1.	Title of the course	Communication Networks Laboratory
2.	Course number	EE509P
3.	Structure of credits	0-0-3-2
4.	Offered to	PG
5.	New course/modification to	Modification To EE5292/8
6.	To be offered by	Department of Electrical Engineering
7.	To take effect from	July 2022
8.	Prerequisite	Nil
9.	**Course Objective(s):** To provide an hands-on experience on applying techniques and methodologies for the purpose of modeling and analysing the performance of Communication Networks.	
10.	**Course Content:** The following are the list of experiments that will be conducted in this Lab course: 1) Wireless Sensor Network Deployment using Spatial Poisson Process 2) Coverage analysis using the Poisson Boolean model 3) Shortest Path Algorithms: Dijkstra's vs. Bellman-Ford Algorithms 4) Stochastic Shortest Path Algorithm 5) Network Utility Maximization 6) Max-weight Scheduling Algorithm 7) Comparison of Various Scheduling Algorithms 8) Implementation and Comparison of Various Queuing Systems 9) Distributed Function Computation and Distributed Optimization 10) Introduction to SDRs	
11.	**Textbook(s):** 1. Kumar A, Manjunath D and Kuri J, *Communication Networking: An Analytical Approach*, Elsevier (2004). 2. Srikant R and Ying Lei, *Communication Networking: An Optimization, Control, and Stochastic Networks Perspective*, Cambridge University Press (2014).	
12.	**Reference(s):** 1. Kelly F and Yudovina E, *Stochastic Networks*, Cambridge University Press (2014). 2. Varghese G, *Network Algorithmics: An Interdisciplinary Approach to Designing Fast Networked Devices*, Morgan Kaufmann (2004). 3. Walrand J and Varaiya P P, *High Performance Communication Networks*, Elsevier (2004).	