

ICT301-001
Introduction to Databases
Fall 2018

Instructor: Dr. Soohyung Joo
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Email: soohyung.joo@uky.edu
Office Phone: 859-257-5942
Office hours: Tuesday and Thursday, 9:00 AM to 11:00 AM
Preferred method of contact: Email/ Canvas.
I usually respond to questions within 24 hours. (expect a delay during weekends and holidays).
Class meetings: Tuesday & Thursday 11:00am – 12:15pm
Rm 312 Little Library Bldg.

Course Description

This course is intended to give students a solid background in databases, with a focus on relational database management systems. Topics include data modeling, database design theory, data definition and manipulation languages, storage and indexing techniques, query processing and optimization, and database programming interfaces.

Course Objectives

Students successfully completing the course will be able to:

- Develop a clear understanding of the basic concepts and principles of database systems
- Design a database application using a relational DBMS
- Describe and apply Structured Query Language (SQL)
- Access and manage database information through web technologies.

Required Materials

No textbook.

Extensive lecture notes will be provided each week. All course reading materials including lecture notes will be uploaded to Canvas.

Class Information

This is a face-to-face course. You are required to attend scheduled classroom sessions. You will need access to an appropriate laptop computer with a Wi-Fi Internet connection. (Please contact the instructor as soon as possible, if you cannot bring your own laptop. The instructor can help you check out a laptop computer from the School of Information Science.) A student will need to install required software (e.g., text editor, ftp client tool, etc.)

Course Activities and Assignments

Your final grade is determined by your performance on the following items: (1) eight assignments (60%), (2) a final project (30%), and (3) class participation (10%).

Summary Description of Course Assignments

- Assignment #1 (7%) – First PHP file
- Assignment #2 (7%) – PHP variables
- Assignment #3 (7%) – PHP form handling
- Assignment #4 (8%) – Database design
- Assignment #5 (7%) – Structured Query Language
- Assignment #6 (8%) – Accessing MySQL using PHP (1)
- Assignment #7 (8%) – Accessing MySQL using PHP (2)
- Assignment #8 (8%) – Making a login page
- Final Project (30%) – Developing a database-driven web application
- Class participation (10%) – Class attendance and participation in lab sessions

Course Grading

Grading scale for this course:

- 90 – 100% = A
- 80 – 89.99% = B
- 70 – 79.99% = C
- 60 – 69.99% = D
- 0 – 59.99% = E

Mid-term Grade: Mid-term grades will be posted in myUK by the deadline established in the Academic Calendar: <http://www.uky.edu/registrar/content/academic-calendar>

Final Exam Information: There is no final exam in this course.

Dead Week: Senate Rules 5.2.4.6 define the last week of class during a regular semester as dead week. Class participation and attendance policies apply during dead week and regularly assigned homework that was announced in the syllabus applies, but no written examinations or quizzes will be assigned during dead week. See Senate Rules 5.2.4.6 for complete policy information.

Tentative Course Schedule

Week	Topic	Assignment
1	Course overview Introduction to LAMP (Linux, Apache, MySQL, PHP)	
2	Introduction to PHP Lab: HTML & PHP	Assignment 1
3	Programming with PHP (1) Lab: PHP programming	Assignment 2
4	Programming with PHP (2) Lab: PHP programming	Assignment 3
5	Introduction to relational database management systems Lab: MySQL	

6	Database design Lab: MySQL	Assignment 4
7	Structure Query Language (1) Lab: SQL & MySQL	
8	Structure Query Language (2) Lab: SQL & MySQL	Assignment 5
9	Database development using PHP & MySQL (1) Lab: PHP & MySQL	Assignment 6
10	Database development using PHP & MySQL (2) Lab: PHP & MySQL	Assignment 7
11	Cookies, sessions, and authentication Lab: PHP & MySQL	Assignment 8
12	PHP programming techniques for database management Lab: PHP & MySQL	
13	Web application development Lab: PHP & MySQL	
14	Special lab session for final project Thanksgiving	
15	Security methods Lab: PHP & MySQL, Final project	
16	Introduction to NoSQL Course review Lab: Final project	
Final project due: December 9th, 2018. 11:59pm(EST)		

Submission of Assignments

All assignments should be submitted online via Canvas. An overdue assignment will get a penalty of 10% of total points for each day late. No assignment and project will be accepted after five days.

Attendance Policy

This class is a community whose success depends on everyone's participation, and it is vital for you to attend class in order to be successful. Attendance will be taken at the beginning of class. If you miss this, it is your responsibility to let me know you arrived late. If you are absent on a day when an assignment is due, you will be allowed to hand in or make up that work only if the absence is officially excused. You will be asked to provide official written documentation for excused absences the next time you are in class in order for your absence to be excused. If you know ahead of time that you will be absent from class with an excused absence, please discuss this with your instructor and turn in any assignments ahead of time. Excuses for university sponsored activities must be made prior to such absences. For any emergency situation that arises, email your instructor as soon as you know about the situation when possible. No make-up work is available for in-class exercises or quizzes unless approved in advance by your instructor. Students have one week to complete a missed assignment or quiz due to an excused absence upon their return without penalty. If you know ahead of time that you will be absent from class with

an excused absence, please discuss this with your instructor and turn in any assignments ahead of time. Excuses for university-sponsored activities must be made prior to such absences. For any emergency situation that arises, email your instructor as soon as you know about the situation when possible. Students have one week to complete a missed assignment or quiz due to an excused absence upon their return without penalty.

Excused Absences

Students need to notify the professor of absences prior to class when possible. S.R. 5.2.4.2 defines the following as acceptable reasons for excused absences: (a) serious illness, (b) illness or death of family member, (c) University-related trips, (d) major religious holidays, and (e) other circumstances found to fit “reasonable cause for nonattendance” by the professor.

Students anticipating an absence for a major religious holiday are responsible for notifying the instructor in writing of anticipated absences due to their observance of such holidays no later than the last day in the semester to add a class. Information regarding dates of major religious holidays may be obtained through the religious liaison, Mr. Jake Karnes (859-257-2754).

Per Senate Rule 5.2.4.2, students missing any graded work due to an excused absence are responsible: for informing the Instructor of Record about their excused absence within one week following the period of the excused absence (except where prior notification is required); and for making up the missed work. The professor must give the student an opportunity to make up the work and/or the exams missed due to an excused absence, and shall do so, if feasible, during the semester in which the absence occurred.

Verification of Absences

Students may be asked to verify their absences in order for them to be considered excused. *Senate Rule 5.2.4.2* states that faculty have the right to request “appropriate verification” when students claim an excused absence because of illness, or death in the family.

Appropriate notification of absences due to University-related trips is required prior to the absence when feasible and in no case more than one week after the absence.

Academic Integrity

Per University policy, students shall not plagiarize, cheat, or falsify or misuse academic records. Students are expected to adhere to University policy on cheating and plagiarism in all courses. The minimum penalty for a first offense is a zero on the assignment on which the offense occurred. If the offense is considered severe or the student has other academic offenses on their record, more serious penalties, up to suspension from the University may be imposed.

Plagiarism and cheating are serious breaches of academic conduct. Each student is advised to become familiar with the various forms of academic dishonesty as explained in the Code of Student Rights and Responsibilities. Complete information can be found at the following website: <http://www.uky.edu/Ombud>. A plea of ignorance is not acceptable as a defense against the charge of academic dishonesty. It is important that you review this information as all ideas borrowed from others need to be properly credited.

Senate Rules 6.3.1 (see <http://www.uky.edu/Faculty/Senate/> for the current set of *Senate Rules*) states that all academic work, written or otherwise, submitted by students to their instructors or other academic supervisors, is expected to be the result of their own thought, research, or self-expression. In cases where students feel unsure about a question of plagiarism involving their work, they are obliged to consult their instructors on the matter before submission.

When students submit work purporting to be their own, but which in any way borrows ideas, organization, wording, or content from another source without appropriate acknowledgment of the fact, the students are guilty of plagiarism.

Plagiarism includes reproducing someone else's work (including, but not limited to a published article, a book, a website, computer code, or a paper from a friend) without clear attribution. Plagiarism also includes the practice of employing or allowing another person to alter or revise the work, which a student submits as his/her own, whoever that other person may be. Students may discuss assignments among themselves or with an instructor or tutor, but when the actual work is done, it must be done by the student, and the student alone.

When a student's assignment involves research in outside sources or information, the student must carefully acknowledge exactly what, where and how he/she has employed them. If the words of someone else are used, the student must put quotation marks around the passage in question and add an appropriate indication of its origin. Making simple changes while leaving the organization, content, and phraseology intact is plagiaristic. However, nothing in these Rules shall apply to those ideas, which are so generally and freely circulated as to be a part of the public domain.

Please note: Any assignment you turn in may be submitted to an electronic database to check for plagiarism.

Accommodations due to disability

If you have a documented disability that requires academic accommodations, please see me as soon as possible during scheduled office hours. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (DRC). The DRC coordinates campus disability services available to students with disabilities. It is located on the corner of Rose Street and Huguelet Drive in the Multidisciplinary Science Building, Suite 407. You can reach them via phone at (859) 257-2754 and via email at drc@uky.edu. Their web address is <http://www.uky.edu/StudentAffairs/DisabilityResourceCenter/>.

Policies concerning academic integrity, excused absences and academic accommodations due to disability are available online at: <https://ci.uky.edu/sis/sites/default/files/policies.pdf>

TECHNOLOGY INFORMATION & RESOURCES

Distance Learning Students are expected to have a minimum level of technological acumen and the availability of technological resources. Students must have regular access a computer with a reliable Internet connection and audio capabilities. Internet Explorer 7 (IE) or Firefox 2.x are the recommended browsers for those using a Windows-based PC. Those using Firefox 3.x may encounter problems with assignment uploads. Those using an Apple computer with MAC OS X (10.5.x) may use Firefox 3.x or Safari 3.x. Please be certain that your computer and/or browser allow you to view Adobe Reader documents (.pdf). Microsoft Office and other software products are free for students: <http://download.uky.edu/>.

As your instructor, I am your first go-to person for technology problems. If you need more immediate assistance, please contact UKIT.

Information Technology Customer Service Center (UKIT)

<http://www.uky.edu/UKIT/>; 859-218-4357

Library Services & Distance Learning Services

<http://www.uky.edu/Libraries/DLLS>

- Carla Cantagallo, DL Librarian
- Local phone number: (859) 257-0500, ext. 2171; long-distance phone #: (800) 828-0439 (option #6)
- Email: dllservice@email.uky.edu
- DL Interlibrary Loan Service:
http://www.uky.edu/Libraries/libpage.php?lweb_id=253&llib_id=16

For more resources about online classes and student resources, visit

<http://www.uky.edu/ukonline/>

The School of Information Science has a page with a comprehensive list of technology resources here: <http://ci.uky.edu/sis/students/techtips>

Military Members and Veterans

We recognize the complexities of being a member of the military community and also a student. If you are a member of the military or a military veteran or dependent, please inform your instructor if you are in need of special accommodations. Drill schedules, calls to active duty, mandatory training exercises, complications with GI Bill disbursement, and other unforeseen military and veteran related developments can complicate your academic life. If you are aware of a complication, we will work with you and put you in contact with university staff members who are trained to assist you. Please contact the Coordinator of the University of Kentucky Veterans Resource Center at (859) 257-1148 for additional assistance. Visit <http://www.uky.edu/veterans> for more available resources.