

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E. Computer Engineering (Wireless Mobile Computing)

Semester: II

Subject Name: Wireless Sensor Networks (Elective III & IV- Group 2)

Subject Code: 725307

Course Content:

Sensor networks overview: introduction, applications, design issues, requirements. Sensor node architecture

Network architecture: optimization goals, evaluation metrics, network design principles. Sensor network operating systems and brief introduction to sensor network programming.

Network protocols: MAC protocols and energy efficiency.

Routing protocols: data centric, hierarchical, and location-based, energy efficient routing etc Sensor deployment, scheduling and coverage issues, self configuration and topology control. Querying, data collection and processing, collaborative information processing and group connectivity Target tracking, localization and identity management. Power management, Security and privacy

Text Books:

1. Wireless Sensor Networks: Technology, Protocols, and Applications by Kazem Sohraby/wiley
2. Wireless Sensor Networks by Zhao Feng/ Elsevier India

Reference Books:

1. Security in Wireless Sensor Networks by Piotr Szczechowiak/ Lap Lambert Academic Publishing
2. Wireless Sensor Networks by Raghavendra Sivalingam Znati/ Springer India
3. Building Wireless Sensor Networks by Robert Faludi/ O'reilly