A L NATIONAL MANNITE OF TE	CHNOTOGA WENN	National Institute of Technology Meghalaya An Institute of National Importance												CURRICULUM	
Progra	amme	ne Master of Computer Applications								Year of Regulation				2024-25	
Depar	tment	ent Computer Science and Engineering Semester											II		
Course	-	Course Name Pre-Requisit						ite		Structure	Marks Distribution				
Code		Date Company in the						L	T	Р	С	INT	MID	END	Total
CA406		Data Communication						3	0	0	3	50	50	100	200
									CO's	Statement				Bloom's Taxonomy	
	То	To introduce the components of Data Communication CA406.1 Able to learn the fundamentals of data communication											Understand		
Course		To analyse the Analog and Digital Transmission							CA406.2	transmission media.			_	Understand	
Objectiv	es To	To describe the structure of Physical and Data Link Layer							CA406.3	detection and correction and medium accontrol.				Analyse	
	То	To describe the function of wireless networks							CA406.4	A406.4 Able to acquire knowledge about the wireless networks.			1	Understand	
COs		Mapping with Program Ou						,	<u>.</u>				1	pping with PSOs	
	F	PO1	PO2	PO3	PO4	PO5	PO6 PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CA406.	1	2	_	_	_						_	_	2	1	
CA406.		2	1	1	1			1			1	1	1	1	1
CA406.		1	1	1	1							1	1	1	1
CA406.	4	1	1	2	2				1		1	1	1	1	1
CA406		1.50	1.00	1.33	1.33			1.00	1.00		1.00	1.00	1.25	1.00	1.00
							S	YLLABUS					T		
No.		Content											Hours	COs	
, -	Objec OSI r	Overview Objectives and Applications of Computer Communication. Computer Communication Network Architecture: ISO OSI reference model, design philosophy, layer, protocol, interface, and service concepts. Layer - wise unctionality												CA406.1, CA406.4	
l t	Physical Layer Concepts of Data and Signals, Analog and Digital Data Transmission, Bandwidth utilization: Multiplexing												12	CA406.2	
	Data Link Layer Framing and Coding techniques, Error Detecting and Correcting Codes, data link control protocols and their												12	CA406.3	
IV	Wired and Wireless LANs											09	CA406.4		
													<u> </u>		

Essential Readings

- 1. Behrouz A Forouzan, "Data Communication and Networking", 5th Edition, McGraw-Hill Education, 2018.
- 2. Andrew S Tanenbaum, David J. Wetherall "Computer Networks", 5th Edition, Prentice Hall. 2011.
- 3. William Stallings, "Data and Computer Communication", 10th Edition, Pearson, 2017.

Supplementary Readings

- 1. James F Kurose, Kaith W Ross, "Computer Networking | A Top-Down Approach", 6th Edition, Pearson, 2017.
- 2. A L Garcia, I Widjaja, "Communication Networks: Fundamental Concepts and Key Architectures", 2nd Edition, Tata McGraw Hill, 2017.
- 3. B. Buchanan, "The Handbook of Data Communications and Networks", 1st Edition, Springer, 2004.
- 4. James F Kurose, Kaith W Ross, "Computer Networking | A Top-Down Approach", 6th Edition, Pearson, 2017.