EID362 : MOBILE COMPUTING (Elective)

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Module I **8 hours**

Introduction to Mobile Communications and Computing : Introduction to mobile computing, novel applications, limitations, and architecture. (Wireless) Medium Access Control: Motivation for a specialized MAC (Hidden and exposed terminals, Near and far terminals), SDMA, FDMA, TDMA,CDMA.

Module II **10 hours**

GSM : Mobile services, system architecture, radio interface, protocols, localization and calling, handover, security, and new data services.

Module III **9 hours**

Mobile Network Layer : Mobile IP (Goals, assumptions, entities and terminology, IP packet delivery, agent advertisement and discovery, registration, tunneling and encapsulation, optimizations), Dynamic Host Configuration Protocol (DHCP)

Module IV **9 hours**

Mobile Transport Layer : Traditional TCP, indirect TCP, snooping TCP, mobile TCP, fast retransmit/fast recovery, transmission /time-out freezing, selective retransmission, transaction oriented TCP.

Module V **10 hours**

Wireless application Protocols: Architecture, wireless data gram protocol, wireless transport layer protocol, wireless transaction layer protocol, wireless session layer protocol, wireless application environment.

Text Book(s)

Jochen H.Schiller, Mobile Communications, 2/e, Pearson Education, 2003.

References

1. Hansmann, Merk, Nicklous, Stober, Principles of Mobile Computing, 2/e, Springer,2003.
2. Adelstein, Frank, Gupta, Sandeep KS, Richard III, Golden , Schwiebert, Loren, Fundamentals of Mobile and Pervasive Computing, 2005.
3. Martyn Mallick ,Mobile and Wireless Design Essentials, Wiley DreamTech, 2003.