COP 6731 – Advanced Database Management Systems
(Multimedia Computing, Communications, and applications)

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Course Description:

Selected topics concerning object-oriented databases, multimedia databases, active databases, temporal databases, spatial databases, and information systems.

Objectives:

The objective of this course is to prepare the students to work in areas related to multimedia computing and communications, and advanced information systems. Relevant applications include Internet of things, multimedia retrieval systems, image/video processing, computer-aided diagnosis of medical images, data analytics, video on demand, electronic commerce, etc. 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 multimedia computing and communication techniques.
- The students will acquire the training to continue their system-oriented research in various related areas such as Internet of things, computer vision, image/video processing, sensor networks, human computer interaction, information retrieval, data mining, social media analytics, and various real-time multimedia applications.

Prerequisite:

The course is self-contained suitable for students with a B.S. degree in Computer Science. However, knowledge in operating systems, databases, and machine learning are helpful.

Class Time: Tuesday and Thursday 6:00 - 7:15PM, Eng1-383.

Office Hours: Tuesday and Thursday 3:00 – 4:00PM, or by appointment.

Text: A text is not required. Class notes are available at http://www.cs.ucf.edu/~kienhua/classes/.

Topics:

System support for multimedia data, indexing techniques for multimedia data, image/video compression, image/video retrieval techniques, scalable video streaming techniques for wired and wireless multimedia systems, live video database management systems, computer-aided diagnosis of medical images, music generation.

Grading:

Test 1	20%	Reading assignments:	20%
Test 2	20%	Project:	20%
Test 3	20%		

Important Dates:

Withdrawal Deadline	March 20, 2020
Martin Luther King Jr Day	January 20, 2020
Spring Break	March 9-14, 2020
Last Day of Class	April 23, 2020