

## SILABUS JARINGAN KOMUNIKASI DATA

Minggu	MATERI	Topik	Subtopik	Course Learning Outcome		
1	Pendahuluan + Fisik	Converged network	1	Course introduction		
			2	Converged network architecure (rules, things must be considered : scalability, quality, fault tolerance, security)	CLO 1	
			3	Network scale (LAN, MAN, WAN, Internet)	CLO 1	
2		Communication protocols	4	Overview packet switch (OSI & TCP/IP)	CLO 1	
			5	Interaction between layers (encapsulation)	CLO 1	
			6	Message delivery process (application to application between end-nodes)	CLO 1	
3		Phisical Layer, Transmission Media & Network Device	7	Review Switching Concept (Circuit Switch, Packet Switch, & Virtual Circuit)	CLO 1	
			8	Wired & Wireless	CLO 2	
			9	Connector & Cabling	CLO 2	
			10	Bit Error Rate (BER)	CLO 3	
4	Datalink + Network	Datalink Layer	11	Functions (LLC, MAC)	CLO 2	
			12	Media access control / metoda akses (shared media : controlled & contention-based, non shared-media)	CLO 2	
13			Protocols framing : ethernet, WiFi	CLO 3		
14			Framing type : header, data, triler	CLO 2		
15			MAC adres	CLO 2		
16			Error Detection (Pariti, CRC, Checksumm)	CLO 2		
5			Error Control : BEC	17	ARQ	CLO 2
				16		CLO 2
				18	Flow control : Sliding Widow	CLO 2
6			Network Layer	21	Function : host to host (addressing, encapsulation, routing)	CLO 2
	22	IP v4 (packet header fields)		CLO 2		
	23	IP v6 (packet header fields)		CLO 2		
	24	IPv4 Subnetting		CLO 3		
	26	IPv4 address planning in LAN : VLSM & Non VLSM		CLO 3		
	27	Routing protocols (distance vector & link state, IGP & BGP, RIPv1, RIPv2, OSPF,		CLO 3		
7		28	Create and read routing table	CLO 3		
		30	functions : application to application (tracking multiple communication, segmenting & reassembling, applications identification/multiplexing)	CLO 2		
10	Trasnport	Transport layer	31	TCP datagrams (segment header fields, clint-server process example, connection establishment & termination)	CLO 2	
			32	UDP datagrams (segment header fields, clint-server process example)	CLO 2	
			33	Port addresssing	CLO 2	
			34	Managing Transport session : segmenting & reassembling	CLO 2	
			35	Connection establishment, connection termination	CLO 2	
			36	Managing transport session : flow control	CLO 2	
13	Aplikasi	Application layer, Presentation & Session	38	functions	CLO 4	
			39	protocols & services example	CLO 4	
			43	client server model	CLO 4	
14			44	protocols & services example (http, dns, smtp, pop, telnet, ftp, dhcp)	CLO 4	
			50	Data Capacity : QoS	CLO 4	