

# **UTKALMANI GOPABANDHU INSTITUTE OF** **ENGINEERING, ROURKELA**



LESSON PLAN

**SESSION: 2022-2023**

## **DEPARTMENT OF ELECTRONICS AND** **TELECOMMUNICATION ENGINEERING**

**SUBJECT CODE: Th.2**

**NAME OF THE SUBJECT: DATA COMMUNICATION AND  
COMPUTER NETWORK**

**BRANCH: ELECTRONICS & TELECOMMUNICATION**

**SEMESTER: DIPLOMA 4<sup>TH</sup> SEM**

**NUMBER OF CLASSES ALLOTTED PER WEEK: 4**

**TOTAL PERIODS ALLOTTED TO THE SUBJECT ACCORDING TO  
SCTEVT: 60**

**NAME OF THE FACULTY: MANINI MONALISA PRADHAN**

**UTKALMANI GOPABANDHU INSTITUTE OF ENGINEERING, ROURKELA**



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**PERIODS PER WEEK:** 4

**NAME OF THE FACULTY:** MANINI MONALISA PRADHAN

**NO OF CLASSES ALLOTTED PER WEEK:** 5(14/02/2023 to 23/05/2023)

Week/Date	Lecture	Topic to be covered	Remarks
1 <sup>st</sup> week 14/02/2023 To 18/02/2023	1 <sup>st</sup>	Data Communication Introduction	
	2 <sup>nd</sup>	Types of data communication	
	3 <sup>rd</sup>	Networks	
	4 <sup>th</sup>	Different types of Networks	
2 <sup>nd</sup> week 20/02/2023 To 25/02/2023	1 <sup>st</sup>	Protocol	
	2 <sup>nd</sup>	Architecture	
	3 <sup>rd</sup>	Standards, OSI	
	4 <sup>th</sup>	TCP/IP	
3 <sup>rd</sup> week 27/02/2023 To 04/03/2023	1 <sup>st</sup>	Data transmission Concepts	
	2 <sup>nd</sup>	Data transmission Terminology	
	3 <sup>rd</sup>	Analog Data transmission	
	4 <sup>th</sup>	Digital Data transmission	

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4 <sup>th</sup> week 06/03/2023 To 11/03/2023	1 <sup>st</sup>	Transmission impairments	07/03/2023 TO 08/03/2023(Holi holidays)Need one extra classes for adjustment
	2 <sup>nd</sup>	Channel capacity	
	3 <sup>rd</sup>	Transmission media	
	4 <sup>th</sup>	Guided Transmission	
		Wireless Transmission	
5 <sup>th</sup> week 13/03/2023 To 18/03/2023	1 <sup>st</sup>	Data Encoding	13/03/2023 TO 16/03/2023 (classes suspended due to semester exam).Need three extra classes
	2 <sup>nd</sup>	Digital data digital signal	
	3 <sup>rd</sup>	Digital data digital signal continue	
	4 <sup>th</sup>	Digital data analog signal	
6 <sup>th</sup> week 20/03/2023 To 25/03/2023	1 <sup>st</sup>	Digital data analog signal continue	
	2 <sup>nd</sup>	Analog data digital signal	
	3 <sup>rd</sup>	Analog data digital signal	
	4 <sup>th</sup>	Analog data analog signal	

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Week/Date	Lecture	Topic to be covered	Remarks
7 <sup>th</sup> week 27/03/2023 To 01/04/2023	1 <sup>st</sup>	Asynchronous and synchronous Transmission	
	2 <sup>nd</sup>	Error Detection	
	3 <sup>rd</sup>	Basic idea of Error control	
	4 <sup>th</sup>	Error Detection	
8 <sup>th</sup> week 03/04/2023 To 08/04/2023	1 <sup>st</sup>	Line Configuration	07/04/2023(holiday)Need one extra class for adjustment
	2 <sup>nd</sup>	Flow control	
	3 <sup>rd</sup>	Error Control	
	4 <sup>th</sup>	Multiplexing	
9 <sup>th</sup> week 10/04/2023 To 15/04/2023	1 <sup>st</sup>	FDM Synchronous TDM	14/04/2023(holiday)Need one extra class for adjustment
	2 <sup>nd</sup>	Statistical TDM	
	3 <sup>rd</sup>	Circuit Switching Network	
	4 <sup>th</sup>	Packet Switching Principles	
		X.25	

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**PERIODS PER WEEK:** 4

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Week/Date	Lecture	Topic to be covered	Remarks
10 <sup>th</sup> week 17/04/2023 To 22/04/2023	1 <sup>st</sup>	Routing in Packet Switching	
	2 <sup>nd</sup>	Congestion	
	3 <sup>rd</sup>	Effects of congestion	
	4 <sup>th</sup>	Congestion control	
11 <sup>th</sup> week 24/04/2023 To 29/04/2023	1 <sup>st</sup>	Traffic Management	
	2 <sup>nd</sup>	Congestion Control in Packet Switching Network	
	3 <sup>rd</sup>	Congestion Control in Packet Switching Network continue	
	4 <sup>th</sup>	Topology	
12 <sup>th</sup> week 01/05/2023 To 06/05//2023	1 <sup>st</sup>	Transmission media	05/05/2023(holiday)Needed one extra class for adjustment
	2 <sup>nd</sup>	LAN Protocol architecture	
	3 <sup>rd</sup>	Medium access control	
	4 <sup>th</sup>	Bridges	
13 <sup>th</sup> week 08/05/2023 To 13/05//2023	1 <sup>st</sup>	Hub	
	2 <sup>nd</sup>	Switches	
	3 <sup>rd</sup>	Ethernet	
	4 <sup>th</sup>	Fiber Channel	
14 <sup>th</sup> week 15/05/2023 TO 20/05/2023	1 <sup>st</sup>	Wireless LAN Technology	19/05/2023(holiday)Needed one extra class for adjustment
	2 <sup>nd</sup>	TCP/IP Protocol	
	3 <sup>rd</sup>	TCP/IP Protocol continue	
	4 <sup>th</sup>	Basic Protocol function	
15 <sup>th</sup> Week 22/05/2023 TO	1 <sup>st</sup>	Basic Protocol function continue	Classes will be continued up to 23/05/2023 as per academic calendar.
	2 <sup>nd</sup>	Principle of Internetworking	
		Principle of Internetworking continue	

23/05/2023		Internet Protocol operation	need three extra classes
		Internet Protocol	