CO	PO						PSO		
	1	2	3	4	5	6	1	2	3
1.	√		√	√		√	√	√	√
2.	√			√		√		√	√
3.			√			√		√	
4.			√	√		√		√	
5.			√			√		√	

CP5111 **NETWORKING LABORATORY** **L T P C**
0 0 4 2

OBJECTIVES:

- Demonstrate the operation of wireless networks.
- Simulate and analyze the performance of GSM, CDMA, LTE and SDN.
- To gain knowledge and work on various protocol layers.
- To explore network simulators.
- Identify the different features of integrated and differentiated services.

LIST OF EXPERIMENTS:

1) Configure networks using:
    a) Distance Vector Routing protocol
    b) Link State Vector Routing protocol
2) Implement the congestion control using Leaky bucket algorithm.
3) Installation of NS3 and execution of TCL commands / scripts.
4) Implementation Point to Point network using duplex links between the nodes. Analyze the packet transfer by varying the queue size and bandwidth. (using simulator)
5) Implement the dynamic routing protocol by varying the CBR traffic for each node and use a flow monitor( ) to monitor losses at nodes. (using simulator)
6) Create a wireless mobile ad-hoc network environment and implement the OLSR routing protocol. (using simulator)
7) Implement CDMA by assigning orthogonal code sequence for 5 stations, generate the CDMA code sequence and communicate between the stations using the generated code.
8) Create a GSM environment and implement inter and intra handover mechanisms. (using simulator)
9) In LTE environment implement Round Robin and Token Bank Fair Queue scheduler in MAC layer.
10) Write python script to create topology in Mininet and configure OpenFlow switches with POX controller to communicate between nodes.

TOTAL:60 PERIODS

OUTCOMES:

Upon completion of the course, the student will be able to

- Judge the emerging wireless technology standards.
- Configure functionalities of router and switches.
- Assess the importance of wireless adhoc networks.
- Compare and contrast various wireless technologies.
- Explain and design the considerations for deploying wireless network infrastructure.

CO	PO						PSO		
	1	2	3	4	5	6	1	2	3
1.	√		√	√		√		√	
2.			√			√	√	√	
3.	√		√				√		
4.	√					√		√	
5.	√		√	√		√			√

CP5251 ADVANCED OPERATING SYSTEMS L T P C
3 0 0 3

OBJECTIVES:

- To understand the concepts of distributed systems.
- To get an insight into the various issues and solutions in distributed operating systems.
- To learn about real-time operating systems.
- To gain knowledge on the design concepts of mobile operating systems.
- To understand cloud operating systems.

UNIT I INTRODUCTION 9

Distributed Operating Systems – Issues – Communication Primitives – Limitations of a Distributed System – Lamport's Logical Clocks – Vector Clocks – Causal Ordering of Messages

UNIT II DISTRIBUTED OPERATING SYSTEMS 9

Distributed Mutual Exclusion Algorithms – Classification – Preliminaries – Simple Solution – Lamport's Algorithm – Ricart-Agrawala Algorithm – Suzuki-Kasami's Broadcast Algorithm – Raymond's Tree-Based Algorithm – Distributed Deadlock Detection – Preliminaries – Centralized Deadlock Detection Algorithms – Distributed Deadlock Detection Algorithms – Path Pushing Algorithm – Edge Chasing Algorithm – Hierarchical Deadlock Detection Algorithms – Agreement Protocols – Classification – Solutions to the Byzantine Agreement Problem – Lamport-Shostak-Pease Algorithm