Semester Plan
(Theory)

TCET/FRM/IP-02/09 **Revision: A**

Semester: VII **Course: IT**

Subject: BEITC- 704: WIRELESS TECHNOLOGY **Class: BEIT-B**

S.No.	Prerequisite/ Bridge course:	Duration (Week /Hrs)	Modes of Learning	Recommended Sources
1	Fundamentals of wireless communication, LAN &WAN topology ,Layered architecture ,WLAN	6 hours	Self Learning/ Revision	**Textbooks:** 1. Fundamentals of Wireless Communication by Tse, Pearson 2. Computer Networks by Tanenbaum, Pearson

Class Room Teaching

Sr. No	Module No.	Lesson No	Topics Planned (Technology to be used)	Teaching Aids Required	Planned /Completion Date	Resource Book Reference	Remarks
1	____	L1.1	SOP-Practical,Introduction to experiments to be performed,tutorials.	Power point presentation, Chalk & Board	7/11/2017	1.6	
2	Module 1	L2.1	Fundamentals of Wireless Communication, Advantages, Limitations and Applications	Chalk & Board, Animation	7/18/2017	1.6.1	
3	Module 1	L2.2	Wireless Media, Infrared Modulation Techniques	Chalk & Board, Animation	7/20/2017	1.6.2,1.6.3	
4	Module 1		DSSS And FHSS	Chalk & Board, Animation		1.6.4,1.6.5	
5	Module 1		Multiple access technique: TDMA, CDMA	Chalk & Board, Animation		1.6.6,1.6.7	
6	Module 1		FDMA, CSMA,OFDMA(fundamentals)	Chalk & Board, Animation		1.6.8,1.6.9,1.6.10	
7	Module 1		Frequency Spectrum	Chalk & Board, Animation		1.6.11	
8	Module 1		Radio and Infrared Frequency Spectrum	Power point presentation, Chalk & Board		1.6.12	
9	Module 2		The cellular concepts: Frequency Reuse	Chalk & Board, Animation		2.6.1,2.6.2	
10	Module 2		Channel assignment strategies, Handoff strategies	Chalk & Board, Animation		2.6.3,2.6.4	
11	Module 2		Interference and System Capacity(Design problems)	Chalk & Board, Animation		2.6.5	

12	Module 2		Evolution of cellular networks 1G,2G,3G,4G	Chalk & Board, Animation		2.6.6	
13	Module 2		GSM: System Architecture, Radio Subsystem	Power point presentation, Chalk & Board		2.6.7	
14	Module 2		GSM: Channel Types	Chalk & Board, Animation		2.6.7,2.6.8	
15	Module 2		GSM frame structure	Chalk & Board, Animation		2.6.7,2.6.8	
16	Module 2		CDMA: Architecture	Chalk & Board, Animation		2.6.9	
17	Module 2		CDMA: Frequency and Channel specifications	Chalk & Board, Animation		2.6.9	
18	Module 2		CDMA: Forward and Reverse CDMA Channels	Chalk & Board, Animation		2.6.10	
19	Module 6		The need, attacks , security services	Power point presentation, Chalk & Board		6.6.1	
20	Module 6		WEP, Mobile IP, VPN (PPTP, L2TP, IPSec)	Chalk & Board, Animation		6.6.2	
21	Module 6		Economic Benefits of Wireless Networks, Economics of Wireless	Chalk & Board, Animation		6.6.3	
22	Module 6		Wireless data forecast, charging issues	Chalk & Board, Animation		6.6.4	
23	Module 6		Practice session , Discussion on university question papers	Chalk & Board, Animation		___	
24	Module 6		Practice session , Discussion on university question papers	Power point presentation, Chalk & Board		___	
25	Module 6		Doubt solving session	Chalk & Board, Animation		___	
Remark:							
Course:		Syllabus Coverage:		Practice Session: 2		**Content Beyond Syllabus:** Case Study on 4G	
No. of (lectures planned)/(lecture taken): 25							

Advanced course: Advanced 3G & 4G wireless mobile communication	20 Hours	Online NPTEL videos with Hands on Training in Laboratory	Web sources: 1. NPTEL-https://onlinecourses.nptel.ac.in 2. www.tutorialpoint.com1. Instructor's study material, Textbook reference: 1. Wireless communications: by T L Singal; Tata McGraw Hill Education private Ltd. (Edition 2011)

Text Books:

1.1. Modern wireless communication systems: by Simon Haykin, Michael Moher, adapted by David Koilpillai ; Pearson (Indian edition 2011)
1.2. Wireless Networks: by Nicopolitidia, M S Obaidat, GI Papadimitriou; Wiley India (Student Edition 2010)
1.3. Wireless communications: by T L Singal; Tata McGraw Hill Education private Ltd. (Edition 2011)

Reference Books:

2.1. Wireless and Mobile Networks: Dr. Sunilkumar S. Manvi & Mahabaleshwar S. Kakkasageri.
2.2. Wireless Communications and Networking: by Vijay K. Garg
2.3. Wireless Communications: by Theodore S. Rappaport."

SD/-

Name & Signature of Faculty Signature of HOD Signature of Principal /Dean (Academics)

Ms.Nishtha Mathur

Date: Date: Date:

Note:

1. Plan date and completion date should be in compliance
2. Courses are required to be taught with emphasis on resource book, course file, text books, reference books, digital references etc.
3. Planning is to be done for 15 weeks where 1st week will be AOP, 2nd -13th for effective teaching and 14th -15th week for effective university examination oriented teaching, mock practice session and semester consolidation.
4. According to university syllabus where lecture of 4 hrs/per week is mentioned minimum 55 hrs and in case of 3 lectures per week minimum 45 lectures are to be engaged are required to be engaged during the semester and therefore accordingly semester planning for delivery of theory lectures shall be planned.
5. In order to improve score in NBA, faculty members are also required to focus course teaching beyond university prescribed syllabus and measuring the outcomes w.r.t learning course and programme objectives.
6. Text books and reference books are available in syllabus. Here only additional references w.r.t. non –digital/ digital sources can be written (if applicable)
7. Technology to be used in class room during lecture shall be written below the topic planned within the bracket.