CSCE 4930.002/5933.003 – Multimedia Computing (Fall 2012)

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Class Web : http://www.cse.unt.edu/~jhoh/
Text : Lecture Notes will be provided in Blackboard.
Pre-Requisites : CSCE2410 or working knowledge of any programming language.

Objectives: This course aims to develop a critical appreciation of the theoretical background as well as the practical issues of multimedia systems, and provides students with an in-depth knowledge of digital multimedia objects, storage and processing technologies: data acquisition, data compression, interpretation, presentation and interaction, and the emerging standards supporting them. Also, it gives students some practical experience of programming components of multimedia systems. By the end of this course, students will:

- know the principles of digital data acquisition and presentation
- understand the principles of data compression, audio, and image interpretation
- be familiar with the emerging standards for digital data storage, and compression: JPEG, MPEG, etc.
- have practical experience of programming component elements of multimedia systems.

Contents : Multimedia plays more and more important role in modern communications (voice-over-IP, videoconferencing, videophone), consumer electronics (MP3 players, digital still and video cameras, DVD, camera-equipped cell phones), entertainment (high-definition TV, digital cinema, networked home) and professional (medical imaging, remote sensing) markets. The success of multimedia systems stems from new opportunities they offer (e.g., video cell phone), and their widespread use (thanks to miniaturization and low cost). This course will provide a comprehensive introduction to most multimedia subjects. In this course we will discuss types of multimedia information: text, audio, images, graphics, video, animation and their characterization; multimedia processing, compression standards and techniques; multimedia systems, storage as well as content generation and manipulation tools; requirements and protocols; multimedia applications in communication, database and entertainment. Various multimedia hardware and software systems will be discussed.

Grading :

	Graduate	Undergraduate
Mid-term Exam	30 %	30 %
Final Exam	35 %	35 %
Programming Assignments	10 %	15 %
Reading Assignments	5 %	10 %
Attendance	10 %	10 %
Term-Project & Presentation	10 %	-

- **Programming Assignments** : There will be some programming assignments. An instruction for each programming assignment will be provided. The programming assignments are individual works. Each individual student needs to submit his/her own work by due date. **No late submission accepted.** The details can be found in the web.
- **Reading Assignments** : There will be some reading assignments. Read the given materials, and submit 2 or 3 pages of summary report by due date. **No late submission accepted.** The details can be found in our web page.
- **Term-Project & Presentation (Graduate Only)** : Using the papers that you select, submit a term paper which includes not only at least three pages of summary but also at least two pages of comparisons of proposed schemes, discussions of their advantages and disadvantages, and/or proposal of new ideas. Indicate the papers you read as references. Finally, present your term paper in the class. **No late submission accepted**. More details can be discussed later in class.

Policy :

1. **No make up exams (before and after) will be given. Equitable arrangements will be made for those with a university-approved excuse.**
2. **The penalty for cheating will be dismissal from the course with failure. No incomplete grade will be given.**
3. **No extra work after Final.**
4. **No grading question by email.**
5. **No early exams.**

"The Student Evaluation of Teaching Effectiveness (SETE) is a requirement for all organized classes at UNT. This short survey will be made available to you at the end of the semester, providing you a chance to comment on how this class is taught. I am very interested in the feedback I get from students, as I work to continually improve my teaching. I consider the SETE to be an important part of your participation in this class."

Disabilities Accommodation: The University of North Texas complies with Section 504 of the 1973 Rehabilitation Act and with the Americans with Disabilities Act of 1990. The University of North Texas provides academic adjustments and auxiliary aids to individuals with disabilities, as defined under the law. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring accommodation, please see the instructor and/or contact the Office of Disability Accommodation at 940-565-4323 during the first week of class.