

**CY3211PE: SECURE PROTOCOL DESIGN
(PROFESSIONAL ELECTIVE-III)**

III-II:CSE(CS)								
Course Code	Category	Hours/Week			Credits	Max Marks		
CY3211PE	PROFESSION	L	T	P	C	CIE	SEE	Total
	AL ELECTIVE-III	3	0	0	3	25	75	100
Contact Classes:45	Tutorial classes:15	Practical classes: Nil				Total Classes:60		
Prerequisites								

Course objectives:

The main objective of this course is that to explore various protocols and design of various protocols with deeper security.

Course Outcomes:

By the end of the course Student will

1. Get the exposure to various protocols.
2. Gain knowledge on various secure mechanisms through set of protocols.
3. Efficiently design new set of protocols.
4. Learn Security issues and overcome means with protocols.

UNIT – I

OSI: ISO Layer Protocols:-Application Layer Protocols-TCP/IP, HTTP, SHTTP, LDAP, MIME,-POP& POP3-RMON-SNTP-SNMP.

Presentation Layer Protocols-Light Weight Presentation Protocol Session layer protocols.

UNIT – II

RPC protocols-transport layer protocols-ITOT, RDP, RUDP, TALI, TCP/UDP, compressed TCP. Network layer Protocols – routing protocols-border gateway protocol-exterior gateway protocol-internet protocol IPv4- IPv6- Internet Message Control Protocol- IRDP- Transport Layer Security-TSL-SSL-DTLS

UNIT – III

Data Link layer Protocol – ARP – In ARP – IPCP – IPv6CP – RARP – SLIP .Wide Area and Network Protocols- ATM protocols – Broadband Protocols – Point to Point Protocols – Other WAN Protocols-security issues.

UNIT – IV

Local Area Network and LAN Protocols – ETHERNET Protocols – VLAN protocols – Wireless LAN Protocols – Metropolitan Area Network Protocol – Storage Area Network and SAN

UNIT – V

Protocols -FDMA, WIFI and WIMAX Protocols- security issues. Mobile IP – Mobile Support Proto for IPv4 and IPv6 – Resource Reservation Protocol. Multi- casting Protocol – VGMP IGMP – MSDP .Network Security and Technologies and Protocols – AAA Protocols – Tunneling Protocols – Secured Routing Protocols – GRE- Generic Routing Encapsulation – IPSEC – Security.

TEXT BOOKS:

1. Jawin: "Networks Protocols Handbook", 3rd Edition, Jawin Technologies Inc., 2005.
2. Bruce Potter and Bob Fleck: "802.11 Security", 1st Edition, O'Reilly Publications, 2002.

REFERENCES:

1. Ralph Oppliger: "SSL and TLS: Theory and Practice", 1st Edition, Arttech House, 2009.
2. Lawrence Harte: "Introduction to CDMA- Network services Technologies and Operations", 1st Edition, Althos Publishing, 2004.
3. Lawrence Harte: "Introduction to WIMAX", 1st Edition, Althos Publishing, 2005.