

Course Syllabus

Database Systems COP 4710, Fall 2019

Class Hours: TR 6:00PM - 7:15 PM
Place: HPA1 O112

Description: The objective of this course is to prepare the students for database application development and studies at more advanced levels. The students are expected to gain an in-depth knowledge of database technology and become proficient at development of database applications suitable for Internet deployment. General topics: Storage and access Structures, database models and languages, related database design, and implementation techniques for database management systems.

PR: COP 3503C with a grade of "C" (2.0) or better

Instructor: Dr. Khanh Vu
Email: Khanh.Vu@ucf.edu
Office: HEC 328
Office Hours: Thursday 3:30PM - 4:30PM, and by appointment.

GTAs: TBA

Text: *Database Management Systems* by Raghu Ramakrishnan and Johannes Gehrke, and *Learning PHP, MySQL, JavaScript, and CSS & HTML5: A Step-by-Step Guide to Creating Dynamic Websites* (Recommended)

Web Resources: <http://webcourses.ucf.edu>

Lecture Notes: course notes, and other materials covered in class will be available and updated on the course's website. Assignments, solution keys, and announcements will also be posted on the website.

Homework Assignments: All homework assignments will be submitted via WebCourses. See below for Late Assignment Policy.

Grading Policy:

- Homework - 20%
- Test 1 (Week of 9/30 - 10/04) - 30%
- Test 2 (Tuesday, Dec. 10, 2019) - 30%
- Team Project - 20%

Exam Format: a combination of multiple-choice questions and free-response questions.
The University's default grading scheme will be used, i.e., Plus/Minus letter grades are based on the straight percentage scale (e.g., B-: 80 – 83%; B: 84 – 86%; B+: 87 – 89%; etc.)

Calendar: See Class Calendar.

Course Outcomes:

The intended outcomes of this course--as relevant to those of The Computer Science Bachelor's program learning outcomes--include the following. Students shall be able to:

- Analyze a problem and identify and define the computing requirements appropriate to its solution.
- Design, implement and evaluate a computer-based system, process, component, or program to meet desired needs and budget, by applying best practices in software development processes, methods, and tools.
- Function effectively on teams to accomplish a common goal.
- Use current techniques, skills, and tools necessary for computing practices.
- Demonstrate their knowledge of, and ability to apply, programming fundamentals in at least three programming languages.

Course Policies:

- All tests are closed books, closed notes, and no electronic devices.
- There will be no makeup exams (Exceptions may be made for medical emergencies).
- Homework reflects individual work and is due by the deadline on Webcourses. Homework may be turned in late with a 10%-off penalty for each day late. They will not be accepted after the fifth day they are due.
- All regrade requests **MUST** be initiated within 1 week of returning back the graded homeworks/exams.
- If you request for a regrade, not only the problem in doubt, but also all problems on your homework/exam may be regraded at the discretion of the TA or the instructor.
- Attending lectures is not mandatory. However, you are responsible for all announcements and course material discussed in the class.
- Do not use any published solutions or solutions from prior semesters unless we explicitly post them for your use.

Academic Integrity and Student Conduct: Please read and understand student rights and responsibilities including conduct rules clearly stated in UCF's golden rules, at http://www.goldenrule.sdes.ucf.edu/2e_Rules.html.

Topics to Be Covered:

- Entity-Relationship Model
- Relational Model
- Relational Algebra and Calculus
- Structured Query Language (SQL)
- File Organizations & Indexing
- Query Optimization/Evaluation
- Database Application Development
- Schema Refinement and Normal Forms
- Transaction Processing

Special Notes:

- *It is recommended that you contact me using my official email address khanh.vu@ucf.edu. Do not use my other UCF email addresses as I no longer have access to them. Also, do not leave*

messages for me on Webcourses messaging boards since ONLY your current message is forwarded to my mailbox and I can't see your past, related messages. Also, I will not discuss non-directory (confidential) issues with you on the messaging boards.

- *Always try to first **email me** your requests/questions/concerns as I keep all course-related issues on record and it helps me respond quicker to problems, such as a typo in a homework assignment. It might spare you the need to meet me in the office over minor requests/problems. If you prefer to see me in the office, it is always a good idea to **let me know you are coming**.*
- *This syllabus/calendar could be changed as needed. When it becomes necessary to revise the schedule, the **changes will be announced in class**.*
- *Pay special attention to the Grade-Due-to-the-College date; all academic issues, if any, that could affect your final grade **must be resolved by this date**.*