Sardar Patel Institute of Technology

Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai-400058-India
(Autonomous Institute Affiliated to University of Mumbai)

Course Code	Course Name	Teaching Scheme (Hrs/week)			Credits Assigned			
		L	**T**	**P**	**L**	**T**	**P**	**Total**
EXC8042	**Mobile Communication**	--	--	2	--	--	1	1
		Examination Scheme						
		ISE		**Practical**		**Oral**		**Total**
		40		--		20		60

Pre-requisite Course Codes	EXC8042 (Mobile Communication)	
After successful completion of the course, student will be able to		
Course Outcomes	CO1	Explain basic building block of mobile communication system
	CO2	Illustrate Mobile information using android applications
	CO3	Analyze the Virtual Lab for different mobile communication technologies.

Exp. No.	Experiment Details	Ref.	Marks
1	**AIM:** List Hardware Components of Mobile Communication Networks. (Mobile Phone, Antenna, BTS,PSTN) List Software Components of Mobile Communication Networks. (Bluetooth Protocol Stack,WML, HTML, Browsers)	5	**05**
2	**AIM:** Find mobile specifications and signal specifications using different android applications.(G-Net Track Lite, Network Cell)	1	**05**
3	**AIM:** WAP to implement cell splitting method to improve coverage area of cellular system. Simulation to implement capacity of cellular system. (Scilab or Matlab)	4	**05**
4	**AIM:** To understand the cellular frequency reuse concept fulfilling the following objectives I. finding the co-channel cells for a particular cell. II. Finding the cell clusters within certain geographic area.	2	**05**
5	**AIM:** To understand the handover mechanism. Objectives: To study the effect of handover threshold and margin on SINR and call drop probability and handover probability.	2	**05**
6	**AIM:** Understand about WiMAX networks, standards, limitations. Get familiar with adaptive modulation techniques used with WiMAX.	3	**05**
7	**AIM:** Understand about the basics of Mobile Ad-hoc Networks (MANETs) and different routing protocols. Setup a network with wireless nodes using ns2. Get familiar with the different characteristics of MANET through simulations	3	**05**

8	Understand basic concepts about Wireless Sensor Networks (WSNs), types, applications of WSN. Gain familiarity with LEACH, a cluster based routing protocol for WSNs.	3	**05**
		Total Marks	**40**

References:

[1] G-NetTrack Lite Android application.

[2] Fading Channels and Mobile Communications Virtual Lab

[3] IIT Khargpur Virtual Lab http://vlabs.iitkgp.ernet.in/ant

[4] Matlab / Scilab

[5] Internet