Detailed Syllabus:
MCA205-II
Mobile Computing

Unit No.	Topics	No. of Hours	CO No.
I	**Introduction** Introduction to Mobile Communication, Evolution of modern Mobile wireless communication systems, Applications of mobile communication, Requirements of Mobile communication, satellite systems and Applications, Satellite classification, characteristics of satellite systems, Some open research topics in mobile communication	10	1
II	**Mobile Communication Systems** Introduction, Cellular Structure, Cell Cluster, Frequency Reuse, Co-channel and Adjacent Channel Interference, Enhancement of system capacity, Channel Assignment schemes in Cellular network. Cellular System Infrastructure: Registration, Handoff Parameters and Underlying support, Roaming Support Using System Backbone.	10	2
III	**Mobile IP and Mobility Management** Mobile IP, Mobile Node, Corresponding Node, Home Network, Foreign Network, Home Agent, Foreign Agent, Care-of Address, Mobile IP Operations: Agent Discovery, Agent Solicitation, Tunneling. **Mobility management in wireless**: Networks, Handoff Techniques, Handoff detection and Assignment, Types of Handoff, channel Reservation for Handoff calls.	10	3
IV	**Wireless LANs and PANs** Introduction to IEEE 802.11, WLAN transmission technology, Spread Spectrum Technology, Frequency Hopping Spread Spectrum Technique, Direct Sequence Spread Spectrum Technique, WLAN System Architecture, IEEE 802.11 Logical Architecture, CSMA/CA, Home RF, Hiper LAN, Bluetooth , Advantages and disadvantages of Wireless LAN.	10	4
V	**Mobile Adhoc Network** Introduction to Mobile Adhoc Network (MANET), Characteristics of MANET, Applications of MANET, Routing, Need for Routing, Routing Classification, Table-Driven Routing Protocol – Destination Sequenced Distance Vector Routing Protocol, Cluster-Head Gateway Switch Routing. Source initiated On-demand Routing- Adhoc On Demand Distance Vector Routing, Dynamic Source Routing, Hybrib Protocol – Zone Routing Protocol.	10	5

RECOMMENDED BOOKS:

1. **Mobile Communication**: *Jochen H. Schiller,* Pearson Education Publication
2. **Introduction to Wireless and Mobile Systems**: *D.P. Agrawal, Qing-An Zing,* Vikas Publishing House.
3. **Wireless Communication and Networks**: *ItiSaha Misra,* McGraw Hill education.
4. **Wireless and mobile Communication**: *T.G. Palanivelu, R. Nakkeeran,* PHI Publication.
5. **Mobile Commerce**: *Karabi Bandyopadhyay,* PHI Publication.