

## MTCE 606A

### MOBILE AND WIRELESS COMMUNICATION

<b>L</b>	<b>T</b>	<b>P</b>
<b>4</b>	<b>0</b>	<b>0</b>
<b>Credits : 4</b>		

#### **Introduction:**

Applications, history, market, reference model and overview. Wireless Transmission- Frequencies, signals, antennas, signal propagation, multiplexing, modulation, spread spectrum, cellular system

#### **MAC and Telecommunication system:**

Specialized MAC, SDMA, FDMA, TDMA- fixed TDM, classical ALOHA, slotted, ALOHA, CSMA, DAMA, PKMA, reservation TDMA. Collision avoidance, polling inhibit sense multiple access.(DMA, comparison, CSM- mobile services, architecture radio interlace, protocol, localization, calling, handover, security, new data services, Introduction to WLL.

#### **Satellite and Broadcast Systems:**

History, Applications, GLO, LLO, MLO, routing, localization, handover in satellite system. Digital audio and video broadcasting.

#### **Wireless LAN:**

IEEE 802.11-System and protocol architecture, physical layer. MAC layered management. Bluetooth ---- User scenarios, Physical layer, MAC layer, networking, security and link management .

#### **Mobile network Layer:**

Mobile IP- goals, assumption, requirement, entities, terminology, IP packet delivery, Agent advertisement and discovery, registration, tunneling, encapsulation, optimization, reverse tunneling, IPV6.

**DHCP. Adhoc Networks-** Routing, destination sequence distance vector, dynamic source routing, hierarchical algorithm, alternative metric.

#### **Mobile Transport Layer:**

Traditional TCP, Indirect TCP, Snooping TCP, Mobile TCP fast retransmission recovery, transmission/time out freezing, selective retransmission, Transaction oriented TCP.

#### **Support for Mobility:**

File System, WWW-HIT, HTML, system architecture. WAP - architecture, wireless datagram, protocol, wireless transport layer security, wireless transaction protocol, application environment, telephony application.

#### **References:**

- 1.Jochen Schiller," Mobile Communication" , Pearson Education,2002
- 2.Lee," Mobile Cellular Telecommunications" McGEA W- WILL, 2<sup>nd</sup> Edition
- 3.Wireless Communications: Theodore S Rappaport; Pearson.