Department of Electronics & Communication Engineering

Course File

COMPUTER NETWORKS

(Course Code: EC603PC)

III B.Tech II Semester (A & B)

2023-24

Dr. G Venkata Hari Prasad
Professor

Ananthagiri, Kodad, Telangana 508 206, India.

Department of Electronics & Communication Engineering

COMPUTER NETWORKS

Check List

Anurag ENGINEERING COLLEGE (An Autonomous Institution)

Department of Electronics & Communication Engineering

Anurag ENGINEERING COLLEGE
An Autonomous Institution
(Approved by AICTE, New Delhi & Affiliated to JNTUH)

Accredited with NAAC A+ GRADE

Ananthagiri (V&M), Kodad, Suryapet (Dt.), Telangana – 508 206
www.anurag.ac.in +91 9553122270

w.e.f : 28.12.2023

Revised Academic Calendar of III B.Tech. I & II Semesters for the Academic Year 2023 – 24			
FIRST SEMESTER	Commencement of Classwork 04.08.2023		
	From	To	Duration
I Spell of Instruction	04.08.2023	29.09.2023	8 Weeks
I Mid Examinations	30.09.2023	04.10.2023	3 Days
II Spell of Instruction	05.10.2023	21.10.2023	2 Weeks 3 Days
Dasara Vacation	23.10.2023	28.10.2023	1 Week
II Spell of Instruction Continuation	30.10.2023	06.12.2023	5 Weeks 3 Days
II Mid Examinations	07.12.2023	11.12.2023	3 Days
Preparation and Practical Examinations	12.12.2023	23.12.2023	1 Week 5 Days
End Semester Examinations	27.12.2023	12.01.2024	2 Weeks 2 Days
SECOND SEMESTER	Commencement of Classwork 22.01.2024		
I Spell of Instruction	22.01.2024	16.03.2024	8 Weeks
I Mid Examinations	18.03.2024	20.03.2024	3 Days
II Spell of Instruction	21.03.2024	08.05.2024	7 Weeks
Industry Oriented Mini-Project / Internship	09.05.2024	05.06.2024	4 Weeks
Summer Vacation	23.05.2024	05.06.2024	2 Weeks
II Spell of Instruction Continuation	06.06.2024	12.06.2024	1 Week
II Mid Examinations	13.06.2024	15.06.2024	3 Days
Preparation Holidays	18.06.2024	24.06.2024	1 Week
Semester End Examinations (Theory & Practical)	25.06.2024	20.07.2024	3 Weeks 2 Days
Commencement of IV Year I Semester Classwork	25.07.2024		

PRINCIPAL

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ANURAG ENGINEERING COLLEGE
(Autonomous)
Ananthagiri(V&M), Suryapet Dt., T.S

Copy to:

1. The Secretary & Correspondent file
2. All the Heads of the Departments
3. The Controller of Examinations (Autonomous)
4. Training & Placement Officer
5. The Librarian
6. Transport in-charge
7. Physical Director
8. College Website In-charge
9. All Notice Boards

Department of Electronics & Communication Engineering

Int. Marks: 30 Ext. Marks: 70 Total Marks: 100

COMPUTER NETWORKS

Course Code: EC603PC **L/T/P/C: 3/0/0/3**
III Year II Semester

Unit- I: Network Models:

Layered Tasks, OSI model: Layered Architecture and Peer-to Peer Process; Layers in the OSI model, TCP/IP protocol suite, Addressing. Physical layer: Guided transmission media, unguided transmission media

Unit – II: Data Link Layer:

Error Detection and Correction- Introduction, Block coding, Cyclic Codes, checksum Data Link Control - Framing, Flow and Error Control, Protocols, Noiseless Channels, Noisy Channels, HDLC. Multi Access Protocols – Random Access: ALOHA, CSMA, CSMA/CD and CSMA/CA.

Unit – III: Wired LANs- IECE Standards, Standard Ethernet, Changes in standard, Fast Ethernet, Gigabit Ethernet. Connecting LANs, Backbone Networks and Virtual LANs: Connecting Devices, Backbone Networks, Virtual LANs. Wireless LANS: IECE 802.11, Bluetooth.

Unit – IV: Network Layer: Delivery, Forwarding and Routing- Delivery, Forwarding, Uni- casting Routing Protocols, Multicast Routing Protocols. Logical Addressing - IPV4 addresses, IPV6 addresses. Transport layer: process to process delivery, UDP, TCP, SCTP.

Unit – V: Application Layer: Domain Name System- Domain Name Space, DNS in the Internet, Resolution, Domain Name Space (DNS)Messages, Electronic Mail, File Transfer, WWW, HTTP.

Text Books:

1. Behrouz A Forouzan, Data Communications and Networking, 4thEdition, McGraw Hill, 2013.
2. Andrew S. Tanenbaum, Computer Network, 5th Edition, Pearson Education India, 2014.
3. William Stallings, Data Communications, 8th Edition, Pearson Education, 2013.

REFERENCE BOOKS:

1. An Engineering Approach to Computer Networks - S. Keshav, 2nd Edition, Pearson Education
2. Understanding Communications and Networks, 3rd Edition, W.A.Shay, Cengage Learning.
3. Computer and Communication Networks - Nader F. Mir, Pearson Education
4. Computer Networking: A Top-Down Approach Featuring the Internet - James F.Kurose, K.W.Ross, 3rd Edition, Pearson Education.
5. Data and Computer Communications - G. S. Hura and M. Singhal, CRCPress, Taylor and Francis Group.

Department of Electronics & Communication Engineering

Timetable

III B.Tech. II Semester – CN (A Sec)

Day/Hour	9.30-10.20	10.20-11.10	11.20-12.10	12.10-1.00	1.40-2.25	2.25-3.10	3.10-4.00
Monday		CN					
Tuesday		CN					
Wednesday						CN	
Thursday		CN					
Friday			CN				
Saturday							

III B.Tech. II Semester – CN (B Sec)

Day/Hour	9.30-10.20	10.20-11.10	11.20-12.10	12.10-1.00	1.40-2.25	2.25-3.10	3.10-4.00
Monday							
Tuesday			CN				
Wednesday			CN				
Thursday						CN	
Friday	CN						
Saturday			CN				

Department of Electronics & Communication Engineering

Vision of the Institute

To be a premier Institute in the country and region for the study of Engineering, Technology and Management by maintaining high academic standards which promotes the analytical thinking and independent judgment among the prime stakeholders, enabling them to function responsibly in the globalized society.

Mission of the Institute

To be a world-class Institute, achieving excellence in teaching, research and consultancy in cutting-edge Technologies and be in the service of society in promoting continued education in Engineering, Technology and Management.

Quality Policy

To ensure high standards in imparting professional education by providing world-class infrastructure, top-quality-faculty and decent work culture to sculpt the students into Socially Responsible Professionals through creative team-work, innovation and research

Vision of the Department

Our vision is to develop the department into a full-fledged centre of learning in various fields of Electronics & Communication Engineering keeping in view the latest developments

Mission of the Department

The Mission of the department is to turn out full-fledged Engineers in the field of Electronics Communication Engineering with an overall background suitable for making a successful career either in industry/research or higher education in India and abroad. To inculcate professional behavior, strong ethical values, innovative research capabilities and leadership abilities in the young minds so as to work with a commitment to the progress of the nation.

Department of Electronics & Communication Engineering

Program Educational Objectives (B.Tech. – ECE)
Graduates will be able to

PEO1: Excel in professional career & higher education, by acquiring knowledge in related fields of Electronics & Communication Engineering.

PEO2: Exhibit leadership in their profession, through technological ability and contemporary knowledge for solving the real life problems appropriately that are technically sound, economically feasible & socially acceptable.

PEO3: Adapt to the emerging technologies for sustenance by exhibiting professionalism, ethical attitude & communication skills in their relevant areas of interest by engaging in lifelong learning.

Program Outcomes (B.Tech. – ECE)
At the end of the Program, a graduate will have the ability to

PO 1: Apply knowledge of mathematics, science, and engineering.
PO 2: Design and conduct experiments, as well as to analyze and interpret data.
PO 3: Design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
PO 4: Function on multi-disciplinary teams.
PO 5: Identify, formulates, and solves engineering problems.
PO 6: Understanding of professional and ethical responsibility.
PO 7: Communicate effectively.
PO 8: Broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
PO 9: Recognition of the need for, and an ability to engage in life-long learning.
PO 10: Knowledge of contemporary issues.
PO 11: Utilize experimental, statistical and computational methods and tools necessary for engineering practice.
PO 12: Demonstrate an ability to design electrical and electronic circuits, power electronics, power systems; electrical machines analyze and interpret data and also an ability to design digital and analog systems and programming them.

Department of Electronics & Communication Engineering

COURSE OBJECTIVES

On completion of this Subject/Course the student shall be able to:

S. No	Objectives
1	Compare OSI & TCP/IP models
2	Understand error detection, correction codes and farming methods
3	Discuss the concepts of LANs and Virtual Networks
4	Outline the concepts of logical addressing
5	Outline Application Layer

COURSE OUTCOMES

The expected outcomes of the Course/Subject are:

S. No	Outcomes
1.	Analyze TCP/IP and OSI models and various protocols.
2.	Analyze various error handling mechanisms.
3.	Use of various devices in connecting different types of LANs.
4.	Compare and contrast IPv4 and IPv6.
5.	Describes the working of various networked applications such as DNS, Mail, File Transfer, WWW and HTTP.

Signature of faculty

Note: Please refer to Bloom's Taxonomy, to know the illustrative verbs that can be used to state the outcomes.

Department of Electronics & Communication Engineering

GUIDELINES TO STUDY THE COURSE / SUBJECT

Course Design and Delivery System (CDD):

- The Course syllabus is written into number of learning objectives and outcomes.
- Every student will be given an assessment plan, criteria for assessment, scheme of evaluation and grading method.
- The Learning Process will be carried out through assessments of Knowledge, Skills and Attitude by various methods and the students will be given guidance to refer to the text books, reference books, journals, etc.

The faculty be able to –

- Understand the principles of Learning
- Understand the psychology of students
- Develop instructional objectives for a given topic
- Prepare course, unit and lesson plans
- Understand different methods of teaching and learning
- Use appropriate teaching and learning aids
- Plan and deliver lectures effectively
- Provide feedback to students using various methods of Assessments and tools of Evaluation
- Act as a guide, advisor, counselor, facilitator, motivator and not just as a teacher alone

Signature of HOD

Date:

Signature of faculty

Date:

Department of Electronics & Communication Engineering

COURSE SCHEDULE

The Schedule for the whole Course / Subject is:

S. No.	Description	Duration (Date)		Total No. of Periods
		From	To	
1.	**UNIT-I: Network Models**: Layered Tasks, OSI model: Layered Architecture and Peer-to Peer Process; Layers in the OSI model, TCP/IP protocol suite, Addressing. **Physical layer:** Guided transmission media, unguided transmission media	22.01.2024	10.02.2024	14
2.	**UNIT-II: Data Link Layer:** Error Detection and Correction- Introduction, Block coding, Cyclic Codes, checksum **Data Link Control** -Framing, Flow and Error Control, Protocols, Noiseless Channels, Noisy Channels, HDLC. **Multi Access Protocols – Random Access:** ALOHA, CSMA, CSMA/CD and CSMA/CA.	11.02.2024	02.03.2024	15
3.	**UNIT-III:** **Wired LANs**- IEEE Standards, Standard Ethernet, Changes in standard, Fast Ethernet, Gigabit Ethernet. **Connecting LANs, Backbone Networks and Virtual LANs:** Connecting Devices, Backbone Networks, Virtual LANs. **Wireless LANS:** IEEE 802.11, Bluetooth.	04.03.2024	30.03.2024	14
4.	**UNIT-IV:** **Network Layer:** Delivery, Forwarding and Routing- Delivery, Forwarding, Uni-casting Routing Protocols, Multicast Routing Protocols. **Logical Addressing** - IPV4 addresses, IPV6 addresses. **Transport layer:** process to process delivery, UDP, TCP, SCTP.	01.04.2024	20.04.2024	13
5.	**UNIT-V:** **Application Layer:** Domain Name System- Domain Name Space, DNS in the Internet, Resolution, Domain Name Space(DNS)Messages, Electronic Mail, File Transfer, WWW, HTTP.	22.04.2024	12.06.2024	09

Total No. of Instructional periods available for the course: 65 Hours

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SCHEDULE OF INSTRUCTIONS - COURSE PLAN

Unit No.	Lesson No.	Date	No. of Periods	Topics / Sub-Topics	Objectives & Outcomes Nos.	References (Textbook, Journal)
1.	1	22.01.2024 & 23.01.2024	2	**UNIT-I : Network Models** Overview of Unit 1	1 1	Behrouz A Forouzan, Data Communications and Networking
	2	24.01.2024 & 25.01.2024	2	Layered Tasks, OSI Model, Peer to Peer Process	1 1	Behrouz A Forouzan, Data Communications and Networking
	3	29.01.2024 & 30.01.2024	2	Layers in OSI Model, TCP/IP Protocol Suite	1 1	Behrouz A Forouzan, Data Communications and Networking
	4	31.01.2024, 01.02.2024 & 02.02.2024	3	Addressing, Physical Layer: Transmission Media, Guided Media: Coaxial Cable	1 1	Behrouz A Forouzan, Data Communications and Networking
	5	03.02.2024 & 05.02.2024	2	Twisted Pair Cable , Fiber optic cable	1 1	Behrouz A Forouzan, Data Communications and Networking
	6	06.02.2024 & 07.02.2024	1	Unguided Media -3 Types, Comparison of Guided and Unguided Mediums	1 1	Behrouz A Forouzan, Data Communications and Networking
	7	08.02.2024	1	Unit 1 Revision	1 1	Behrouz A Forouzan, Data Communications and Networking
	8	09.02.2024	1	Class Test 1	1 1	Behrouz A Forouzan, Data Communications and Networking
2.	1	12.02.2024 & 13.02.2024	2	**Unit II: Introduction,** Block Coding, Cyclic codes	2 2	Behrouz A Forouzan, Data Communications and Networking
	2	14.02.2024 & 15.02.2024	2	Check sum, Problems	2 2	Behrouz A Forouzan, Data Communications and Networking
	3	17.02.2024	1	Framing	2 2	Behrouz A Forouzan, Data Communications and Networking
	4	21.02.2024 - 23.02.2024	3	Flow Control & Error Control, Noiseless Channel Protocols	2 2	Behrouz A Forouzan, Data Communications and Networking
	5	26.02.2024 & 27.02.2024	2	Stop and Wait ARQ, Go back N ARQ, Selective Repeat ARQ (Noisy Channel Protocols)	2 2	Behrouz A Forouzan, Data Communications and Networking
	6	28.02.2024	1	HDLC Protocols, PPP Protocol	2 2	Behrouz A Forouzan, Data Communications and Networking
	7	29.02.2024	2	Random Access Protocols, ALOHA & Slotted ALOHA Protocols, CSMA Protocols	2 2	Behrouz A Forouzan, Data Communications and Networking
	8	01.03.2024	1	CSMA/CD Protocols	2	Behrouz A Forouzan,

					2	Data Communications and Networking
	9	02.03.2024	1	Problems , Revision	2 2	Behrouz A Forouzan, Data Communications and Networking
3.	1	04.03.2024 & 05.03.2024	2	**Unit III: Introduction, Wired LANs**	3 3	Behrouz A Forouzan, Data Communications and Networking
	2	06.03.2024 & 07.03.2024	2	**IEEE Standards** , Standard Ethernet	3 3	Behrouz A Forouzan, Data Communications and Networking
	3	11.03.2024 & 12.03.2024	2	Changes in Standard Ethernet, Fast Ethernet	3 3	Behrouz A Forouzan, Data Communications and Networking
	4	14.03.2024 & 15.03.2024	2	Gigabit Ethernet **, Discussion on 1st Mid Syllabus & Imp Questions**	3 3	Behrouz A Forouzan, Data Communications and Networking
	5	22.03.2024 & 23.03.2024	2	Connecting Devices, Virtual LANs, Backbone Networks	3 3	Behrouz A Forouzan, Data Communications and Networking
	6	26.03.2024 & 27.03.2024	1	IEEE 802.11	3 3	Behrouz A Forouzan, Data Communications and Networking
	7	28.03.2024	1	Bluetooth	3 3	Behrouz A Forouzan, Data Communications and Networking
	8	29.03.2024	1	Revision	3 3	Behrouz A Forouzan, Data Communications and Networking
	9	30.03.2024	1	Old question paper discussions	3 3	Behrouz A Forouzan, Data Communications and Networking
4	1	01.04.2024 & 02.04.2024	2	**Unit IV: Introduction** , Delivery, Forwarding	4 4	Behrouz A Forouzan, Data Communications and Networking
	2	03.04.2024 & 04.04.2024	2	Uni- cast Routing Protocols	4 4	Behrouz A Forouzan, Data Communications and Networking
	3	05.04.2024 & 06.04.2024	2	Multi cast Routing Protocols	4 4	Behrouz A Forouzan, Data Communications and Networking
	4	08.04.2024 & 10.04.2024	2	Logical Addressing, IPV4 addresses	4 4	Behrouz A Forouzan, Data Communications and Networking
	5	11.04.2024	1	IPV6 addresses	4 4	Behrouz A Forouzan, Data Communications and Networking
	6	12.04.2024	1	Transport Layer, Process to Process Delivery	4 4	Behrouz A Forouzan, Data Communications and Networking
	7	15.04.2024	1	UDP	4 4	Behrouz A Forouzan, Data Communications and Networking

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	8	18.04.2024	1	TCP, SCTP	4 4	Behrouz A Forouzan, Data Communications and Networking
	9	19.04.2024	1	Revision	4 4	Behrouz A Forouzan, Data Communications and Networking
5	1	22.04.2024	1	**UNIT -V: Introduction** , Application Layer	5 5	Behrouz A Forouzan, Data Communications and Networking
	2	23.04.2024	1	Domain Name System	5 5	Behrouz A Forouzan, Data Communications and Networking
	3	25.04.2024	1	Domain Name Space	5 5	Behrouz A Forouzan, Data Communications and Networking
	4	26.04.2024	1	DNS in the Internet	5 5	Behrouz A Forouzan, Data Communications and Networking
	5	30.04.2024	1	Resolution	5 5	Behrouz A Forouzan, Data Communications and Networking
	6	01.05.2024	1	Domain Name Space (DNS) Messages	5 5	Behrouz A Forouzan, Data Communications and Networking
	7	02.05.2024	1	E-Mail, File Transfer	5 5	Behrouz A Forouzan, Data Communications and Networking
	8	03.05.2024	1	WWW, HTTP	5 5	Behrouz A Forouzan, Data Communications and Networking
	9	12.06.2024	1	Revision of Unit I,II, III, IV & V	1, 2, 3, 4, 5 1, 2, 3, 4, 5	Behrouz A Forouzan, Data Communications and Networking

Signature of HOD

Date:

Signature of faculty

Date:

Note:

1. Ensure that all topics specified in the course are mentioned.
2. Additional topics covered, if any, may also be specified in bold.
3. Mention the corresponding course objective and outcome numbers against each topic.

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LESSON PLAN (U-I)

Lesson No: 01, 02 Duration of Lesson: 10hr 0 min

Lesson Title: Network Models, Physical Layer

Instructional / Lesson Objectives:

- To make students Compare OSI & TCP/IP models
- To understand students the concept of Physical Layer
- To provide information on Guided and Unguided media

Teaching AIDS : PPTs, Digital Board
Time Management of 12 Classes :

Each Class Time Management
5 mins for taking attendance
40 min for the lecture delivery
5 min for doubts session

Assignment / Questions: Attached
(Note: Mention for each question the relevant Objectives and Outcomes Nos.1, 2, 3, 4 & 1, 3...)

Refer Assignment – I & Class Test I

Signature of faculty

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LESSON PLAN (U-II)

Lesson No: 03, 04 and 05 Duration of Lesson: 11hr40 min

Lesson Title: Data Link Layer, Data Link Control & Multi Access Protocols

Instructional / Lesson Objectives:

- To Understand error detection, correction codes and farming methods
- To Discuss the concepts of noise and noiseless protocols
- To provide information on Random Access Protocols
-

Teaching AIDS : PPTs, Digital Board

Time Management of 13 Classes :

Each Class Time Management
5 mins for taking attendance
40 min for the lecture delivery
5 min for doubts session

Assignment / Questions: Attached
(Note: Mention for each question the relevant Objectives and Outcomes Nos.1, 2, 3, 4 & 1, 3...)

Refer Assignment – II & Question Bank

Signature of faculty

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LESSON PLAN (U-III)

Lesson No: 06, 07 and 08 Duration of Lesson: 10hr 0 min

Lesson Title: Wired LANs, Connecting LANs and Wireless LANs

Instructional / Lesson Objectives:

- To Understand the IEEE Standards
- To Explain MAC and types of Ethernet
- To Discuss the concepts of LANs and Virtual Networks

Teaching AIDS : PPTs, Digital Board

Time Management of 12 Classes :

Each Class Time Management
5 mins for taking attendance
40 min for the lecture delivery
5 min for doubts session

Assignment / Questions: Attached
(Note: Mention for each question the relevant Objectives and Outcomes Nos.1, 2, 3, 4 & 1, 3...)

Refer Assignment – III & Question Bank

Signature of faculty

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LESSON PLAN (U-IV)

Lesson No: 09, 10 and 11 Duration of Lesson: 10hr 0 min

Lesson Title: Network Layer, Logical Addressing and Transport Layer

Instructional / Lesson Objectives:

- To Discuss different routing Protocols
- To Outline the concepts of logical addressing
- To understand students the concept of Transport Layer

Teaching AIDS : PPTs, Digital Board

Time Management of 12 Classes :

Each Class Time Management
5 mins for taking attendance
40 min for the lecture delivery
5 min for doubts session

Assignment / Questions: Attached
(Note: Mention for each question the relevant Objectives and Outcomes Nos.1, 2, 3, 4 & 1, 3...)

Refer Assignment – IV & Question Bank

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LESSON PLAN (U-V)

Lesson No: 12, 13 and 14 Duration of Lesson: 06 hr 40 min

Lesson Title: Application Layer, E-mail & WWW

Instructional / Lesson Objectives:

- To Outline application Layer
- To Understand the E-mail
- To Discuss the concepts of WWW and HTTP

Teaching AIDS : PPTs, Digital Board

Time Management of 08 Classes :

Each Class Time Management
5 mins for taking attendance
40 min for the lecture delivery
5 min for doubts session

Assignment / Questions: Attached
(Note: Mention for each question the relevant Objectives and Outcomes Nos.1, 2, 3, 4 & 1, 3...)

Refer Assignment – V & Question Bank

Signature of faculty

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ANURAG ENGINEERING ENGINEERS	**ANURAG Engineering College (An Autonomous Institution) Ananthagiri (V&M), Suryapet (Dt.)**	**Dept. Of ECE Accredited by NBA**

LESSON PLAN FOR THE A.Y. 2023 - 2024

NAME OF THE FACULTY:	Dr G Venkata Hari Prasad
SUBJECT:	COMPUTER NETWORKS
YEAR/COURSE/SEMESTER/SECTION:	III B.Tech (ECE) II-SEM. A -SECTION

Date	Day	Week No.	No. of days/ week	Topics Covered
22.1.24	MON	1	4	**UNIT-I : Network Models**
23.1.24	TUE			Overview of Unit 1
24.1.24	WED			Layered Tasks, OSI Model
25.1.24	THU			Peer to Peer Process
26.1.24	FRI			**REPUBLIC DAY**
27.1.24	SAT			**NO CLASS**
28.1.24	SUN			**SUNDAY**
29.1.24	MON	2	5	Layers in OSI Model
30.1.24	TUE			**NO CLASS**
31.1.24	WED			TCP/IP Protocol Suite
1.2.24	THU			Addressing
2.2.24	FRI			Physical Layer: Transmission Media
3.2.24	SAT			Guided Media: Coaxial Cable, Twisted Pair Cable
4.2.24	SUN			**SUNDAY**
5.2.24	MON	3	5	**"3 Day Workshop on Robotics"**
6.2.24	TUE			Fiber optic cable
7.2.24	WED			Unguided Media -3 Types
8.2.24	THU			Comparison of Guided and Unguided Mediums
9.2.24	FRI			**"Field Visit (schools Visit)"**
10.2.24	SAT			**SECOND SATURDAY**

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11.2.24	**SUN**			**SUNDAY**
12.2.24	**MON**	**4**	**5**	**NO CLASS**
13.2.24	**TUE**			Unit 1 Revision
14.2.24	**WED**			Class Test 1
15.2.24	**THU**			**Unit II: Introduction**
16.2.24	**FRI**			**NO CLASS**
17.2.24	**SAT**			**Block Coding, Cyclic codes, Problems (2)**
18.2.24	**SUN**	**SUNDAY**		
19.2.24	**MON**	**5**	**3**	**NO CLASS**
20.2.24	**TUE**			**NO CLASS**
21.2.24	**WED**			Check sum, Problems
22.2.24	**THU**			Framing, Flow Control & Error Control
23.2.24	**FRI**			Noiseless Channel Protocols
24.2.24	**SAT**			**NO CLASS**
25.2.24	**SUN**	**SUNDAY**		
26.2.24	**MON**	**6**	**7**	Stop and Wait ARQ, Go back N ARQ
27.2.24	**TUE**			Selective Repeat ARQ (Noisy Channel Protocols)
28.2.24	**WED**			HDLC Protocols, PPP Protocol
29.2.24	**THU**			Random Access Protocols
1.3.24	**FRI**			ALOHA & Slotted ALOHA Protocols, CSMA Protocols (2)
2.3.24	**SAT**			CSMA/CD Protocols
3.3.24	**SUN**	**SUNDAY**		
4.3.24	**MON**	**7**	**4**	CSMA/CA Protocols
5.3.24	**TUE**			Problems based on coding
6.3.24	**WED**			Unit –II Revision
7.3.24	**THU**			Class Test-2
8.3.24	**FRI**			**NO CLASS**

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9.3.24	**SAT**			**SECOND SATURDAY**
10.3.24	**SUN**			**SUNDAY**
11.3.24	**MON**	**8**	**5**	**Unit III: Introduction, Wired LANs, IEEE Standards**
12.3.24	**TUE**			Standard Ethernet
13.3.24	**WED**			Changes in Standard Ethernet, Fast Ethernet
14.3.24	**THU**			Gigabit Ethernet
15.3.24	**FRI**			**Discussion on 1st Mid Syllabus & Imp Questions**
16.3.24	**SAT**			**NO CLASS**
17.3.24	**SUN**			**SUNDAY**
18.3.24	**MON**	**9**	**2**	**Mid-1**
19.3.24	**TUE**			
20.3.24	**WED**			
21.3.24	**THU**			**NO CLASS**
22.3.24	**FRI**			Connecting Devices
23.3.24	**SAT**			Virtual LANs
24.3.24	**SUN**			**SUNDAY**
25.3.24	**MON**	**10**	**3**	**NO CLASS**
26.3.24	**TUE**			Backbone Networks
27.3.24	**WED**			IEEE 802.11
28.3.24	**THU**			Bluetooth
29.3.24	**FRI**			**NO CLASS**
30.3.24	**SAT**			**NO CLASS**
31.3.24	**SUN**			**SUNDAY**
1.4.24	**MON**	**11**	**5**	Unit 3 Revision
2.4.24	**TUE**			Class Test 3
3.4.24	**WED**			**Unit IV: Introduction** , Delivery, Forwarding (2)
4.4.24	**THU**			Uni- casting Routing Protocols

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5.4.24	FRI			NO CLASS
6.4.24	SAT			SECOND SATURDAY
7.4.24	SUN			SUNDAY
8.4.24	MON	12	2	Multicast Routing Protocols
9.4.24	TUE			NO CLASS
10.4.24	WED			Multicast Routing Protocols
11.4.24	THU			NO CLASS
12.4.24	FRI			NO CLASS
13.4.24	SAT			NO CLASS
14.4.24	SUN			SUNDAY
15.4.24	MON	13	4	Logical Addressing
16.4.24	TUE			SPORTS DAY
17.4.24	WED			NO CLASS
18.4.24	THU			IPV4 addresses
19.4.24	FRI			IPV6 addresses
20.4.24	SAT			NO CLASS
21.4.24	SUN			SUNDAY
22.4.24	MON	14	4	Transport layer, process to process delivery
23.4.24	TUE			UDP
24.4.24	WED			NO CLASS
25.4.24	THU			TCP
26.4.24	FRI			SCTP , Revision
27.4.24	SAT			NO CLASS
28.4.24	SUN			SUNDAY
29.4.24	MON	15	4	NO CLASS
30.4.24	TUE			UNIT -V: Introduction
1.5.24	WED			Application Layer

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2.5.24	THU			Domain Name System
3.5.24	FRI			Domain Name Space
4.5.24	SAT			SECOND SATURDAY
5.5.24	SUN	SUNDAY		
6.5.24	MON	16	6	DNS in the Internet
7.5.24	TUE			Resolution
8.5.24	WED			Domain Name Space (DNS) Messages
9.5.24	THU			INTERNSHIP
10.5.24	FRI			
11.5.24	SAT			
12.5.24	SUN			
13.5.24	MON			
14.5.24	TUE			
15.5.24	WED			
16.5.24	THU			
17.5.24	FRI			
18.5.24	SAT			
19.5.24	SUN			
20.5.24	MON			
21.5.24	TUE			
22.5.24	WED			
23.5.24	THU			
24.5.24	FRI			
25.5.24	SAT			
26.5.24	SUN			
27.5.24	MON			
28.5.24	TUE			

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29.5.24	**WED**			
30.5.24	**THU**			
31.5.24	**FRI**			
1.6.24	**SAT**			
2.6.24	**SUN**			
3.6.24	**MON**			
4.6.24	**TUE**			
5.6.24	**WED**			
6.6.24	**THU**			
7.6.24	**FRI**			
8.6.24	**SAT**			
9.6.24	**SUN**			
10.6.24	**MON**			E-Mail, File Transfer
11.6.24	**TUE**			WWW, HTTP
12.6.24	**WED**			Revision

Signature of HOD

Date:

Signature of faculty

Date:

Department of Electronics & Communication Engineering

ASSIGNMENT – 1

This Assignment corresponds to Unit No. 1 Date: 29.02.2024

Question No.	Question	Objective No.	Outcome No.
1	Discuss in detail about the OSI model?	1	1
2	Explain in detail about Guided transmission media?	1	1

Signature of HOD Signature of faculty

Date: Date:

Department of Electronics & Communication Engineering

ASSIGNMENT – 2

This Assignment corresponds to Unit No. 2 Date: 12. 03. 2024

Question No.	Question	Objective No.	Outcome No.
1	Discuss about the Error detection mechanism in Data Link Layer	2	2
2	Explain CSMA/CD, CSMA/CA	2	2

Signature of HOD

Date:

Signature of faculty

Date:

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ASSIGNMENT – 3

This Assignment corresponds to Unit No. 3 Date: 19. 03. 2024

Question No.	Question	Objective No.	Outcome No.
1	Discuss about the various Ethernet Implementations	3	3
2	Briefly explain in detail about Fast Ethernet and Gigabit Ethernet	3	3

Signature of HOD Signature of faculty

Date: Date:

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ASSIGNMENT – 4

This Assignment corresponds to Unit No. 4 Date: 11. 05. 2024

Question No.	Question	Objective No.	Outcome No.
1	Explain multicast routing protocols	4	4
2	Write about UDP and SCTP	4	4

Signature of HOD Signature of faculty

Date: Date:

Department of Electronics & Communication Engineering

ASSIGNMENT – 5

This Assignment corresponds to Unit No. 5 Date: 10. 06. 2024

Question No.	Question	Objective No.	Outcome No.
1	Write about Domain Name System (DNS) and DNS in Internet	5	5
2	Explain about WWW	5	5

Signature of HOD

Date:

Signature of faculty

Date:

Department of Electronics & Communication Engineering

ANURAG Engineering College

(Autonomous)

CLASS TEST -1; Date: 17.02.2024

Subject: COMPUTER NETWORKS
ELECTRONICS & COMMUNICATION ENGINEERING

1) With a neat diagram explain in detail about the Network architecture
2) Explain the TCP/IP model?
3) Explain various network categories based on size of network and physical structures.
4) Explain about various addressing used in TCP/IP
5) Classify about types of major classes of Guided media
6) Explain about unguided media for communication

Signature of HOD

Date:

Signature of faculty

Date:

Department of Electronics & Communication Engineering

ANURAG Engineering College

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CLASS TEST -2; Date: 7.03.2024

Subject: COMPUTER NETWORKS
ELECTRONICS & COMMUNICATION ENGINEERING

1) With a neat diagram explain in detail about the Network architecture
2) Explain the TCP/IP model?
3) Explain various network categories based on size of network and physical structures.
4) Explain about various addressing used in TCP/IP
5) Classify about types of major classes of Guided media
6) Explain about unguided media for communication

Signature of HOD

Date:

Signature of faculty

Date:

Department of Electronics & Communication Engineering

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CLASS TEST -3; Date: 7.03.2024

Subject: COMPUTER NETWORKS
ELECTRONICS & COMMUNICATION ENGINEERING

1) With a neat diagram explain in detail about the Network architecture
2) Explain the TCP/IP model?
3) Explain various network categories based on size of network and physical structures.
4) Explain about various addressing used in TCP/IP
5) Classify about types of major classes of Guided media
6) Explain about unguided media for communication

Signature of HOD

Date:

Signature of faculty

Date:

Department of Electronics & Communication Engineering

EVALUATION STRATEGY

Target (s)

a. Percentage of Pass : 95%

Assessment Method (s) (Maximum Marks for evaluation are defined in the Academic Regulations)

a. Daily Attendance
b. Assignments
c. Online Quiz (or) Seminars
d. Continuous Internal Assessment
e. Semester / End Examination

List out any new topic(s) or any innovation you would like to introduce in teaching the subjects in this semester

Case Study of any one existing application

Signature of HOD

Date:

Signature of faculty

Date:

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COURSE COMPLETION STATUS

Actual Date of Completion & Remarks if any

Units	Remarks	Objective No. Achieved	Outcome No. Achieved
Unit 1	completed on 14.02.2024	1	1
Unit 2	completed on 07.03.2024	2	2
Unit 3	completed on 02.04.2024	3	3
Unit 4	completed on 24.04.2024	4	4
Unit 5	completed on 12.06.2024	5	5

Signature of HOD

Date:

Signature of faculty

Date:

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Mappings

1. Course Objectives-Course Outcomes Relationship Matrix

(Indicate the relationships by mark "X")

Course-Outcomes / Course-Objectives	1	2	3	4	5
1	H				
2		H			
3			H		
4				H	
5					H

2. Course Outcomes-Program Outcomes (POs) & PSOs Relationship Matrix

(Indicate the relationships by mark "X")

P-Outcomes / C-Outcomes	a	b	c	d	e	f	g	h	i	j	k	l	PSO 1	PSO 2
1	H	M	M	L	L	M						M	L	L
2	H	M	M	L	L	M						M	L	L
3	H		M	L	L		H				M	M	L	L
4		H	M			M	M					M	M	M
5	H	M	M	L	L	M	M	M	M		M	M	M	M

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Rubric for Evaluation

Performance Criteria	Unsatisfactory	Developing	Satisfactory	Exemplary
	1	2	3	4
Research & Gather Information	Does not collect any information that relates to the topic	Collects very little information some relates to the topic	Collects some basic Information most relates to the topic	Collects a great deal of Information all relates to the topic
Fulfil team role's duty	Does not perform any duties of assigned team role.	Performs very little duties.	Performs nearly all duties.	Performs all duties of assigned team role.
Share Equally	Always relies on others to do the work.	Rarely does the assigned work - often needs reminding.	Usually does the assigned work - rarely needs reminding.	Always does the assigned work without having to be reminded
Listen to other team mates	Is always talking—never allows anyone else to speak.	Usually doing most of the talking-- rarely allows others to speak	Listens, but sometimes talks too much.	Listens and speaks a fair amount.