COP 6730 – Database Transaction Processing Systems

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Objectives:

This course is for students interested in learning about transaction processing techniques including atomicity, serializability, recoverability, and durability; and their implications on system development for large-scale deployment, particularly online applications. Beside the lectures, which provide a broad base for understanding the technologies, each student will perform in-depth study on a specific topic.

Prerequisite:

COP4710 (Relational model, simple SQL, query processing). Background in operating systems and distributed systems is helpful.

Class Time:

Tuesday and Thursday 6:00 - 7:15PM, Room HEC 0117.

Office Hours:

Tuesday and Thursday 4:30 – 5:30PM.

Class Notes:

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

Topics:

Transaction Processing Models
Isolation Implementation
Implementing atomicity and durability
Architecture of Transaction Processing systems
Transaction Processing Monitors
Lock Implementation
Techniques for Electronic Commerce
Distributed Transaction Processing

Grading:

First test: 30%
Second test: 35%
Critical reviews: 20%
Project presentation: 15%

Final Exam: http://registrar.ucf.edu/exam/2016/spring (FIRM)
Note: “+/-” grades will be used

Holidays:

Martin Luther King Jr. Day: Monday, January 18, 2016
Spring Break: March 07, 2016 – March 12, 2016