

COURSE TITLE : MOBILE COMPUTING
COURSE CODE : 5067
COURSE CATEGORY : E
PERIODS/WEEK : 4
PERIODS/SEMESTER : 72
CREDITS : 4

TIME SCHEDULE

MODULE	TOPICS	PERIODS
1	Introduction and Cellular System	18
2	GSM, Satellite and Broadcast Systems	18
3	Wireless LAN	18
4	VPN and Mobile Operating System	18
	Total	72

OBJECTIVES

MODULE I

- 1 Introduction to Mobile Computing
 - 1.1 Discuss the Applications of mobile computing
 - 1.2 Explain internetworking
 - 1.3 Study Hidden & exposed terminals, Near & far terminals
 - 1.4 Explain Cellular systems
 - 1.5 Study of SDMA, FDMA, TDMA, CDMA
 - 1.6 Comparison of S/T/F/CDMA

MODULE II

- 2.1 Explain GSM system architecture
- 2.2 Explain Handover
- 2.3 List the Applications of satellite systems
- 2.4 Study of Elevation angle and Foot print
- 2.5 Study of GEO, LEO, MEO
- 2.6 Overview of broadcast system
- 2.7 Explain cyclic repetition of data
- 2.8 Study of Digital audio broadcasting
- 2.9 Study Digital video broadcasting

MODULE III

- 3.1 Advantage and Disadvantage of Wireless LAN
- 3.2 Compare Infrared and radio transmission
- 3.3 Study the Infrastructure & adhoc network
- 3.4 Study IEEE802.11 System architecture
- 3.5 Know Bluetooth Technology
- 3.6 List the Bluetooth applications
- 3.7 Discuss Bluetooth standards documents
- 3.8 Discuss Usage models
- 3.9 Discuss Piconets & Scatternets

MODULE IV

- 4.1 Introduction to WAP
- 4.2 Advantage and Disadvantage of WAP
- 4.3 Introduction – Wireless Local Loop (WLL)
- 4.4 Introduction – Virtual Private Network (VPN)
- 4.5 Goal of VPN
- 4.6 Type of VPN
- 4.7 Introduction – CDMA 2000
- 4.8 Introduction – Wimax
- 4.9 Application of Wimax
- 5.0 Advantage of Wimax
- 5.1 Introduction – WIFI
- 5.2 Introduction – VOIP (Voice Over Internet Protocol)]
- 5.3 Mobile operating systems

CONTENT OUTLINE

MODULE I

Introduction to mobile computing- application-, cellular systems , Internetworking, Hidden & Exposed terminals, Near and Far terminals, SDMA, FDMA ,TDMA, CDMA,

MODULE II

GSM architecture, handover, Satellite Systems- Applications, GEO, LEO, MEO Broadcast systems, cyclic repetition, digital audio and video broadcasting

MODULE III

Wireless LAN- infrared/radio transmission, IEEE 802.11 – architecture, Blue Tooth – applications, standard, usage models, Piconets, Scatternets,

MODULE IV

WAP, Wireless Local Loop(WLL), Virtual Private Networks (VPN), CDMA 2000, Wimax, WIFI, Voice Over Internet Protocol(VOIP),Mobile operating Systems

TEXT BOOK

- 1. Mobile communications - Jochen Schiller, Pearson Publishers

REFERENCE BOOKS

- 1. Mobile computing
 - Prashant kumar patra
 - Sanjit kumar Dash , Scitech
- 2. Wireless communications & networks
 - William Stallings, Pearson Publishers