

DHABALESWAR INSTITUTE OF POLYTECHNIC

LESSON PLAN

Discipline		Semester		Name of the Teaching Faculty	
Diploma Engg		6th Sem		Mitunjali Bohuyan	
Subject		No. of days per Week Class Alloted		Semester from Dt. 14/03/22	To Dt. 04/06/22
Advance Communication		5 days		No. of Weeks: 15 weeks	
Week		Class Day		Theory / Practical Topics	
1st week		01 day 01		RADAR AND NAVIGATION AIDS:-	
		02 days		1:- Basic Radar, advantages and applications.	
		03 days		2:- Working principle of simple Radar system, its types.	
		04 days		3:- Radar range equation and performance factor of radar.	
2nd week		01 days		4:- Working principle of Pulsed Radar system.	
		02 days		5:- Function of radar indication and working principle of moving target indicator.	
		03 days		6:- Define Doppler effects and working principle of C.W radar.	
				7:- Radar aids to navigation.	
				8:- MTI Radar - working principle - Aircraft landing system.	
				9:- Navigation Satellite System (NAV-SAT) and GPS System.	
3rd week				2- SATELLITE COMMUNICATION	
		1st day		1:- Basic satellite Transponder and Kepler's laws.	
		2nd days		2:- Satellite orbital patterns and elevation (LEO, MEO, GEO) Categories	

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Diploma Engg	6th sem	Uttanjali Bhuyan
Subject	No. of days per Week Class Allotted	Semester from Dt. <u>14/03/22</u> To Dt. <u>04/06/22</u>
Advance Communication	5 days	No. of Weeks: <u>15 Weeks</u>
Week	Class Day	Theory / Practical Topics
4th Week	3rd days	3- Concept of Geostation - satellite any satellite, calculate its height, velocity and round trip time delay and their advantage and disadvantage.
	4th days	4- Working of the satellite sub system.
	5th days	5- Satellite frequency allocation and frequency bands.
	1st day	6- General structure of satellite link system (uplink, Down link, Transponder, Crosslink)
	2nd day	7- Working principle of direct broadcast system (DBS)
	3rd day	8- Working principle of VSAT system.
	4th day	9- Define multiple accessing and various types.
	5th day	10- Time division multiple Accessing (TDMA) and code division multiple accessing (CDMA) - block diagram, its advantages and dis- advantages.

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Diploma Engg	6th sem	Metanjali Dshreyan
Subject	No. of days per Week Class Alloted	6th Semester from Dt. <u>14/03/22</u> To Dt. <u>07/06/22</u> No. of Weeks: <u>15 Weeks</u>
Advance Communication	5 days	
Week	Class Day	Theory / Practical Topics
5th Week	1st day	11- Satellite Application, Communication, Satellite (MSAT), Digital Satellites Radio.
	2nd day	12- Working principle of GPS Receiver & Transmitters applications.
	3rd day	13- Optical Satellite link transmitter and Receiver.
		3- OPTICAL FIBER COMMUNICATION-
	4th day	1- Basic principle of optical communication.
6th Week	5th day	2- Compare the advantage and disadvantage of optical fiber & metallic cables.
	1st day	3- Electromagnetic frequency and wave line spectrum.
	2nd day	4- Types of optical fibres & principles of propagation in a fibre using Ray Theory.
	3rd day	5- Optical fiber construction.
		6- Define terms, Velocity of propagation, Critical angle, Acceptance angle numerical-aperture.


 H.O.D. Electronics & Telecomm. Engg
 DIP Athgarh

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Diploma Engg	6th sem	Mitanjali Dshuyan
Subject	No. of days per Week Class Alloted	6th Semester from Dt. 14/03/22 To Dt. 04/06/22 No. of Weeks: 15 Weeks
Advance Communication	5 day	
Week	Class Day	Theory / Practical Topics
7th Week	4th day	7- Optical fibre communication system block diagram & working principle 8- modes of propagation and index profile of optical fiber.
	5th day	9- Types optical fiber configuration single - mode step index. Multi-mode step index.
	1st day	10- Attenuation in optical fibers- Absorption losses, scattering losses bending losses, Core and cladding losses - Dispersion - material dispersion.
	2nd day	11- Optical sources (Transmitter) and types - LED - semiconductor laser diodes
	3rd day	12- Laser - its working principle block diagram using laser feedback control circuit.
	4th day	13- optical detectors - PIN and APD diodes & block diagram using APD connectors and isolates.
	5th day	14- optical repeater and single channel system.
	1st day	15- Applications of optical fibers civil industry and military application.
	2nd day	16- Concept of wave length Division, Multiplexing
	8th block	


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Diploma	6th	Gitanjali Bhuyan
Subject	No. of days per Week Class Alloted	6th Semester from Dt. 14/06/22 To Dt. 04/06/22
Ad. Comm.	5 days/week	No. of Weeks: 15 weeks
Week	Class Day	Theory / Practical Topics
9th week	3rd day 4-	TELECOMMUNICATION SYSTEM:-
	4th day	1- Working of electronic Telephone system.
	5th day	2- Function of switching system & call procedures.
	6th day	3- Space and time switching.
	1st day	4- Numbering plan of telephone networks
	2nd day	5- Working principle of a PABX & Digital EPABX.
10th	3rd day 5-	6- Units of power measurement
	4th day	7- Working principle of Internet protocol Telephone.
	5th day	8- Working principle of Internet telephone.
	1st day	DATA COMMUNICATION:-
	2nd day	1- Basic Concept of Data Communication.
		2- Architecture, protocols and standards.
	3rd day	3- Data Communication Circuits.
	4th day	4- Types Transmission.
	5th day	5- Data Communication Codes.
	6th day	6- Basic idea of Error control & Error detection.
	7th day	7- MODEM & its basic block diagram & common feature.
	8th day	Voice Modem.


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Adv. Comm.	5 days/week	
Week	Class Day	Theory / Practical Topics
10th week	3rd day 6-	WIRELESS COMMUNICATION-
	4th day.	1- Basic concept of cell phone.
	5th day.	frequency reuse channel assign-
11th week	1st day.	ment strategic handoff - co
	2nd day.	channel assignment.
	3rd day.	2- Concept of improving coverage
	4th day.	and capacity in cellular
	5th day.	system.
12th week	1st day.	3- Wireless system and its stan-
	2nd day.	dards.
	3rd day.	4- Discuss the GSM (Global-
	4th day.	system for mobile) service
	5th day.	and features.
	1st day.	5- Architecture of GSM system
	2nd day.	and GSM mobile station and
	3rd day.	channel types of GSM system.
	4th day.	6- Working of forward and reverse
	1st day.	CDMA Channel. the frequency and
	2nd day.	channel specification.
	3rd day.	7- Architecture and features of
	4th day.	GPRS.
	1st day.	8- Discuss the mobile TCP, IP
	2nd day.	protocol.
13th week	3rd day.	9- Working of wireless Application
	4th day.	protocol (WAP)
	1st day.	10- Smart Phone and discuss
	2nd day.	it features indicate through
	3rd day.	block diagram.
	4th day.	