Please tick in the respective column.

| S.No | Criteria                              | Rating    |           |      |      |              |
|------|---------------------------------------|-----------|-----------|------|------|--------------|
|      |                                       | Excellent | Very good | Good | Fair | Satisfactory |
| 1    | Course content                        |           | ✓         |      |      |              |
| 2    | Skill development                     |           |           | ✓    |      |              |
| 3    | Motivation                            |           | ✓         |      |      |              |
| 4    | Regularity and punctuality of teacher |           |           |      | ✓    |              |
| 5    | Coverage of syllabus                  |           | ✓         |      |      |              |
| 6    | Interaction                           |           |           | ✓    |      |              |
| 7    | Individual attention                  |           |           |      |      |              |
| 8    | Outcome                               |           |           |      |      |              |
| 9    | Other suggestions                     |           |           |      |      |              |



**Bharath**  
INSTITUTE OF HIGHER EDUCATION AND RESEARCH  
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Date: 02.06.2016

**Department of Automobile Engineering**  
**Circular**

The of Department of Automobile Engineering, BIHER glad to conduct on six days value added program on "**Course on Engine Overhauling**" from 13.06.2016 for 30 hours. Those who are interested to participate do register your name to the program coordinator.

**Resource persons:**

**Dr.P.Naveenchandran**

Prof. & Head

Dept. of Auto. Engg.

BIHER

**Mr.C.Thamotharan**

Associate Professor,

Dept. of Auto. Engg.

BIHER

  
**Program Coordinator:**

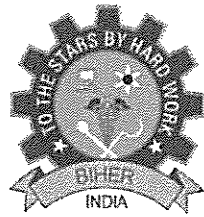
Mr.E.Raja

Asst. Professor

[rajaaerospace@gmail.com](mailto:rajaaerospace@gmail.com)

  
(HOD-Auto)





# Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH  
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## Department of Automobile Engineering

### Course on “Engine Overhauling”

#### OBJECTIVES:

- To enable student to understand the method of removal of Cylinder Head and Piston Connecting Rod Assembly
- To study the procedure of Cleaning and Overhauling Of Cylinder Head and Piston Connecting Rod Assembly
- To make students familiar with the Calibration of Cylinder Liner, Piston, Piston Rings, Ovality Check of Connecting Rod etc.,
- To study the procedure of Overhauling of Fuel Injection Pump, Attached JCW Pump
- To enable student to Assemble Cylinder Head, Piston Connecting Rod Etc.,

#### [DAY: 1]

**MODULE 1** Method of removal of Cylinder Head and Piston Connecting Rod Assembly (5 Hrs)

#### [DAY: 2]

**MODULE 2** Cleaning and Overhauling Of Cylinder Head and Piston Connecting Rod Assembly (5 Hrs)

#### [DAY: 3]

**MODULE 3** Calibration of Cylinder Liner, Piston, Piston Rings, Ovality Check of Connecting Rod etc., (5 Hrs)

#### [DAY: 4]

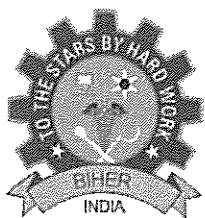
**MODULE 4** Overhauling of Fuel Injection Pump, Attached JCW Pump (5 Hrs)

#### [DAY: 5]

**MODULE 5:** Assembly of Cylinder Head, Piston Connecting Rod Etc., (5 Hrs)

#### [DAY: 6]

**MODULE 6:** Practical Session on Engine Overhauling (5 Hrs)



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**Department of Automobile Engineering**  
**Value Added Course – Engine Overhauling**  
**(13.06.2016 to 18.06.2016)**

**PARTICIPANTS LIST**

| S.NO | REG.NO   | NAME                     | DEPARTMENT |
|------|----------|--------------------------|------------|
| 1    | U15AM002 | ABISHEK RAJAGOPAL        | Automobile |
| 2    | U15AM006 | GIRIDAAR A               | Automobile |
| 3    | U15AM010 | HASHIM JAWAD MELEDATH    | Automobile |
| 4    | U15AM013 | MARIA SUBITCHAM VINITH N | Automobile |
| 5    | U15AM015 | MOHAMED ASHIF M          | Automobile |
| 6    | U15AM016 | MOHAMMED VASIM A         | Automobile |
| 7    | U15AM027 | SRIHARI K                | Automobile |
| 8    | U15AM028 | TARIGOPPALA NITHIN KUMAR | Automobile |
| 9    | U15AM029 | VIGNESH A                | Automobile |
| 10   | U15AM030 | VISHANTH K               | Automobile |
| 11   | U15AM034 | DERIN M                  | Automobile |
| 12   | U15AM036 | RUPESH RANA              | Automobile |
| 13   | U15AM703 | K.L.V. KOTESHWAR RAO     | Automobile |
| 14   | U15AM704 | INNAMURI SHANMUKA KIRAN  | Automobile |
| 15   | U15AM705 | REMILAN SUCHIANG         | Automobile |





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**Department of Automobile Engineering**  
**Value Added Course – Engine Overhauling**  
**(13.06.2016 to 18.06.2016)**

**PARTICIPANTS LIST**

| S.NO | REG.NO   | NAME                    | DEPARTMENT |
|------|----------|-------------------------|------------|
| 16   | U15ME015 | ALTAF HUSAIN            | Mechanical |
| 17   | U15ME022 | ARIVARASU J             | Mechanical |
| 18   | U15ME027 | ASHISH PATEL            | Mechanical |
| 19   | U15ME044 | BODDA DINESH            | Mechanical |
| 20   | U15ME088 | JOHNSON J               | Mechanical |
| 21   | U15ME095 | KARRI YASWANTH SRINIVAS | Mechanical |
| 22   | U15ME114 | LALASRAFI JEETHENDRA    | Mechanical |
| 23   | U15ME156 | NARAYANAN M             | Mechanical |
| 24   | U15ME175 | POTNURU SATISH          | Mechanical |
| 25   | U15ME231 | SHANKAR A               | Mechanical |
| 26   | U15ME247 | SURYA S                 | Mechanical |
| 27   | U15ME264 | VIMAL KUMAR J.V         | Mechanical |
| 28   | U15ME701 | GILL JEFRIN J           | Mechanical |
| 29   | U15ME714 | IENGSKHAN KUPAR DKHAR   | Mechanical |



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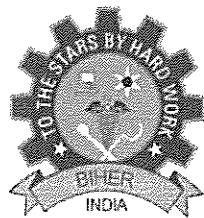
## Department of Automobile Engineering

**Value Added Course – Engine Overhauling  
(13.06.2016 to 18.06.2016)**

### **PARTICIPANTS LIST**

| S.NO | REG.NO   | NAME                        | DEPARTMENT   |
|------|----------|-----------------------------|--------------|
| 30   | U15MT001 | AJITH S                     | Mechatronics |
| 31   | U15MT004 | INAYATHULLA A               | Mechatronics |
| 32   | U15MT008 | OVIAN NICHOLAS              | Mechatronics |
| 33   | U15MT010 | TADIKONDA SAI TEJA          | Mechatronics |
| 34   | U15MT012 | MOHAMMED MOIDEEN<br>RIYAZ M | Mechatronics |
| 35   | U15MT702 | NEELAM SRIKANTH             | Mechatronics |
| 36   | U15MT704 | HARI PRASATH V K            | Mechatronics |





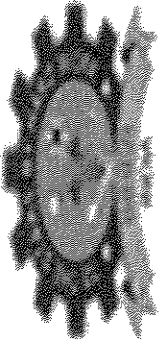
# Bharath

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

**Department of Automobile Engineering**  
**Value Added Course – Engine Overhauling**  
**conducted by Dr. P. Naveenchandran on 15.10.2018**

**SNAP SHOT**





**Bharath Institute of Higher Education and Research**  
INSTITUTE OF HIGHER EDUCATION AND RESEARCH  
(Declared as Deemed - to - be - University under section 3 of UGC Act 1956)

**BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY**  
No. 173, Aghoram Road, Selsayur, Chennai - 600 073.  
Department of Automobile Engineering

# Participation Certificate

This is to certify that

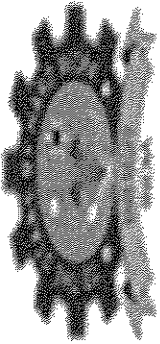
**SRIHARI K (U15AM027)**

has attended the value added program on "Engine Overhauling" organized by Department of Automobile Engineering, Bharath Institute of Higher Education and Research, Chennai, on 13-06-2016 to 18-06-2016

Mr. E. Raja  
Co-ordinator

Dr. P. Naveenchandran  
Prof. & Head





**25th Anniversary**

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**SHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY**

No.173, Ashram Road, Settyur, Chennai - 600 073.

**Department of Automobile Engineering**

# Participation Certificate

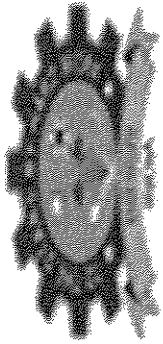
*This is to certify that*

**BODDA DINESH (U15ME044)**

**has attended the value added program on "Engine Overhauling" organized by Department of Automobile Engineering, Bharath Institute of Higher Education and Research, Chennai, on 13-06-2016 to 18-06-2016**

**Mr. E. Raja**  
Co-ordinator

**Dr. P. Naveen Chandran**  
Prof. & Head



**25th Anniversary**

**INSTITUTE OF HIGHER EDUCATION AND RESEARCH**  
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**BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY**

No.173, Agharam Road, Selatyr, Chennai - 600 073.

**Department of Automobile Engineering**

# Participation Certificate

*This is to certify that*

**OVIAN NICHOLAS (U15MT008)**

*has attended the value added program on "Engine Overhauling" organized by Department of Automobile Engineering, Bharath Institute of Higher Education and Research, Chennai, on 13-06-2016 to 18-06-2016*

*Q. Raja*

**Mr. E. Raja**  
Co-ordinator

**Dr. P. Naveen Chandran**  
Prof. & Head





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**Bharath Institute of Higher Education and Research, Chennai-600073**

## **STUDENT FEEDBACK FORM FOR VALUE ADDED COURSES**

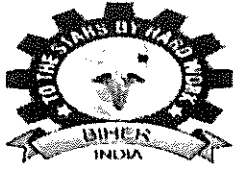
School : School of Mechanical Engineering  
Department : Automobile Engineering  
Name /code of the value added course offered: Engine Overhauling  
Semester : III  
Period of Batch : 2015 - 2019  
Register Number : U15AM006  
Staff Coordinator : Mr. E. RAJA  
Staff Handling : Dr. P. NAVEEN CHANDRAN, Mr. C. THAMOTHARAN

## **STUDENT FEEDBACK**

Dear Student,

You are required to give your feedback on the following aspects. Please tick in the respective column.

| S.No | Criteria                              | Rating    |           |      |      |              |
|------|---------------------------------------|-----------|-----------|------|------|--------------|
|      |                                       | Excellent | Very good | Good | Fair | Satisfactory |
| 1    | Course content                        | ✓         |           |      |      |              |
| 2    | Skill development                     |           | ✓         |      |      |              |
| 3    | Motivation                            | ✓         |           |      |      |              |
| 4    | Regularity and punctuality of teacher | ✓         |           |      |      |              |
| 5    | Coverage of syllabus                  |           | ✓         |      |      |              |
| 6    | Interaction                           | ✓         |           |      |      |              |
| 7    | Individual attention                  |           | ✓         |      |      |              |
| 8    | Outcome                               |           | ✓         |      |      |              |
| 9    | Other suggestions                     |           |           |      |      |              |



# Bharath

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

**Bharath Institute of Higher Education and Research, Chennai-600073**

## STUDENT FEEDBACK FORM FOR VALUE ADDED COURSES

School : MECHANICAL  
Department : MECHANICAL

Name /code of the value added course offered: Engine Overhaulng  
Semester : III

Period of Batch : 2015-2019

Register Number : U15ME088

Staff Coordinator : MV-E.Roja

Staff Handling : Dr. P. Naveen chandran & Mr. C. Theerthaven

## STUDENT FEEDBACK

Dear Student,

You are required to give your feedback on the following aspects. Please tick in the respective column.

| S.No | Criteria                              | Rating    |           |      |      |              |
|------|---------------------------------------|-----------|-----------|------|------|--------------|
|      |                                       | Excellent | Very good | Good | Fair | Satisfactory |
| 1    | Course content                        | ✓         |           |      |      |              |
| 2    | Skill development                     | ✓         |           |      |      |              |
| 3    | Motivation                            |           | ✓         |      |      |              |
| 4    | Regularity and punctuality of teacher |           | ✓         |      |      |              |
| 5    | Coverage of syllabus                  | ✓         |           |      |      |              |
| 6    | Interaction                           | ✓         |           |      |      |              |
| 7    | Individual attention                  |           | ✓         |      |      |              |
| 8    | Outcome                               |           | ✓         |      |      |              |
| 9    | Other suggestions                     | ✓         | ✓         |      | ✓    | ✓            |





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**Bharath Institute of Higher Education and Research, Chennai-600073**

## STUDENT FEEDBACK FORM FOR VALUE ADDED COURSES

School : Mechanical Engg  
Department : Mechanics  
Name /code of the value added course offered: Course on Engine over hauling  
Semester : 3rd  
Period of Batch : 2014-2018  
Register Number : U15MT008  
Staff Coordinator : B. Raja  
Staff Handling : Dr. P. Naveen chandran, C. Dharmadarn.

## STUDENT FEEDBACK

Dear Student,

You are required to give your feedback on the following aspects. Please tick in the respective column.

| S.No | Criteria                              | Rating    |           |      |      |              |
|------|---------------------------------------|-----------|-----------|------|------|--------------|
|      |                                       | Excellent | Very good | Good | Fair | Satisfactory |
| 1    | Course content                        | ✓         |           |      |      |              |
| 2    | Skill development                     |           | ✓         |      |      |              |
| 3    | Motivation                            |           | ✓         |      |      |              |
| 4    | Regularity and punctuality of teacher | ✓         |           |      |      |              |
| 5    | Coverage of syllabus                  |           | ✓         |      |      |              |
| 6    | Interaction                           |           |           | ✓    |      |              |
| 7    | Individual attention                  |           | ✓         |      |      |              |
| 8    | Outcome                               | ✓         |           |      |      |              |
| 9    | Other suggestions                     | —         | —         | —    | —    | —            |