COP 6731 – Advanced Database Management Systems

Instructor: Kien A. Hua
Office: Harris Engineering Center, Room 229
Email: kienhua@cs.ucf.edu

Objectives:

The objective of this course is to prepare the students to work in areas related to multimedia databases and advanced information systems such as live video computing, Internet of things, computer-aided diagnosis of medical images, video on demand, and electronic commerce. Beside the lectures which provide a broad base for understanding the technologies, each student will read recent papers and perform an in-depth study on a specific topic.

Outcomes:

- The students will gain an in-depth knowledge in advanced database and information system technology
- The students will acquire the proper training to continue their research in various areas of database and information system technology
- The students will be able to apply the latest database and information system technologies to other areas of research such as Internet of Things, computer vision, image processing, sensor networks, human computer interaction, information retrieval, data mining, automatic medical diagnosis, social media, and real-time multimedia applications.

Prerequisite:

File structures, relational data model, query processing. Basic knowledge in network communications is helpful, but not required.

Class Time: Tuesday and Thursday 6:00 - 7:15PM, HEC Room 117.

Office Hours: Tuesday and Thursday 4:30 – 5:30PM.

Class Notes: Available at http://www.cs.ucf.edu/~kienhua/classes/.

Topics:

System support for multimedia data, multidimensional data indexing techniques, image/video compression, image/video retrieval techniques, video delivery techniques for wired and wireless environments, image-data applications, database techniques for live video computing, Internet of Things.

Grading:

- Test 1: 30%
- Test 2: 30%
- Critical reviews: 20%
- Project: 20% +/- grades will be used

Important Dates:

- Withdrawal Deadline: March 22, 2017
- Last Day of Class: April 20, 2017