

EEL 6935 Multimedia Systems

Credits: 3 credits

Textbook, Title, Author, and Year: B. Furht, Handbook of Multimedia Computing, CRC Press, 1999

Reference Materials: Research papers (to be given in the class)

Specific Course Information

Catalog Description: Multimedia systems concepts and characteristics. Multimedia compression techniques. Systems architectures for multimedia. Multimedia networking, communications, and synchronization. Multimedia operating systems. Video partitioning and retrieval. Multimedia systems and tools. Wireless multimedia. Multimedia applications. Student projects.

Prerequisites: COP 4610 Operating Systems

Specific Goals for the Course: To provide an in-depth survey of the state-of-the-art in multimedia system design and applications. The student shall learn the basic techniques and standards for image and video compression (such as JPEG and MPEG), multimedia networking and communications, multimedia security and mining, and operating system support for multimedia.

Brief List of Topics to be covered:

1. Introduction to multimedia systems
2. Image compression techniques and standards
3. Video compression techniques and standards
4. Motion estimation algorithms
5. Image and video indexing and retrieval
6. Multimedia security and mining
7. Multimedia networks and communications
8. Multimedia operating systems
9. Multimedia and the Internet
10. Wireless multimedia