Requisition Letter

Date: 18.1.2019

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 **"Comprehensive Understanding Of Deep Learning"** -Reg

    With reference to above subject, I would like to bring to your kind notice that, our department interested to organizevalue added course on **"Comprehensive Understanding Of Deep Learning"** in our campus premises on **30.1.2019**, studentswould be participating in this course. We request you kindly to give permission to organize this event.

Venue: **CSE Smart Room**

Timing 4:00 PM to 5:00 PM.Monday to Friday

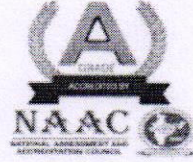Submitted to Principal for approval to organize this value-added course.

HOD

DEAN ENGINEERING

Bharath

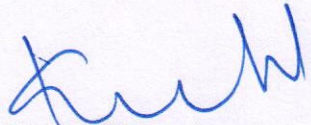## INSTITUTE OF HIGHER EDUCATION AND RESEARCH
(Declared as Deemed-to-be University under section 3 of UGC Act 1956)

CIRCULAR

25.1.2019

The School of computing, Bharath Institute of Higher Education and Research is planned to conduct a certification value added course on **Comprehensive Understanding Of Deep Learning**for the benefit of II, III and IV year students. This course is scheduled from 30.1.2019 for 30hours which includes theory and practical. The timings are 4 p.m-5 p.m from Monday –Friday.

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.C.Nalini	Professor
2	Dr.C.Rajabhushanam	Professor

Head of Department

To

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CERTIFICATE COURSE ON COMPREHENSIVE UNDERSTANDING OF DEEP LEARNING

Date of Introduction of the Course: 30.1.2019

COURSE SYLLABUS

1. Inauguration of value Added course on Comprehensive Understanding of Deep Learning

2. Introduction: Various paradigms of earning Problems

3. Perspectives and Issues in Deep Learning Framework:
   1. Provide a brief overview of deep learning, and highlight current research efforts and the challenges to Deep Learning, as well as the future trends.

4. Review of Fundamental Learning techniques:
   a. Classic **Neural Networks**. ...
   b. Convolutional **Neural Networks**. ...
   c. Recurrent **Neural Networks** (RNNs) ...
   d. Generative Adversarial Networks. ...
   e. Self-Organizing Maps.

5. Feedforward neural network

6. Artificial Neural Network

7. Activation Function, Multi-layer neural network

8. Training Neural Network

9. Risk minimization, loss function

10. Back propagation

11. Regularization, Model selection

12. Optimization

13. Conditional Random Fields

14. Linear Chain, Partition function

15. Markov network, Belief propagation

16. Training CRFs, Hidden Markov model, Entropy

17. Deep Learning:
    i. Deep Feed Forward network, Regularizations

18. Recurrent Neural Network , Deep Belief Network

19. Probalistic Neural Network, Hopfield Net, Boltzman machine, RBMs

20. Sigmoid net, Autoencoders, Deep Learning research:Object recognition

21. Object recognition
22. Sparse coding,Computer vision
23. Natural Language Processing
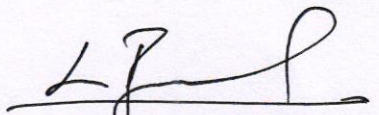24. Deep Learning Tools: Caffe, Theano, Torch

COURSE OBJECTIVES

In this course we plan to give students an overview of the field of Deep Learning, and an in-depth study into its enabling technologies and main building blocks. Students will gain hands-on experience solving relevant problems through projects that will utilize existing algorithms. It is our objective that students will develop the skills needed to become a practitioner or carry out research projects in this domain.
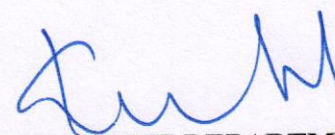
Specifically, the course has the following objectives:

Students will learn

1) The fundamental ideas behind Deep Learning, the evolution of the paradigm, its applicability; Benefits, as well as current and future challenges;
2) This topics course aims to present the mathematical, statistical and computational challenges of building stable representations for high-dimensional data, such as images, text and data.
3) We will delve into selected topics of Deep Learning, discussing recent models from both supervised and unsupervised learning.
4) Special emphasis will be on convolutional architectures, invariance learning, unsupervised learning and non-convex optimization.

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

CERTIFICATE COURSE ON COMPREHENSIVE UNDERSTANDING OF DEEP LEARNING
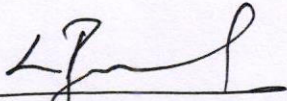
Date of Introduction of the Course:30.1.2019

The timings are

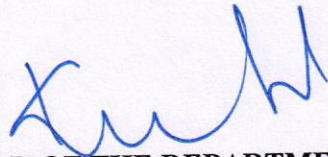## Time Table& Lesson plan

CLASS(Timing 4-5p.m)	DATE	TOPIC
class 1	30/1/2019	Inauguration of value Added course on Comprehensive Understanding of Deep Learning Introduction: Various paradigms of earning Problems
Class2	31/2/2019	Perspectives and Issues in Deep Learning Framework Review of Fundamental Learning techniques
Class 3	3/2/2019	Feedforward neural network Artificial Neural Network
Class 4	4/2/2019	Activation Function, Multi-layer neural network Training Neural Network
Class 5	5/2/2019	Risk minimization, loss function Back propagation
Class 6	6/2/2019	Regularization, Model selection Optimization
Class 7	7/2/2019	Conditional Random Fields Linear Chain, Partition function
Class 8	8/2/2019	Markov network, Belief propagation

Class 9	11/2/2019	Training CRFs, Hidden Markov model, Entropy
Class 10	12/2/2019	Deep Learning: Deep Feed Forward network, Regularizations
Class 11	13/2/2019	Recurrent Neural Network , Deep Belief Network
Class 12	14/2/2019	Probalistic Neural Network, Hopfield Net, Boltzman machine, RBMs
Class 13	15/2/2019	Sigmoid net, Autoencoders, Deep Learning research:Object recognition
Class 14	18/2/2019	Object recognition
Class 15	19/2/2019	Sparse coding,Computer vision Natural Language Processing Deep Learning Tools: Caffe, Theano, Torch

COURSE COORDINATOR

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CERTIFICATE COURSE ON COMPREHENSIVE UNDERSTANDING OF DEEP LEARNING
Date of Introduction of the Course: 30.01.2019

School of Computing
### Registered Students Name List

S.NO	REG.NO	NAME OF THE STUDENT
1	U17CS001	YALAMADDI BHARGAV
2	U17CS002	MAMDARAPU SARTHIK
3	U17CS003	BHUVANESHWARI P
4	U17CS004	PRASANNAKUMAR E
5	U17CS005	MUGUNTHAN A L
6	U17CS081	SHAIK AFREED
7	U17CS082	NIRMALA DEVI S
8	U17CS083	SODUM BHARATH SHIVA REDDY
9	U17CS084	OGUBOINA KIRAN
10	U17CS085	Y BHAVYA
11	U17CS152	JAMMULADINNE RANGA REDDY
12	U17CS153	BANDARU JANARDHAN
13	U17CS154	PASAM ANIL KRISHNA
14	U16CS701	PRADEEP SURIYA
15	U16CS702	MOHANRAJ
16	U16CS100	GALLA BHUCHANDRA
17	U16CS101	NITHISHVAR S
18	U16CS151	PODAPATI ASMITHA
19	U16CS152	NALLAPU RAJESH
20	U16CS707	HANUMANTHU RAO
21	U16CS708	SIMRAN ALIZA NISAR
22	U15CS034	CHIDIPOTHU PRATHYUSHA
23	U15CS035	CHINTAGINJALA VENKATA SRI SAI SRAVYA

24	U15CS087	KARTHEESWARAN P
25	U15CS088	KARTHICK S
26	U15CS180	RAVURI SRIKANTH
27	U15CS182	RICHARD WUMBRAND J
28	U15CS183	S. PUNITHA
29	U15CS184	S. SAI SHRUTHI
30	U15CS185	SADHOLLA PRANAY REDDY

COURSE COORD

HEAD OF THE DEPARTMENT
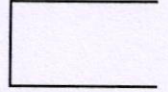
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CERTIFICATE COURSE ON CERTIFICATE COMPREHENSIVE UNDERSTANDING OF DEEP LEARNING
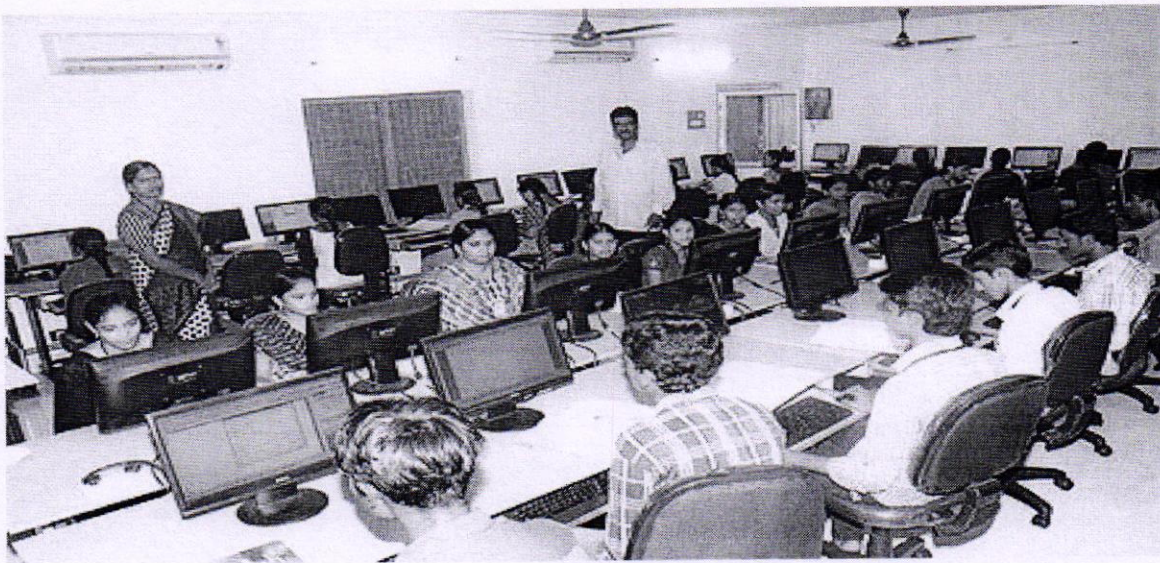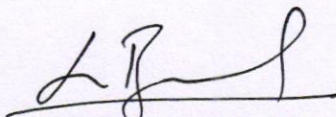

COURSE COORDINATOR

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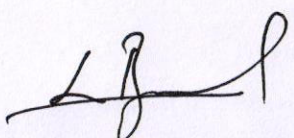(Declared as Deemed-to-be University under section 3 of UGC Act 1956)
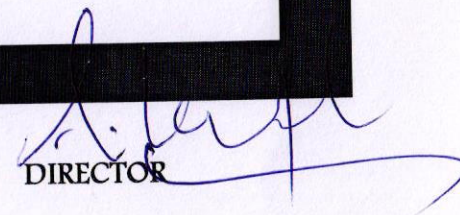
CERTIFICATE OF PARTICIPATION

This certificate is presented to

MOHANRAJ U16CS702

For actively participating in the value added course **"Comprehensive Understanding Of Deep Learning"** Conducted by School of Computing, BIHER from 30/1/2019 to 19/2/2019.

COURSE COORDINATORS

HEAD OF THE DEPARTMENT

DIRECTOR

COURSE FEEDBACK FORM

Academic Year	2019-2020				
Term					
Course Number					
Course Title	Comprehensive Understanding Of Deeplearning.				
Number of Credits					
Type of Course	Regular		Elective		Add-on ✓

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

1.	Percentage of classes attended								
	0-20		20-40		40-60		60-80 ✓	80-100	

2.	Number of hours per week spent on the course (Other than lecture hours)								
	0-2		2-4		4-6		6-8	8-10	

3.	Preparation for the course by the student:	
(i)	Have done part of this course earlier	Yes
(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

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

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

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

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

HEAD OF THE DEPARTMENT

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2.	Comment of the Subject	✓				
3.	Clarity of expression	✓				
4.	Level of preparation		✓			
5.	Level of interaction	✓				
6.	Accessibility outside the class		✓			
7.	Others (please specify					

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HEAD OF THE DEPARTMENT