



# Bharath

**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, Agharam Road, Selaiyur, Chennai , T.N - 600 073.

## Requisition Letter

Date:20.05.2019

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

To  
PRO VICE CHANCELLOR,  
Bharath Institute of Higher Education and Research,  
Chennai

Respected sir

Subject: Request of Permission to conduct a value-added course on “NETWORKING” -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 “NETWORKING” in our campus premises from **29.05.2019**, students would be participating in this course. We request you kindly to give permission to organize this event.

Venue: **CSE Smart Room**

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.

**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

**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)  
Selaiyur, Chennai-600 073.





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## CIRCULAR

24.05.2019

The school of computing, Bharath Institute of Higher Education and Research is planned to conduct a certification value added course on **Certificate Course of NETWORKING** for the benefit of students. This course is scheduled from 24.05.2019 to 10.6.2019 which includes theory and practical. 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. C. Nalini	Professor
2.	Mrs. B. Lakshmi	

**Head of Department**

**HEAD OF DEPARTMENT**

Department Of Computer Science & Engg.,  
Bharath Institute Of Higher Education & Research  
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Chennai - 600 073, INDIA

To

Copy to CSE

Copy to IT



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## **CERTIFICATE COURSE ON NETWORKING**

**Date of Introduction of the Course: 03.07.2019**

### **COURSE SYLLABUS**

#### **1. Introduction to Networking**

A network, is a collection of computers and other hardware components interconnected by communication channels that allow sharing of resources and information

#### **2. Networking Standards and the OSI Model**

It is a layered, abstract definition for communications protocol and computer network protocol design.

#### **3. Transmission Basics and Networking Media**

In data communication terminology, a transmission medium is a physical path between the transmitter and the receiver i.e. it is the channel through which data is sent from one place to another.

#### **4. Introduction to TCP/IP Protocols Topologies and Ethernet Standards**

TCP/IP, in full Transmission Control Protocol/Internet Protocol, standard Internet communications protocols that allow digital computers to communicate over long distances.

#### **5. Network Hardware**

Networking hardware. Computers need networking hardware in order to connect to each other. Routers, hubs, switches and bridges are all pieces of networking equipment that can perform slightly different tasks.

#### **6. WANs and Remote Connectivity**

Wide-area network (WAN) is a collection of local-area networks (LANs) or other networks that communicate with one another. A WAN is essentially a network of networks, with the Internet the world's largest WAN.

#### **7. Wireless Networking**

A wireless network is a computer network that uses wireless data connections between network nodes.

#### **8. Network Operating Systems Voice and Video over IP**

Voice over IP converts data, such as voice or video, into a digital signal and transfers it over the internet as digital data packets. In order to use VoIP technology, you need a VoIP service or application to facilitate the calls, internet access, and a SIP trunk or VoIP provider.

## 9. Network Security.

It is a set of rules and configurations designed to protect the integrity, confidentiality and accessibility of computer networks and data using both software and hardware technologies.

## 10. Troubleshooting Network Problems

A Network Monitoring (or Network Performance Monitoring) tool monitors end-to-end network performance to identify network issues affecting your end-users and customers - even if those network problems may reside outside of your local network infrastructure.

## 11. Ensuring Integrity and Availability

Confidentiality is limiting data access, integrity is ensuring your data is accurate, and availability is making sure it is accessible to those who need it.

### COURSE OBJECTIVES

To learn and analyse and visualize about computer network organization and implementation, obtaining a theoretical understanding of data communication and computer networks, and gaining practical experience in installation, monitoring, and troubleshooting of current LAN systems.

**Specifically, the course has the following objectives:**

**Students will learn**

1. To develop an understanding of computer networking basics
2. To develop an understanding of different components of computer networks, various protocols, modern technologies and their applications.
3. Recognize the technological trends of Computer Networking.
4. Discuss the key technological components of the Network.
5. Evaluate the challenges in building networks and solutions to those.

*Plu N. Anitha*  
Course Coordinator

*K. S. S. S.*  
HOD

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Department Of Computer Science & Engg.,  
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## **CERTIFICATE COURSE ON NETWORKING**

**Date of Introduction of the Course: 03.07.2019**

**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**

<b>CLASS</b>	<b>DATE</b>	<b>TOPIC</b>
<b>1</b>	<b>29-05-2019(FN)</b>	<b>1. Introduction to Networking</b> A network, is a collection of computers and other hardware components interconnected by communication channels that allow sharing of resources and information.
<b>2</b>	<b>30-05-2019 (FN)</b>	<b>2. Networking Standards and the OSI Model</b> It is a layered, abstract definition for communications protocol and computer network protocol design.
<b>3</b>	<b>31-05-2019 (FN)</b>	<b>3. Transmission Basics and Networking Media</b> In data communication terminology, a transmission medium is a physical path between the transmitter and the receiver i.e. it is the channel through which data is sent from one place to another.
<b>4</b>	<b>1-06-2019 (FN &amp; AN)</b>	<b>4. Introduction to TCP/IP Protocols Topologies and Ethernet Standards</b> TCP/IP, in full Transmission Control Protocol/Internet Protocol, standard Internet communications protocols that allow digital computers to communicate over long distances.
<b>5</b>	<b>3-06-2019 (FN)</b>	<b>5. Network Hardware</b> Networking hardware. Computers need networking hardware in order to connect to each other. Routers, hubs, switches and bridges are all pieces of networking equipment that can perform slightly different tasks.

6	04-06-2019 (FN)	<b>6. WANs and Remote Connectivity</b> Wide-area network (WAN) is a collection of <u>local-area networks</u> (LANs) or other networks that communicate with one another. A WAN is essentially a network of networks, with the Internet the world's largest WAN.
7	05-06-2019 (FN)	<b>7. Wireless Networking</b> A wireless network is a computer network that uses wireless data connections between network nodes.
8	06-06-2019 (FN)	<b>8. Network Operating Systems Voice and Video over IP</b> Voice over IP converts data, such as voice or video, into a digital signal and transfers it over the internet as digital data packets. In order to use VoIP technology, you need a VoIP service or application to facilitate the calls, internet access, and a SIP trunk or VoIP provider.
9	07-06-2019(FN)	<b>9. Network Security.</b> It is a set of rules and configurations designed to protect the integrity, confidentiality and accessibility of computer networks and data using both software and hardware technologies.
10	08-06-2019 (FN & AN)	<b>10. Troubleshooting Network Problems</b> A Network Monitoring (or Network Performance Monitoring) tool monitors end-to-end network performance to identify network issues affecting your end-users and customers - even if those network problems may reside outside of your local network infrastructure.
11	10-06-2019 (AN)	<b>11. Ensuring Integrity and Availability</b> Confidentiality is limiting data access, integrity is ensuring your data is accurate, and availability is making sure it is accessible to those who need it.

**COURSE COORDINATOR**

**HEAD OF THE DEPARTMENT**

**HEAD OF DEPARTMENT**  
Department Of Computer Science & Engg.,  
Bharath Institute Of Higher Education & Research  
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Academic Year 2019-20

B.Tech Computer Science and Engineering - First Year

S.No	REG.NO	NAME OF THE CANDIDATE
1	U19CB001	THANNEERU RAM PRIYATHAM CHOWDARY
2	U19CB002	THARALA PRANAY
3	U19CB003	THATIPARTHI PAVAN KALYAN REDDY
4	U19CB004	THELLAGORLA RAM GOPI
5	U19CB005	THELLURI HEMANTH RATNA SAGAR REDDY
6	U19CB006	THIRUMAL REDDY NITHIN KUMAR REDDY
7	U19CB007	THIRUMALAI VASAN R
8	U19CB008	THIRUMANI THARUN
9	U19CB009	THOKALA SRI RAM CHARAN
10	U19CB010	THOTA ANAND
11	U19CB011	THOTA BHARATH KUMAR
12	U19CB012	THOTA DINESH
13	U19CB013	THOTA HEMANTH
14	U19CB014	THOTAKURA VEERA SATYA SAI CHANDRA
15	U19CB015	THULLURI SAI RAM
16	U19CB016	TIKKALA PARTHIV ADITYA
17	U19CB017	TIRUMALASETTI PAVAN SAI
18	U19CB018	TIRUVEEDULA SATISH
19	U19CB019	TOGARANA YASWANTH
20	U19CB020	TOKLE PRASAD UDDHAV
21	U19CB021	TUMMALA ANJAN MAHESH BABU
22	U19CB022	TUNGALA TEJOSAI
23	U19CB023	ULLI MANIKANTA
24	U19CB024	UMMAGANI VIGNESH
25	U19CB025	UNDAMATLA VENKATA PRASAD
26	U19CB026	UNDELA LEKHANA
27	U19CB027	UNDRA VAMSI KRISHNA
28	U19CB028	S UPENDRA REDDY
29	U19CB029	UPPALA HARSHAVARDHAN SAI
30	U19CB030	UPPALA RAKESH
31	U19CB031	UPPALA SAI PRASAD
32	U19CB032	UPPALAPATI PAVAN KUMAR
33	U19CB033	UPPARI SAI RAHUL
34	U19CB034	UPPU SATHISH
35	U19CB035	UPPUTURI AKANKSHA

Course Coordinator

HOD

HEAD OF DEPARTMENT  
Department Of Computer Science & Engg.,  
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Chennai - 600 073. INDIA

# COURSE FEEDBACK FORM

Academic Year		2019-20			
Term					
Course Number					
Course Title		NETWORKING			
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 <input checked="" type="checkbox"/>	80-100
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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	8-10 <input checked="" type="checkbox"/>
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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	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	<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	YES <input checked="" type="checkbox"/>				
7.	Others (please specify)	YES <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>
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**HEAD OF THE DEPARTMENT**  
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0-2		2-4		4-6		6-8		8-10	<input checked="" type="checkbox"/>
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(ii)	Has adequate prior exposure to the prerequisites	No
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(iv)	Have no exposure to the background material	Yes

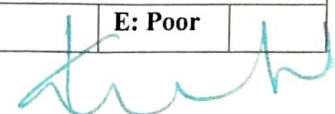
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(c)	Curiosity	Yes
(d)	Better Employment Opportunity	Yes
(e)	Complete Course requirements	Yes
(f)	To Improve CGPA	Yes

**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	YES				
7.	Others (please specify)	YES				

A: Excellent		B: Very Good		C: Good		D: Satisfactory		E: Poor
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(e)	Complete Course requirements	no
(f)	To Improve CGPA	no

**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	YES				
7.	Others (please specify)	YES				

A: Excellent		B: Very Good <input checked="" type="checkbox"/>	C: Good	D: Satisfactory	E: Poor
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## CERTIFICATE OF PARTICIPATION

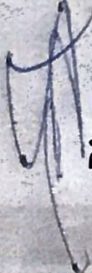


**THOTA DINESH**

For actively participating in the value added course  
"NETWORKING "Conducted by School of Computing, BIHER  
from 29-05-2019 to 10.06-2019 .

  
Course Coordinator

  
Head of the 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)

  
Director

Chennai - 600 073, INDIA

# CERTIFICATE COURSE ON NETWORKING

Introduction of the Course: 3.07.2019



**Course Coordinator**

**Head of the Department**

**HEAD OF DEPARTMENT**  
Department Of Computer Science & Engg.,  
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