

**ADVANCED NETWORK TECHNOLOGIES  
(SKILL BASED LAB ELECTIVE-II)  
(VIRTUAL LAB, IIT KHARAGPUR)**

**Course Code:19EC11M2**

**L T P C**  
**0 0 2 1**

Prerequisites: Computer Networks.

Course Outcomes: At the end of the course the student will be able to

- CO1:** Demonstrate typical installation of NS-2.
- CO2:** Understand LAN simulation using NS2.
- CO3:** Illustrate Network performance evaluation, and related metrics.
- CO4:** Differentiate Bluetooth networks from other WiFi networks.
- CO5:** Understand Zigbee Network simulation with NS2.

**List of Experiments:**

1. Basics of Network Simulation and Tcl Programming for NS-2
2. Simulating a Local Area Network
3. Simulating a LAN using NS2
4. Network Performance Evaluation
5. Performance Evaluation Techniques | Network Performance Evaluation using NS-2
6. Simulating a Wi-Fi Network
7. Simulating a MAC protocol with NS3
8. Simulating a WiMAX Network with NS2
9. Simulating a WiMAX Network addressing format
10. Simulating a Mobile Adhoc Network with NS2
11. Setting up a Bluetooth Network
12. Simulating a Bluetooth network with NS2
13. Setting up a ZigBee Network
14. ZigBee Network with NS2

Note: Any **TWELVE** of the experiments are to be conducted.

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