C. U. Shah University, Wadhwan City

Faculty of Computer Science

Name of Program: Bachelor of Computer Application (BCA)

Semester : IV

W.e.f. June-2014

Teaching & Evaluation Scheme

Sr. No	Subject Code	Subject Name	Teaching Hours/Week				Credits	Evaluation Scheme/Semester							Total Marks
			Th	Tu	Pr	Total		Theory				Practical			
								Sessional Exam		University Exam		Internal		Uni.	
								Marks	Hrs	Marks	Hrs	Pr	TW	Pr	
4	4CS04BNT2	Wireless Communication & Mobile Technology	4	2	-	6	5	30	1.5	70	3	-	-	-	100

Objectives: The course provides introduction to wireless communication with focus on digital mobile communication system. It emphasizes both on technology and standard of Wireless communication system, Telecommunication system, Satellite communication system& Mobile Network System.

Pre-requisites: Fundamental of Computer Networking, Wireless Communication & Mobile Networking.

Ch. No.	Chapter Name	Chapter Topics	Total Lecture
1	Introduction	Overview of Wireless Transmission	05
		Electromagnetic Spectrum Radio Transmission, Microwave Transmission, Infrared, Bluetooth & Assisting Technology.	
2	Telecommunication System	Public Switched Telephone Network(PSTN),Local Loop(Modem, DSL, ADSL & Wireless)	05
		Switching, Calling, Handover, Trunk &Multiplexing	
		Spread spectrum in CDMA systems(DSSS & FHSS) GSM, Cellular Network, GPRS System & Architecture, ATM Technology	
3	Wireless Network System	Overview of Various Wireless Technology, Types of Wireless Network(WLAN, WMAN, WWAN, WPAN & assisting technologies) Wireless LAN(IEEE 802.11 Infrastructure, Ad hoc Network)	15
		Bluetooth, ATM, Frame Relay, HDLC, PPP, PPPoE, X.25, MPLS	
		Broadband Wireless, ISDN & Wireless Protocols(Layers of WAP,WAE & WML) Architecture & Assisting Technology.	
4	Satellite Communication System& Cable Television System	Overview of Satellite Communication, Types of Satellite Communication system(GEO,MEO &LEO)	10
		Iridium, VSAT & GPS Basic Concept of Cable Television system& Assisting Technology.	
5	Mobile Network System:-	Overview of Mobile Communication, Various Mobile Generation (2.5G, 3G, 4G & others	10
		Mobile IP, Mobile Ad hoc Network, Wireless sensor network & Assisting Technology.	
6	Multimedia Network Technology:-	Multimedia networking application, Streaming stored Audio &Video, Making Best Effort Services, Protocols for Real timeinteractive application RTP, RTCP, RTSP, SIP, M.H323/H.324, Scheduling & Policing mechanism, Integrated services	10

		Video on Demand services VOIP, RSVP, DOCSIS, IP telephony & VideoConferencing.	
		Total ::	**55**

Teaching Methodology:

Revision, Paper Solving, Seminar, Expert Talk, MCQ Quiz, Viva Test

Learning Outcomes:

Designing of Wireless Network Environment to the various organization

Provide effective solution regarding the Wireless & Mobile Technology

Recognize and Implement the affect of Satellite Communication & Telecommunication in Today's World

Books Recommended:

1. "Data Communication & Networking "   TMH, Behrouz A. Forouzen,ISBN No:0072967757
2. "TCP-IP Protocol Suite"   TMH, Behrouz A. Forouzen ,ISBN No:0073376043

Reference Books:

1. "Computer Networks"   Pearson, A.S.Tanenbaum,ISBN No:0132126958
2. "Computer Networking: Pearson,James Kurose &Keith Ross, ISBN No: 0273768964
   A Top down approach featuring the internet"
3. "Cryptography and Network Security"   Prentice Hall India, William Stallings, ISBN No:0133354695