Course Overview: This course covers the challenges and the latest research results related to the design and management of wireless sensor networks (WSNs). WSNs have recently gained tremendous popularity due to the wide range of applications they can be used for such as disaster management, military, building and road monitoring, health care, etc. WSNs are infrastructures wireless networks that are significantly constrained in the amount of available resources such as energy, storage and computation. Such constraints make the design and operation of sensor networks considerably different from contemporary wireless networks, and necessitate the development of resource conscious protocols and management techniques. This course covers the following topics:

- Sensor node architecture.
- WSN network architecture and deployment strategies.
- Medium access control (MAC) in WSN.
- Routing protocols in WSN.
- Data centric and content-based networking.


Note: Lecture notes are the primary reference.

Course Outcomes:
After completing this course the students should:
1. Demonstrate familiarity with common wireless sensor node architectures.
2. Be able to carry out simple analysis and planning of WSN.
3. Demonstrate knowledge of MAC protocols developed for WSN.
4. Demonstrate knowledge of routing protocols developed for WSN.
5. Demonstrate familiarity with mobile data-centric networking principles.
6. Demonstrate familiarity with WSN standards.

Grading System:
- Final Exam 80%
- Project/Presentation (subject to change) 20%

Classroom Policy:
No eating, drinking, chatting, or use of mobile phones is allowed during lectures.