



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



**SHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY**  
No.173, Agharam Road, Selayur, Chennai , T.N - 600 073.

**Requisition Letter**

Date: 02.12.2020

From  
Dr. K.P.Kaliyamurthie,  
Professor & Head,  
Department of CSE,  
Bharath Institute of Higher Education and Research,  
Chennai

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

Respected sir

**Subject: Request of Permission to conduct a value-added course on "Introduction to Fuzzy Logic Tool Box" (online) -Reg**

With reference to above subject, I would like to bring to your kind notice that, our department interested to organize value added course on "Introduction to Fuzzy Logic Tool Box" in our campus premises on 10.12.2020 students would be participating in this course. We request you kindly to give permission to organize this event.

Timing : 9:30 AM to 12:30 PM (FN) and 1:30 PM to 4:30 PM(AN) and Saturday (FN&AN).

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

**HOB**

**HEAD OF DEPARTMENT**

Department Of Computer Science & Engg.,  
Bharath Institute Of Higher Education & Research  
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)  
Chennai - 600 073, INDIA

**DEAN ENGINEERING**

**DEAN (Engineering)**

Bharath Institute of Science & Technology  
**BHARATH INSTITUTE OF HIGHER EDUCATION & RESEARCH**  
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)  
Selayur, Chennai-600 073.



# Bharath

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## CIRCULAR

05.12.2020

The school of computing, Bharath Institute of Higher Education and Research is planned to conduct a certification value added course on **Introduction to Fuzzy Logic Tool Box** for the benefit of students. This course is scheduled from 10.12.2020 to 19.12.2020. The timings are 9:30 AM to 12:30 PM (FN) and 1:30 PM to 4:30 PM (AN) and Saturday (FN&AN).

All Registered Students must attend all the classes without fail. The following faculty members are assigned to handle the course. S.NO	Name of the Faculty	Designation
1	Dr. G. Michael	Professor
2	Mr. B. Sundaraj	Assistant Professor

To

Copy to CSE

Copy to IT

**Head of Department**

HEAD OF DEPARTMENT

Department Of Computer Science & Engg.,

Bharath Institute Of Higher Education & Research

(Declared as Deemed to be University U/S of UGC Act, 1956)

Chennai - 600 073, INDIA



# **Bharath**

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## **CERTIFICATE COURSE ON Training on INTRODUCTION TO FUZZY - LOGIC TOOL BOX**

### **COURSE SYLLABUS**

#### **1. Fuzzy Logic Toolbox Product Description**

Key Features, What is Different About Using Fuzzy Logic Toolbox Online.

#### **2. Foundations of Fuzzy Logic**

Fuzzy Sets , Membership Functions . Logical Operations . If-Then Rules . Types of Fuzzy Inference Systems .

#### **3. Description of Fuzzy Logic**

Why Use Fuzzy Logic , When Not to Use Fuzzy Logic , What Can Fuzzy Logic Toolbox Software do.

#### **4. Fuzzy Modeling and Identification**

About the Toolbox and the installation.

#### **5. Fuzzy Inference Process**

Fuzzify Input , Apply Fuzzy Operator, Apply Implication Method, Aggregate All Outputs, Defuzzify, Fuzzy Inference Diagram .

#### **6. Fuzzy Logic Designer**

Fuzzy Logic Toolbox Graphical User Interface Tools, The Basic Tipping Problem , The Fuzzy Logic Designer

#### **7. Fuzzy vs. Nonfuzzy Logic**

Basic Tipping Problem, Nonfuzzy Approach, Fuzzy Logic Approach

#### **8. Build Fuzzy Systems Using Custom Functions**

Build Fuzzy Inference Systems Using Custom Functions in Fuzzy Logic Designer, Specify Custom Membership Functions, Specify Custom Membership Functions.

#### **9. Adaptive Neuro-Fuzzy Modeling**

Neuro-Adaptive Learning and ANFIS, Comparison of Dnfis and Neuro-Fuzzy Designer Functionality.



## 10. Data Clustering

Fuzzy Clustering , Cluster Quasi-Random Data Using Fuzzy C-Means Clustering .

## 11. Deployment

Deploy Fuzzy Inference Systems

## 12. Compile and Evaluate Fuzzy Systems

Compile and Evaluate Fuzzy Systems on Windows Platforms, Compile and Evaluate Fuzzy Systems on UNIX Platforms

### COURSE OBJECTIVES

This course is designed to impart knowledge about Fuzzy Logic Toolbox Product and to Compile and Evaluate Fuzzy Systems on Windows Platforms, Compile and Evaluate Fuzzy Systems on UNIX Platforms

#### Students will learn

1. Understanding Fuzzy Logic Toolbox Product
2. Understanding Fuzzy Modeling and Identification
3. Analyse Fuzzy Inference Process
4. Understanding Fuzzy vs. Nonfuzzy Logic
5. Knowing Neuro-Fuzzy Modeling
6. Compile and Evaluate Fuzzy Systems on Windows Platforms as well as UNIX Platforms



**COURSE COORDINATOR**



**HEAD OF THE DEPARTMENT**

HEAD OF DEPARTMENT  
Department Of Computer Science & Engg.,  
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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## CERTIFICATE COURSE ON STATISTICS WITH INTRODUCTION TO FUZZY LOGIC TOOL BOX

The timings are 9:30 AM to 12:30 PM (FN) and 1:30 PM to 4:30 PM (AN)  
Saturday (FN&AN).

### Time Table & Lesson plan

CLASS	DATE	TOPIC
1	10-12-2020 (FN)	<b>1. Fuzzy Logic Toolbox Product Description</b> Key Features, What is Different About Using Fuzzy Logic Toolbox Online.
2	11-12-2020 (FN)	<b>2. Foundations of Fuzzy Logic</b> Fuzzy Sets , Membership Functions . Logical Operations . If-Then Rules . Types of Fuzzy Inference Systems .
3,4	12-12-2020 (FN & AN)	<b>3. Description of Fuzzy Logic</b> Why Use Fuzzy Logic , When Not to Use Fuzzy Logic , What Can Fuzzy Logic Toolbox Software do. <b>4. Fuzzy Modeling and Identification</b> About the Toolbox and the installation.
5	14-12-2020 (FN)	<b>5. Fuzzy Inference Process</b> Fuzzify Input , Apply Fuzzy Operator, Apply Implication Method, Aggregate All Outputs, Defuzzify, Fuzzy Inference Diagram .
6	15-12-2020 (FN)	<b>6. Fuzzy Logic Designer .</b> Fuzzy Logic Toolbox Graphical User Interface Tools, The Basic Tipping Problem , The Fuzzy Logic Designer <b>7. Fuzzy vs. Nonfuzzy Logic</b> Basic Tipping Problem, Nonfuzzy Approach, Fuzzy Logic Approach

7	16-12-2020 (FN)	<b>8. Build Fuzzy Systems Using Custom Functions</b>  Build Fuzzy Inference Systems Using Custom Functions in Fuzzy Logic Designer, Specify Custom Membership Functions, Specify Custom Membership Functions.
8	17-12-2020 (FN)	<b>9. Adaptive Neuro-Fuzzy Modeling</b>  Neuro-Adaptive Learning and ANFIS, Comparison of Dnfis and Neuro-Fuzzy Designer Functionality.
9	18-12-2020 (FN)	<b>10. Data Clustering</b>  Fuzzy Clustering , Cluster Quasi-Random Data Using Fuzzy C-Means Clustering .
10	19-12-2020 (FN)	<b>11. Deployment</b>  Deploy Fuzzy Inference Systems
11	19-12-2020 (FN)	<b>12. Compile and Evaluate Fuzzy Systems</b>  Compile and Evaluate Fuzzy Systems on Windows Platforms, Compile and Evaluate Fuzzy Systems on UNIX Platforms

*B. Sander*

**COURSE COORDINATOR**



**HEAD OF THE DEPARTMENT**

HEAD OF DEPARTMENT  
 Department Of Computer Science & Engg.,  
 Bharath Institute Of Higher Education & Research  
 (Declared as Deemed to be University U.S.C. OF U.C. Act, 1956)  
 Chennai - 600 072, INDIA





**Bharath**  
**INSTITUTE OF HIGHER EDUCATION AND RESEARCH**  
(Declared as Deemed-to-be University under section 3 of UGC Act, 1956)  
(Vide Notification No. F.9-5/2000 - U.3. Ministry of Human Resource Development, Govt. of India, dated 4<sup>th</sup> July 2002)

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**B.Tech Computer Science and Engineering**

**Introduction To Fuzzy Logic Tool Box**

S. No	REG.NO	NAME OF THE CANDIDATE
1	U15CS111	M.YESHWITHA REDDY
2	U15CS112	MAILE ARUN KUMAR
3	U15CS113	MAMUNDURU BHARATH KUMAR
4	U15CS114	MANCHALA ROHITH
5	U15CS115	MANCHIKANTI RAJITHA
6	U15CS117	MANOJ KUMAR R
7	U15CS118	MANUGUNTA BHARGAVI
8	U15CS119	MARRIBOYINA GOVARDHAN YADAV
9	U15CS120	MARRIPUDI KRISHNA CHAITANYA
10	U15CS121	MD MINHAZ RAZA HASHMI
11	U15CS122	MOHAMED SAJEEN N
12	U15CS123	MOHAMMAD ASLAM SHAREEF
13	U15CS124	MOHANKUMAR J
14	U15CS125	MOLAPANTI SIVA KALPANA
15	U15CS126	MOORABOINA NARESH
16	U15CS127	MUPPALLA SURENDRA
17	U15CS128	MURARI KUMAR CHAUDHARY
18	U15CS129	N SWAPNA RAAGA
19	U15CS130	NAGANNAGARI JAGADISH
20	U15CS132	NALLANALLI SATYA SANDEEP KUMAR
21	U15CS133	NALLURI AKHIL BABU
22	U15CS134	NAMBURI VIJAY KUMAR
23	U15CS135	NARENDULA NIREESHA
24	U15CS136	NARESH K
25	U15CS137	NEDUNURI NAGA SAI SURYA SUJITH
26	U15CS138	NEELA SAI KUMAR
27	U15CS139	NIKHIL KUMAR
28	U15CS140	NIRANJAN S
29	U15CS141	NITIN SINGH
30	U15CS142	NUKALA BHODANANDA CHARAN
31	U15CS143	OLIVER S
32	U15CS144	OMPRAKASH YADAV
33	U15CS145	PADMAVATY V

34	U15CS147	PALEPU SIVA MANIKANTA CHARI
35	U15CS148	PARTHIBAN S
36	U15CS174	RAMACHANDRAN J
37	U15CS175	RAMIREDDY LAKSHMAN AJAY
38	U15CS176	RAMIREDDY SURENDRA REDDY
39	U15CS177	RANGISETTY KARTHIK
40	U15CS178	RAPARTHY SAI KIRAN
41	U15CS179	RAVANAM CHAITANYA ARAVIND VISHNU VARDHAN
42	U15CS180	RAVURI SRIKANTH
43	U15CS181	RESHMA A
44	U15CS182	RICHARD WMVRAND J
45	U15CS183	S. PUNITHA

B. Sundar  
COURSE CO-ORDINATOR

HOD

HEAD OF DEPARTMENT  
Department Of Computer Science & Engg.,  
Bharath Institute Of Higher Education & Research  
(Declared as Deemed to be University U/S 3 Of UGC Act, 1956)  
Chennai - 600 073. INDIA



## COURSE FEEDBACK FORM

Academic Year		2020-2021					
Term							
Course Number							
Course Title		Introduction To Fuzzy Logic Tool Box					
Number of Credits							
Type of Course	Regular		Elective		Add-on	<input checked="" type="checkbox"/>	
<b>I. Information on the Respondent: (Tick (✓) Appropriately)</b>							
<b>1. Percentage of classes attended</b>							
0-20		20-40		40-60		60-80	80-100 <input checked="" type="checkbox"/>
<b>2. Number of hours per week spent on the course (Other than lecture hours)</b>							
0-2		2-4		4-6		6-8	8-10 <input checked="" type="checkbox"/>
<b>3. Preparation for the course by the student:</b>							
(i)	Have done part of this course earlier						No
(ii)	Has adequate prior exposure to the prerequisites						Yes
(iii)	Had to pickup relevant additional topics through concurrent study						No
(iv)	Have no exposure to the background material						Yes
<b>4. The expectations for taking the course by the student are:</b>							
(a)	Enhance by skill base in the area of specializations						Yes
(b)	Get exposed to a relevant subject						Yes
(c)	Curiosity						Yes
(d)	Better Employment Opportunity						Yes
(e)	Complete Course requirements						Yes
(f)	To Improve CGPA						Yes
<b>About the Instructor: Information on the Respondent: (Tick (✓) Appropriately)</b>							
		<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	
1.	Pace of the Teaching/lecture	<input checked="" type="checkbox"/>					
2.	Content of the Subject	<input checked="" type="checkbox"/>					
3.	Clarity of expression	<input checked="" type="checkbox"/>					
4.	Level of preparation	<input checked="" type="checkbox"/>					
5.	Level of interaction		<input checked="" type="checkbox"/>				
6.	Accessibility outside the class	<input checked="" type="checkbox"/>					
7.	Others (please specify)	<input checked="" type="checkbox"/>					
<b>A: Excellent</b>		<b>B: Very Good</b>	<input checked="" type="checkbox"/>	<b>C: Good</b>		<b>D: Satisfactory</b>	<b>E: Poor</b>

  
**HEAD OF THE DEPARTMENT**

HEAD OF DEPARTMENT  
Department of Computer Science & Engg.,  
Bharath Institute of Higher Education & Research  
(Declared as Deemed to be University UG & OF UGC Act, 1956)  
Chennai - 600 075, India

# COURSE FEEDBACK FORM

Academic Year		2020-2021			
Term					
Course Number					
Course Title		Introduction To Fuzzy Logic Tool Box			
Number of Credits					
Type of Course	Regular		Elective		Add-on <input checked="" type="checkbox"/>

**I. Information on the Respondent: (Tick (✓) Appropriately)**

1. Percentage of classes attended									
0-20		20-40		40-60		60-80		80-100	<input checked="" type="checkbox"/>

2. Number of hours per week spent on the course (Other than lecture hours)									
0-2		2-4		4-6		6-8	<input checked="" type="checkbox"/>	8-10	

3. Preparation for the course by the student:	
(i)	Have done part of this course earlier <span style="float: right;">No</span>
(ii)	Has adequate prior exposure to the prerequisites <span style="float: right;">Yes</span>
(iii)	Had to pickup relevant additional topics through concurrent study <span style="float: right;">No</span>
(iv)	Have no exposure to the background material <span style="float: right;">Yes</span>

4. The expectations for taking the course by the student are:	
(a)	Enhance by skill base in the area of specializations <span style="float: right;">Yes</span>
(b)	Get exposed to a relevant subject <span style="float: right;">Yes</span>
(c)	Curiosity <span style="float: right;">Yes</span>
(d)	Better Employment Opportunity <span style="float: right;">Yes</span>
(e)	Complete Course requirements <span style="float: right;">Yes</span>
(f)	To Improve CGPA <span style="float: right;">No</span>

**About the Instructor: Information on the Respondent: (Tick (✓) Appropriately)**

		A	B	C	D	E
1.	Pace of the Teaching/lecture	<input checked="" type="checkbox"/>				
2.	Comment of the Subject		<input checked="" type="checkbox"/>			
3.	Clarity of expression	<input checked="" type="checkbox"/>				
4.	Level of preparation		<input checked="" type="checkbox"/>			
5.	Level of interaction	<input checked="" type="checkbox"/>				
6.	Accessibility outside the class		<input checked="" type="checkbox"/>			
7.	Others (please specify)	<input checked="" type="checkbox"/>				

A: Excellent	<input checked="" type="checkbox"/>	B: Very Good		C: Good		D: Satisfactory		E: Poor	
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**HEAD OF THE DEPARTMENT**

HEAD OF DEPARTMENT  
 Department Of Computer Science & Engg.  
 Bharath Institute Of Higher Education & Research  
 (Declared as Deemed to be University U.S.O Of UGC Act, 1956)  
 Chennai - 600 070, INDIA



# COURSE FEEDBACK FORM

Academic Year		2020-2021			
Term					
Course Number					
Course Title		Introduction To Fuzzy Logic Tool Box			
Number of Credits					
Type of Course	Regular	Elective	Add-on	<input checked="" type="checkbox"/>	

**I. Information on the Respondent: (Tick (✓) Appropriately)**

1. Percentage of classes attended

0-20		20-40		40-60		60-80		80-100	<input checked="" type="checkbox"/>
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2. Number of hours per week spent on the course (Other than lecture hours)

0-2		2-4		4-6		6-8	<input checked="" type="checkbox"/>	8-10	
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3. Preparation for the course by the student:

(i)	Have done part of this course earlier	No
(ii)	Has adequate prior exposure to the prerequisites	Yes
(iii)	Had to pickup relevant additional topics through concurrent study	Yes
(iv)	Have no exposure to the background material	No


4. The expectations for taking the course by the student are:

(a)	Enhance by skill base in the area of specializations	No
(b)	Get exposed to a relevant subject	Yes
(c)	Curiosity	Yes
(d)	Better Employment Opportunity	No
(e)	Complete Course requirements	Yes
(f)	To Improve CGPA	Yes

**About the Instructor: Information on the Respondent: (Tick (✓) Appropriately)**

	A	B	C	D	E
1. Pace of the Teaching/lecture	<input checked="" type="checkbox"/>				
2. Content of the Subject		<input checked="" type="checkbox"/>			
3. Clarity of expression	<input checked="" type="checkbox"/>				
4. Level of preparation		<input checked="" type="checkbox"/>			
5. Level of interaction	<input checked="" type="checkbox"/>				
6. Accessibility outside the class	<input checked="" type="checkbox"/>				
7. Others (please specify)	<input checked="" type="checkbox"/>				

A: Excellent		B: Very Good	<input checked="" type="checkbox"/>	C: Good		D: Satisfactory		E: Poor	
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**HEAD OF THE DEPARTMENT**





# Bharath UNIVERSITY

பாரத பல்கலைக்கழகம்

**BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH**

(Declared as Deemed-to-be-University, u/s 3 of the UGC Act, 1956)



## CERTIFICATE OF PARTICIPATION



### Ms. S.PUNITHA

For actively participating in the value added course “**Introduction To Fuzzy Logic Tool Box**” Conducted by School of Computing, BIHER  
from 10-12-2020 to 19-12-2020 .

*B. Sund*

Course Coordinator

*[Signature]*

Head of the Department

*[Signature]*

Director