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INSC 384 Database Design

Spring 2023

School of Information Sciences

Instructor: *Peiling Wang*, Ph.D. (peilingw at utk.edu)
Classes meet: Tuesday and Thursday 11:20 AM - 12:35 PM in JHB-425
Course site: <https://utk.instructure.com/> [NetID and password required to access]
Office & hours: 443 Communications Building; Hours in Canvas and by appointment

Catalog Description

The course introduces the student to the process of database development, including data modeling, database design, and database implementation. Students learn basic interactive SQL for both data definition and queries. Students practice design skills by developing a small database project. Prerequisite: INSC 210.

Student Learning Outcomes

Upon satisfactory completion of the course, the student will:

- Understand data models and data structures for relational databases
- Be able to use ERD to design a conceptual model
- Be able to map ERD to relations to design logical model
- Be able to convert the relational model to a database structure (physical model)
- Understand the Structured Query Language (SQL)
- Be able to run SQL queries to retrieve data
- Be able to run SQL queries to generate reports
- Be able to design real-world projects
- Be able to prototype database design

Course Design

This course is one of the four courses for [Information Management, and Analytics \(DIMA\) Concentration Courses](#)

Lectures weekly; assignments include 4 practice quizzes that can be repeated to improve scores, 3 labs to build data structure and run queries, and a design project for a real-world scenario.

Course Materials

Database Systems: Design, Implementation, & Management by Carlos Coronel/Steven Morris, 14th Edition © 2023 | ISBN: 9780357673102 (ebook); ISBN: 9780357673034 (hard copy) [either hard copy or ebook will work for the course. You may use 13th Edition]

Microsoft ACCESS. (You can download a copy from office365.utk.edu; if you use a different DBMS, please discuss it with the instructor)

Attendance and participation in course activities are important to learning in this course. If you need to miss a class for whatever reason, you are still responsible for the material covered.

Missing more than two class meetings for reasons other than those listed above will impact your course participation grade. *Acceptable reasons for absence from the class include:*

- Illness
- Serious family emergencies
- Special curricular or job requirements (e.g., judging trips, field trips, professional conferences)
- Military obligation
- Severe weather conditions
- Religious holidays
- Participation in official university activities such as music performances, athletic competitions, or debate
- Obligations for court-imposed legal obligations (i.e., jury duty, or a subpoena)

Assignments and Grading

1. 5 Practice Quizzes (30 %)
2. 3 Labs (30 %)
3. Design project (30%)
4. Attendance & participation (10%)
5. Journals to reflect learning (bonus 5%)

Check the Canvas course site for instructions and due dates. It is important to meet deadlines for coursework to maximize learning. A late assignment will result in a point deduction (1/each day) unless a prior request has been approved with a new due date agreed upon. Acceptable reasons are similar to the above listed.

The University of Tennessee grading system (<https://registrar.utk.edu/online-transcript-key/>)

A: superior (4.0)	A-: intermediate grade (3.7)
B+: very good (3.3)	B: good (3.0)
B-: intermediate grade (2.7)	C+: Fair (2.3)
C: Satisfactory (2.0)	C-: Unsatisfactory (1.7)
D+: Unsatisfactory (1.3)	D: Unsatisfactory (1.0)
D-: Unsatisfactory (0.7)	F: Failure (0.0)

Course Grading Scale:

A (4.0): $\geq 95\%$	C (2.0): $< 77\%$ and $\geq 74\%$
A- (3.7): $< 95\%$ and $\geq 90\%$	C- (1.7): $< 74\%$ and $\geq 70\%$
B+ (3.3): $< 90\%$ and $\geq 87\%$	D+ (1.3): $< 70\%$ and $\geq 67\%$
B (3.0): $< 87\%$ and $\geq 84\%$	D (1.0): $< 67\%$ and $\geq 64\%$
B- (2.7): $< 84\%$ and $\geq 80\%$	D- (0.7): $< 64\%$ and $\geq 60\%$
C+ (2.3): $< 80\%$ and $\geq 77\%$	F (0.0): $< 60\%$

Course Communications

Canvas is the course communication space. Discussions, Announcements, Assignments, Schedules, Grades, and any related matters will be facilitated by Canvas. If you send an email from Canvas, be sure to include your Vols email because canvas email cannot be replied to directly.

Required Technology

Computer, Internet access, and a relational DBMS (Microsoft ACCESS or similar).

Course Feedback from Students

In order to maximize learning outcomes, students are encouraged to provide criticisms, input, and suggestions to my teaching. You may do so by meeting with me, emailing me, or just dropping an anonymous note.

Being Successful in Learning and Teaching

- Students will be prepared for all classes such as reading before class
- Students will actively participate in discussions
- Students always meet the due dates on assignments
- The instructor will be attentive to and supportive of individual students' needs
- The instructor will create and facilitate meaningful learning activities
- The instructor will provide feedback on assignments promptly

Schedule

see Canvas

Policies and Additional Information

Inclement Weather

The chancellor (or appointed representative) may officially close or suspend selected activities of the university because of extreme weather conditions. When a decision to close is made, information is distributed to the campus community, shared with local media, and posted on the front page at <http://utk.edu>. SIS will cancel classes when UTK is closed. Please check the SIS student listserv (UTKSIS-L@LISTSERV.UTK.EDU) for messages about closing.

Disabilities that may Impede Learning

Any student who feels s/he may need an accommodation based on the impact of a disability should contact [Student Disability Services](#) at 2227 Dunford Hall at 865-974-6087, or by video relay at 865-622-6566 to coordinate reasonable academic accommodations.

Civility

Civility is genuine respect and regard for others: politeness, consideration, tact, good manners, graciousness, cordiality, affability, amiability, and courteousness. Civility enhances academic freedom and integrity, and is a prerequisite to the free exchange of ideas and knowledge in the learning community. Our community consists of students, faculty, staff, alumni, and campus visitors. Community members affect each other's well-being and have a shared interest in creating and sustaining an environment where all community members and their points of view are valued and respected. Affirming the value of each member of the university community, the campus asks that all its members adhere to the principles of civility and community adopted by the campus: <http://civility.utk.edu/>.

CCI Diversity Statement

CCI recognizes and values diversity. Exposing students to diverse people, ideas and cultures increases opportunities for intellectual inquiry, encourages critical thinking, and enhances communication and information competence. When all viewpoints are heard, thoughtfully considered, and respectfully responded to, everyone benefits. Diversity and fairness unite us with the wider professional and global community. (Long version at <https://cci.utk.edu/diversity>)

Instructor Status as a Title IX Mandatory Reporter

University of Tennessee faculty are committed to supporting our students and upholding gender equity laws as outlined by Title IX. Please be aware that if you choose to confide in a faculty member regarding an issue of sexual misconduct, dating violence, or stalking, we are obligated to inform the University's Title IX Coordinator, who can assist you in connecting with all possible resources both on- and off-campus. If you would like to speak with someone confidentially, the

Student Counseling Center (865-974-2196) and the Student Health Center (865-974-3135) are both confidential resources.

For additional resources and information, visit titleix.utk.edu.

Academic Integrity

Students should be familiar with and maintain their *Academic Integrity* described in <https://hilltopics.utk.edu/academics/>, p. 15 as: “*Study, preparation and presentation should involve at all times the student’s own work unless it has been clearly specified that work is to be a team effort. Academic honesty requires that the student present his or her own work in all academic projects, including tests, papers, homework, and class presentation. When incorporating the work of other scholars and writers into a project, the student must accurately cite the source of that work.*”

Students should abide by the *Honor Statement* (<https://hilltopics.utk.edu/student-code-of-conduct/> Section X. Honor Statement)

“As a student of the University, I pledge that I will neither knowingly give nor receive any inappropriate assistance in academic work, thus affirming my own personal commitment to honor and integrity.”

Plagiarism

Plagiarism in any of its several forms is intolerable, and attention to matters of documentation in all written work is expected and required. Inadvertence, alleged lack of understanding, or avowed ignorance of the various types of plagiarism are not acceptable excuses.

Specific examples of plagiarism include:

- Copying without proper documentation (quotation marks and a citation) written or spoken words, phrases, or sentences from any source;
- Summarizing without proper documentation (usually a citation) ideas from another source (unless such information is recognized as common knowledge);
- Borrowing facts, statistics, graphs, pictorial representations, or phrases without acknowledging the source (unless such information is recognized as common knowledge);
- Collaborating on a graded assignment without the instructor’s approval;
- Submitting work, either in whole or in part, created by a professional service and used without attribution (e.g., paper, speech, bibliography, or photograph).

Students who may be unsure of the nature of plagiarism should consult the instructor or a guide for writing research reports. (Additional resources are available at

<https://libguides.utk.edu/scholarlypublishing/plagiarism>

Infractions of academic integrity are penalized according to the severity of the infraction but may include a course grade of "F."