

Mark Distribution (for 150 Marks)			
Theory Marks - 100		Practical Marks - 50	
Midterm	20	PC	25
Class test	10	PF	25
Quiz test	10	-	-
Final	60	-	-
<b>Total</b>	<b>100</b>	<b>Total</b>	<b>50</b>



**Daffodil**  
**Polytechnic**  
**Institute**

**Daffodil Polytechnic Institute, Institute Code: 50238**

**Lesson Plan – Academic session: January to June 2024**

Subject Teacher: Shuva Sarker ( Instructor)

Marks	Grade Point	Letter Grade	Marks	Grade Point	Letter Grade
80>	4.00	A+	55-59	2.75	B-
75-79	3.75	A	50-54	2.50	C+
70-74	3.50	A-	45-49	2.25	C
65-69	3.25	B+	40-44	2.00	D
60-64	3.00	B	0-39	0.00	F

Subject Name : Telecom Workshop and outside plant

Subject Code : 29431

Technology : Telecommunication Technology

Semester : 3rd

Reference Book : Telecom Workshop and outside plant

(Publisher: Haque Prokashani / Technical Prokashoni)

Class Timing Distribution	
Particulars	Time
Greeting with students	10 Minutes
Previous Class Review	10 Minutes
Present Class Topic Discussion and Lecture Delivery	60 Minutes
Present Class Topics Review	10 Minutes

### **Subject Aims:**

- Telecommunication workshop
- Cellular network System
- GSM and WCDMA System
- Telecommunication equipments and media
- Media converter and E1 to Ethernet converter
- SIM and RIM
- Function of Walkie Talkie.

- Single- and double-sided PCB
- Planning and wiring of telecom workshop
- Architecture of GSM Mobile System

**Subject Outcome:**

- Students will able to learn about Telecom workshop, Cellular network System, Architecture and Interfaces of GSM and WCDMA, Concept of Mobile Station (MS), Subscriber Identification Number (SIM and RIM), Radio wave Communication system. by studying this subject

Lecture	Chapter/ Exam / Industrial Visit	Learning Area	Learning Outcome	Class/Lab Supporting Equipment's
1.	1. Introduction to Telecommunication workshop	1.1 Define the telecommunication workshop 1.2 List the require equipments in telecommunication work shop.	To know about the equipments in telecommunication work shop.	Projector, Internet <a href="#">Link</a>
2.	1. Introduction to Telecommunication workshop	1.3 List the transmission media used in telecommunication system. 1.4 List the Safety Health and Environmental Awareness (Network & Telecommunications).	To know about transmission media used in telecom system	Projector, Internet <a href="#">Link</a>
3.	Chapter 1	<b>1st Class Test</b>	To know about the tx media used in telecomn system	Theory base
4.	<b>PRACTICAL:</b>	1. Identify the telecommunication equipment's and prepare the list. 2. Prepare the specification of each media.	Observe the equipment's and get some knowledge	Projector, Internet <a href="#">Link 1</a> <a href="#">Link 2</a>
5.	2. Understand the Cellular network System.	2.1 List the frequency bands of GSM and WCDMA. 2.2 Distinguish the difference between GSM, CDMA and WCDMA.	To know about the difference between GSM, CDMA and WCDMA	Theory base Projector, Internet <a href="#">Link</a>
6.	2. Understand the Cellular network System.	2.3 Describe the Block diagram of GSM MS. 2.4 List the advantages and disadvantages of GSM system over CDMA.	To know about the advantages and disadvantages of GSM system over CDMA.	Theory base
7.	Chapter 2	<b>1st Quiz Test</b>	To know about Cellular system (GSM, WCDMA & CDMA)	Theory base and
8.	<b>PRACTICAL:</b>	3. Perform the planning and wiring of telecom workshop 4. Perform the installation of telecom workshop.	To know the planning and wiring of telecom workshop	Projector, Internet Link: <a href="https://youtu.be/RcTPUIR UhZE">https://youtu.be/RcTPUIR UhZE</a>
9.	Assignment 01	How to Connect Rj-45 with UPT cable	Know how to connoted broadband	

10.	3. Understand the concept of Communication Equipment.	3.1 List different types Communication Equipment. 3.2 List the different types of Network.	To know about the different types of Network.	Projector, Internet Link: <a href="https://www.youtube.com/watch?v=LQEcZD939jI">https://www.youtube.com/watch?v=LQEcZD939jI</a>
11.	3. Understand the concept of Communication Equipment.	3.3 Describe the Media converter and E1 to Ethernet converter. 3.4 List the types of communication Router. 3.5 Identify and configure the Wi-Fi Router	To know about the Ethernet converter. Identify and configure the Wi-Fi Router.	Projector, Internet <a href="#">Link 1</a> , <a href="#">Link 2</a> & <a href="#">Link 3</a>
12.	3. Understand the concept of Communication Equipment.	3.6 Describe the Dual Tone Multi-Frequency (DTMF) telephone set. 3.7 Describe the Internet Protocol(IP) telephone set.	To know about the Dual Tone Multi-Frequency (DTMF), IP	Projector, Internet Link: <a href="https://www.youtube.com/watch?v=c61ZU8NEs9o">https://www.youtube.com/watch?v=c61ZU8NEs9o</a>
13.	<b>PRACTICAL:</b>	5. Observe the Walkie Talkie Handset. 6. Perform the tracing of circuit diagram of electronic equipment.	Develop knowledge and skill of Walkie Talkie Handset & circuit diagram.	<a href="#">Link 1</a> , <a href="#">Link 2</a>
14.	Chapter 3	<b>2nd Class Test</b>	To know about the Ethernet converter. Dual Tone Multi-Frequency (DTMF), IP	Theory base
15.	<b>All Review Class</b>	Chapter:1- 3 (Regarding students problem)	Student's can solve there problems	Theory base
16.	Chapter 3	<b>2nd Quiz Test</b>	Ethernet converter. Identify and configure the Wi-Fi Router	Theory base
17.	4. Understand the Subscriber Identification Number (SIM and RIM).	4.1 Define SIM and RIM. 4.2 List the types of SIM. 4.3 Describe the Block diagram of SIM and RIM.	To know about the RIM, SIM, diagram of SIM and RIM.	Theory base
18.	4. Understand the Subscriber Identification Number (SIM and RIM).	4.4 List the data stored on a SIM and RIM. 4.5 Describe the application of SIM and RIM.	To know about application of SIM and RIM.	Theory base Projector, Internet <a href="#">Link</a>
19.	Chapter 4	<b>3rd Class Test</b>	To know about the	Theory base
20.	<b>PRACTICAL:</b>	7. Prepare the single and double sided PCB using direct etching method.	Develop knowledge and skill of Walkie Talkie Handset, PCB using direct etching method	Projector, Internet <a href="#">Link 1</a> , <a href="#">link 2</a>
21.	Assignment 02	<b>Describe</b> of circuit diagram of electronic equipment.		

22.	Chapter 4	<b>3rd Quiz Test</b>	To know about application of SIM and RIM.	Theory base
23.	<b>PRACTICAL:</b>	8. Study the architecture of GSM and WCDMA Mobile System. 9. Visit mobile station (BTS, NODE-B, BSC and MSC etc) and prepare a report	Develop knowledge and skill of BTS, NODE-B, BSC and MSC	Projector, Internet Link: <a href="https://www.youtube.com/watch?v=O4QXd4QEJ1c">https://www.youtube.com/watch?v=O4QXd4QEJ1c</a>
24.	5. Understand the Radio wave Communication system.	5.1 Define Radio communication 5.2 List the Frequency Bandwidth of radio wave. 5.3 Describe the function of Willkie Talkie.	To know about the Radio communication, function of Willkie Talkie.	Projector, Internet Link: <a href="https://www.youtube.com/watch?v=PaKtplesS4U">https://www.youtube.com/watch?v=PaKtplesS4U</a>
25.	5. Understand the Radio wave Communication system	5.4 Describe the function of Fixed Wireless Phone. 5.5 List the advantages and disadvantages of Walkie Talkie and Fixed Wireless Phone.	To know about advantages and disadvantages of Walkie Talkie and Fixed Wireless Phone.	Theory base
26.	Chapter 5	<b>4rd class Test</b>	To know about the Radio communication, function of Willkie Talkie	Theory base
27.	Chapter 5	<b>4rd Quiz Test</b>	To know about advantages and disadvantages of Walkie	Theory & practical base
28.	All Review Class	Chapter:1- 5 (Regarding students problem)		Theory base
29.	Review Class	Review Class & Extra Class		Practical base
30.	Review Class	Review Class & Extra Class		Theory base