



C. U. Shah University, Wadhwan City

Faculty of Computer Science

Name of Program: Bachelor of Science in Information Technology

(B.Sc.IT)

Semester : IV

W.e.f. June-2014

Teaching & Evaluation Scheme

Sr. No	Subject Code	Subject Name	Teaching Hours/Week				Credits	Evaluation Scheme/Semester							
			Th	Tu	Pr	Total		Theory				Practical			Total Marks
								Sessional Exam		University Exam		Internal		Uni.	
								Marks	Hrs	Marks	Hrs	Pr	TW	Pr	
4	4CS04IAN2	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)	15
		Wireless LAN(IEEE 802.11 Infrastructure, Ad hoc Network)	
		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 time interactive application RTP, RTCP, RTSP, SIP, M.H323/H.324, Scheduling & Policing mechanism, Integrated services	10

		Video on Demand services VOIP, RSVP, DOCSIS, IP telephony & Video Conferencing.	
		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