FACULTY OF COMPUTER SCIENCE
Master Of Computer Application (Integrated) (Sem-IV)
In Effect from Academic Year 2023-24

Branch Name:	IMCA
Program Code:	CS301
Course Title:	Computer Networking
Course Code :	1CS3010405T
Pre-requisite Course:	Basic Knowledge of Computer

Course Objective (CO):

This course is intended to make the students

- To provide the basic knowledge of various types of computer networks,
- To aware of network topologies and reference models.
- To learn different kinds of transmission media.
- To focus on data communication components.
- To make the students familiar with IP addressing and mobile computing.

Teaching and Examination Scheme:

Teaching Scheme (Hours per week)				Evaluation Scheme(Marks)				
				Theory(Marks)		Practical (Marks)		
Lecture (L)	Tutorial (T)	Practical (P)	Credit	University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Total (Marks)
3	-	-	3	60	40	-	-	100

Course Contents:

Sr. No.	Topics	Total Hours	Weightage (%)
1	**Basic of Computer Networks:** Definition of Networking-Advantages and Disadvantages of computer networking. **Types of Networks**-LAN, MAN, WAN. **Network Topology**–Star, Ring, Bus, Tree, Mesh, Complete, Irregular.	10	20
2	**Reference Models**–The OSI reference model, The TCP/IP Reference model **The Telephone System:** Structure of Telephone System, The Local Loop, Trunk **Multiplexing:** FDM and TDM	10	20
3	**Transmission Media:** Types of Transmission media- Twisted pair, co-axial cable (Baseband and broadband), fiber cables, and comparison of fiber optic and copper wire. **WirelessTransmissionMedia:**RadioTransmission,MicrowaveTransmission, Infrared.	10	20
4	**Data Communication Components:** Modem, Hubs, Repeater, Routers, Bridges, Switches. **Switching:** Circuit switching, Message switching, Packet Switching.	9	20
5	**IP Addressing:** IP Address class, Network and Host Addressing, Sub net, Sub net Mask, Sub netting, super netting. **Mobile Computing:** Overview, Applications of Mobile Computing, Characteristics of Mobile Computing	9	20

List of Text book :

1. Data Communications and Networking, Behrous A. Forouzan, TMH publication.
2. Computer Networks, A.S.Tanenbaum.PHI publication.

List of Text Reference book:

1. Fundamentals of Mobile Computing, Prasant Kumarrajib Mall Pattnaik, PHIpublication.

E-Resources/Web Links:

- http://williamstallings.com/DataComm/
- http://williamstallings.com/Network/
- https://www.pearsonhighered.com/csresources/products/product.html#product,isbn=0132126958
- https://en.wikipedia.org/wiki/Mobile_computing

Course Learning Outcomes (CLO):

At the end of this course, the student would be able

CLO	Description	Bloom's Taxonomy Level
CLO1	To understand fundamental knowledge of computer network and its topologies.	1 Remembering 3 Applying,
CLO2	To learn various references models like OSI and TCP/IP.	2 Understanding, 1 Remembering
CLO3	To identify and work with various transmission media, cables and connectors.	4 Analyzing
CLO4	To familiar with terminology used with Data Communication and Networking.	2 Understanding,
CLO5	To understand and implement the fundamentals of IP Addressing.	4 Analyzing
CLO6	To understand the fundamentals of Mobile computing.	4 Analyzing

Mapping of CLO with PO and PSO

Course Learning Outcomes	Program Outcomes(POs)												Program Specific Outcomes (PSOs)	
Learning Outcomes	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**	**PSO1**	**PSO2**
CLO1	M	L		M	H	L	L				L			L
CLO2	L		M		M		M		H				L	
CLO3		M	H		M	L	M	L		L				M
CLO4	M		L		M	L	L		L					L
CLO5		L		M		M		M					L	M
CLO6		L		M		M		M					L	M

H: High, M: Medium, L: Low