

Course Number and Name													
BCS702 Mobile and Pervasive Computing													
Credits and Contact Hours													
3 and 45													
Course Coordinator's Name													
Dr C.Rajabhushanam													
Text Books and References													
TEXT BOOKS:													
1. Jochen Schiller, "Mobile Communications", PHI, Second Edition, 2003.													
2. Jochen Burkhardt, Pervasive Computing: Technology and Architecture of MobileInternet App lications, Addison Wesley Professional; 3 rd edition 2007.													
REFERENCES:													
1.Frank Adelstein, Sandeep KS Gupta, Golden Richard, Fundamentals of Mobile and Pervasive Computing, McGraw-Hill 2005													
2. Debashis Saha, Networking Infrastructure for Pervasive Computing: EnablingTechnol ogies, Kluwer Academic Publisher, Springer; 1 st edition, 2002													
3. Introduction to Wireless and Mobile Systems by Agrawal and Zeng, Brooks/ Cole(Thom son Learning),1 st edition, 2002													
4. Uwe Hansmann, Lothar Merk, Martin S. Nicklons and Thomas Stober, Principles Of Mobile Computing, Springer, New York, 2003.													
5. <a href="http://media.techtarget.com/searchMobileComputing/downloads/Mobile_and_pervasive_co
mputing_Ch06.pdf">http://media.techtarget.com/searchMobileComputing/downloads/Mobile_and_pervasive_co mputing_Ch06.pdf													
Course Description													
This course discuss about knowledge and skills about a new trend in mobile Computing.													
Prerequisites						Co-requisites							
Communication Engineering I													
required, elective, or selected elective (as per Table 5-1)													
Selected elective													
Course Outcomes (COs)													
CO1: Explain the concepts and features of mobile networks.													
CO2: Explain the working of wireless communication protocols.													
CO3: Compare the routing protocols of mobile networks.													
CO4: Explain the transport and application layer protocols of mobile networks.													
CO5: Outline the basics of pervasive computing.													
CO6: Learn the Concept of GSM,GPRS.													
Student Outcomes (SOs) from Criterion 3 covered by this Course													
	COs/SOs	a	b	c	d	e	f	g	h	i	j	k	
	CO1	M		H									
	CO2	M		H									
	CO3			H					M				
	CO4			H									
	CO5	M		M									
	CO6								M				

List of Topics Covered	
UNIT I	9
MOBILE NETWORKS	
Cellular Wireless Networks – GSM – Architecture – Protocols –connection establishment – Frequency Allocation – Routing – Mobility Management – Security – GPRS.	
UNIT II	9
WIRELESS NETWORKS	
Wireless LANs and PANs – IEEE 802.11 Standard – Architecture – Services –Network – HiperLAN – BlueTooth- Wi-Fi – WiMAX.	
UNIT III	9
ROUTING	
Mobile IP – DHCP – AdHoc– Proactive and Reactive Routing Protocols – MulticastRouting.	
UNIT IV	9
TRANSPORT AND APPLICATION LAYERS	
Mobile TCP– WAP – Architecture – WWW Programming Model– WDP – WTLS – WTP WSP – WAE – WTAArchitecture – WML – WMLScripts.	
UNIT V	9
PERVASIVE COMPUTING	
Pervasive computing infrastructure applications- Device Technology - Hardware, Human machine Interfaces, Biometrics, and Operating systems– Device Connectivity – Protocols, Security, and Device Management- pervasive Web Application architecture Access from PCs and PDAs - Access via WAP.	