

6. Path Testing and Equivalence Partitioning
7. Performance Testing
8. Using Testing Tool Selenium
9. Using Testing Tool QTP
10. Using Testing Tool WAPT
11. Using Testing Tool VTEST
12. Using Testing Tool AutoIT

## SEMESTER II

### Course 5: Mobile Computing

PSIT201

Course Code	Unit	Description	Credits
PSIT201	I	<b>Introduction:</b> Applications, A short history of wireless communication <b>Wireless Transmission:</b> Frequency for radio transmission, Signals, Antennas, Signal propagation, Multiplexing, Modulation, Spread spectrum, Cellular systems. <b>Medium Access Control:</b> Motivation for a specialized MAC: Hidden and Exposed terminals. Near and Far terminals; SDMA, FDMA, TDMA: Fixed TDM, Classical Aloha, Slotted Aloha, Carrier sense multiple access, Demand assigned multiple access, PRMA packet reservation multiple access, Reservation TDMA, Multiple access with collision avoidance, Polling, Inhibit sense multiple access; CDMA: Spread Aloha multiple access.	4
	II	<b>Telecommunication Systems:</b> GSM: Mobile services, System architecture, Radio interface, Protocols, Localization And Calling, Handover, Security, New data services; DECT: System architecture, Protocol architecture; TETRA, UMTS and IMT-2000: UMTS Basic architecture, UTRA FDD mode, UTRA TDD mode <b>Satellite Systems:</b> History, Applications, Basics: GEO, LEO, MEO; Routing, Localization, Handover, Examples	
	III	<b>Broadcast Systems:</b> Overview, Cyclic repetition of data, Digital audio broadcasting: Multimedia object transfer protocol; Digital video broadcasting <b>Wireless LAN:</b> Infrared vs. Radio transmission, Infrastructure and Ad hoc Networks, IEEE 802.11: System architecture, Protocol architecture, Physical layer, Medium access control layer, MAC management, Future development; HIPERLAN: Protocol architecture, Physical layer, Channel access control. Sublayer, Medium access control Sublayer, Information bases And Networking; Bluetooth: User scenarios, Physical layer, MAC layer, Networking. Security, Link management.	
	IV	<b>Wireless ATM:</b> Motivation for WATM, Wireless ATM working group, WATM services, Reference model: Example configurations, Generic reference model; Functions: Wireless mobile terminal side, Mobility supporting network side; Radio access layer: Requirements, BRAN; Handover: Handover reference model, Handover requirements, Types of handover, Handover scenarios, Backward handover, Forward handover; Location management: Requirements for location management, Procedures and Entities; Addressing, Mobile quality of service, Access point control protocol. <b>Mobile Network Layer:</b> Mobile IP: Goals, assumptions and requirements, Entities and Terminology, IP packet delivery, Agent advertisement and discovery, Registration, Tunneling and Encapsulation , Optimizations, Reverse tunneling, Ipv6; Dynamic host configuration protocol.	

		Ad hoc networks: Routing, Destination sequence distance vector, Dynamic source routing, Hierarchical algorithms, Alternative metrics	
	V	<b>Mobile Transport Layer:</b> Traditional TCP: Congestion control, Slow start, Fast retransmit/fast recovery, Implications on mobility; Indirect TCP, Snooping TCP, Mobile TCP, Fast retransmit/fast recovery, Transmission/time-out freezing, Selective retransmission, Transaction oriented TCP. <b>Support for Mobility:</b> File systems: Consistency, Examples; World Wide Web: Hypertext transfer protocol, Hypertext markup language, Some approaches that might help wireless access, System architectures; Wireless application protocol: Architecture, Wireless datagram protocol, Wireless transport layer security, Wireless transaction protocol, Wireless session protocol, Wireless application environment, Wireless markup language, WML script, Wireless telephony application, Examples Stacks with Wap, Mobile databases, Mobile agents	

### References :

Jochen Schiller, “*Mobile communications*”, Addison wisely , Pearson Education  
 Wiiliam Stallings, “*Wireless Communications and Networks*”  
 Rappaort, “*Wireless Communications Principals and Practices*”  
 YI Bing Lin , “*Wireless and Mobile Network Architectures*”, John Wiley  
 P. Nicopolitidis , “*Wireless Networks*”, John Wiley  
 K Pahlavan, P. Krishnamurthy , “*Principles of Wireless Networks*”  
 M. Richharia , “*Mobile Satellite Communication: Principles and Trends*”, Pearson Education

### Course Code: PSIT2P1

1. Develop UI with different controls on Mobile using Android.
2. Develop UI with different controls on Mobile using Windows.
3. Using buttons, radiobuttons, checkboxes on Mubile using Android / Windows.
4. Create a simple temperature converter application using Android.
5. Design a simple calculator using Windows / Android.
6. Program for simple quiz competition.
7. Program to insert and display data from database Windows / Android.
8. Program to generate Calendar using Windows / Android.
9. Design a simple to-do list using Windows/ Android.
10. Program to demonstrate simple Animation.

### Course 6: Advanced Computer Networks

PSIT202

Course Code	Unit	Description	Credits
PSIT202	I	TCP/IP Review, Static Routing, Dynamic Routing Protocols- Interior Gateway Protocol & Exterior Gateway Protocol	4
	II	OSPF Overview and Neighbour Relationships, OSPF Topology, Routes and Convergence, OSPF Route Summarization, Filtering and Default Routing OSPF Virtual Links and Frame Relay Operations	
	III	Policy-Based Routing and IP Service Level Agreement Internet Connectivity and BGP, External BGP, BGP Path Control Network Address Translation, IP Multicast Routing, IP Version 6 IPv6 overview, IPv4 and IPv6 Coexistence, Static	