COMPUTER SCIENCE
COLLEGE OF ENGINEERING
UIC

CSC 480
Database Systems
Summer 2020
online
T Th 1:30 P.M. – 4:00 P.M.

Instructor: Professor Diana Diaz Herrera
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TAS:
Office Hours:
Email:

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Official Description:

Database design, logical design, physical design. Relational databases. Recovery, concurrency control. Normalization.
UIC catalog - https://catalog.uic.edu/search/?P=CS%20480

Course Description:

The course's goal is to present a basic introduction to database management systems, with an emphasis on database design methodologies (ER diagrams) and database query languages (relational algebra and SQL). A substantial component of this class is hands-on exercises and the development of database programming skills in a real-world database application. Students will design and implement a web-based database application to deepen their understanding of the underlying database concepts and theories. After taking this course, you will have the capability of developing various database applications.
Supplementary information for the course is available at https://uic.blackboard.com. Log on with your NetID for pre-recorded lectures, optional sync lectures, class notes, lecture slides, class announcements, the course syllabus, and all course information. You will submit your assignments and project and check grades there too.

Credit Hours:

3 Credit Hours for undergraduates - 3 out-of-class student work per each hour of lecture.
4 Credit Hours for grad. students - 4 out-of-class student work per each hour of lecture.
https://policies.uic.edu/educational-policy/contactcredit-hour-policy/

Dates:

Starting date - June 15
Ending date - August 5
Academic Calendar - https://catalog.uic.edu/ucat/academic-calendar/#2019

Prerequisite:

CS 251.

Co-requisites:

None.

Textbooks: There is not a mandatory textbook for this course. You can acquire any of the following textbooks:

Database System Concepts by Silberschatz, A., Korth, H. F., & Sudarshan, S. New York: McGraw-Hill. 7th Edition.
Book website: http://www.cs.yale.edu/homes/avi/db-book/index.html

Database Systems - An Application-Oriented Approach, by Michael Kifer, Arthur Bernstein and Philip M. Lewis, 2 edition, ISBN: 9780321268457. Addison-Wesley, 2005.

Concise guide to databases, by Lake, P., & Crowther, P. 2013.. Springer, London.

(Open textbook) Database Design, by Watt, A. 2nd Edition. 2014.
Book website: https://open.umn.edu/opentextbooks/textbooks/database-design-2nd-edition

Database Systems: Design, Implementation and Management by Coronel and Morris (11th edition).

A First Course in Database Systems by Jeff Ullman and Jennifer Widom

Database Management Systems by Raghu Ramakrishnan

Computer Programs:

None.

Course contents:

Week	Lesson Plan Tuesday	Lesson Plan Thursday
1	Intro to Databases	Relational Databases
2	Relational Databases	Database Design
3	SQL	Review for Quiz
4	Data storage	DB systems
5	Normalization	Review for Quiz
6	Normalization	Peer review

7	Transaction Management	Review for Quiz
8	Transaction Management	Final project Gallery

LINK TO COMPLETE SCHEDULE

Course Learning Objectives:

The students will apply Entity-Relationship modeling, relational algebra, and indexing for query optimization. The students will also perform SQL programming at various levels and develop a stand-alone database application using relational database management systems.

Upon successful completion of this class, the student will be able to:

	Course Learning Outcomes
1	Describe clearly the basic concepts of relational database design and development
2	Apply the E-R diagram methodology to database design
3	Perform SQL programming at the basic level, intermediate level and advanced levels
4	Explain the role of normalization in the database design process
5	Develop a web database application using relational database management systems

Assessment for 3 credit course:

Assignments (3 x 100 = 300 points) 30%
Quizzes (3 x 100 = 300 points) 30%
Project (1 x 400 = 400 points) 40%
Total = 1000 points

Assessment for 4 credit course:

Assignments (3 x 100 = 300 points) 24%
Quizzes (3 x 100 = 300 points) 24%
Project (1 x 400 = 400 points) 32%
Extra work (250 points) 20%
Total = 1200 points

All the above work is expected to be done individually. The project has three parts with three different deadlines.
Assignments will be submitted on gradescope/blackboard as a pdf file.

Grading Scale:

The grades for the course will be truncated to zero decimal digits and represented to letter grade based upon the percentages given below:

A	90 - 100%
B	80 - 89%
C	70 - 79%
D	60 - 69%
F	50 - 59%

https://registrar.uic.edu/student_records/grading_system.html

Grading Policies:

Late work policy

Late submissions have a penalty of 10% per day and can be late up to one week. No credits will be given for works submitted one week after the due date. However, you can have one late assignment submission up to one week without any penalty. Please write "LATE EXCUSE" on the cover page of your submission when you use your late excuse. The late excuse cannot be used for the second project part and the final exam due to time constraints.

Resubmission policy
30%
average

Office hours policy

Office hours are used for clarification of doubts and confusions. Students should not ask a grader or instructor to grade their assignment or project during this time, nor use the informal positive feedback as a promise for good grades.

Required office hours with TA or instructors

Feedback policy

If you have any feedback, suggestion, concern, or complaint about any aspect of the class, you should either meet the instructor during her office hours, make an appointment with her to discuss them, or send an email.

Religious Holidays:

Because of the extraordinary variety of religious affiliations of the University student body and staff, the Academic Calendar makes no provisions for religious holidays. However, it is University policy to respect the faith and religious obligations of the individual. Students with classes or examinations that conflict with their religious observances are expected to notify their instructors well in advance so that mutually agreeable alternatives may be worked out.

Student Disabilities Services:

- If you have a documented disability that requires accommodations, you will need to register with Student Disability Services for coordination of your academic accommodations. The Student Disability Services (SDS) office is located in the Adamany Undergraduate Library. The SDS telephone number is 313-577-1851 or 313-202-4216 (Videophone use only). Once your accommodation is in place, someone can meet with you privately to discuss your special needs. Student Disability Services' mission is to assist the university in creating an accessible community where students with disabilities have an equal opportunity to fully participate in their educational experience at Wayne State University.
- Students who are registered with Student Disability Services and who are eligible for alternate testing accommodations such as extended test time and/or a distraction-reduced environment should present the required test permit to the professor at least one week in advance of the exam. Federal law requires that a student registered with SDS is entitled to the reasonable accommodations specified in the student's accommodation letter, which might include allowing the student to take the final exam on a day different than the rest of the class.

Academic Dishonesty - Plagiarism and Cheating:

Academic misbehavior means any activity that tends to compromise the academic integrity of the institution or subvert the education process. All forms of academic misbehavior are prohibited at Wayne State University, as outlined in the Student Code of Conduct (http://www.doso.wayne.edu/student-conduct-services.html). Students who commit or assist in committing dishonest acts are subject to downgrading (to a failing grade for the test, paper, or other course-related activity in question, or for the entire course) and/or additional sanctions as described in the Student Code of Conduct.

- Cheating: Intentionally using or attempting to use, or intentionally providing or attempting to provide, unauthorized materials, information or assistance in any academic exercise. Examples include: (a) copying from another student's test paper; (b) allowing another student to copy from a test paper; (c) using unauthorized material such as a "cheat sheet" during an exam.
- Fabrication: Intentional and unauthorized falsification of any information or citation. Examples include: (a) citation of information not taken from the source indicated; (b) listing sources in a bibliography not used in a research paper.

- **Plagiarism:** To take and use another's words or ideas as one's own. Examples include: (a) failure to use appropriate referencing when using the words or ideas of other persons; (b) altering the language, paraphrasing, omitting, rearranging, or forming new combinations of words in an attempt to make the thoughts of another appear as your own.
- **Othe**r forms of academic misbehavior include, but are not limited to: (a) unauthorized use of resources, or any attempt to limit another student's access to educational resources, or any attempt to alter equipment so as to lead to an incorrect answer for subsequent users; (b) enlisting the assistance of a substitute in the taking of examinations; (c) violating course rules as defined in the course syllabus or other written information provided to the student; (d) selling, buying or stealing all or part of an un-administered test or answers to the test; (e) changing or altering a grade on a test or other academic grade records.

Course Drops and Withdrawals:

There will be no in-completes given for the course.

In the first two weeks of the (full) term, students can drop this class and receive 100% tuition and course fee cancellation. After the end of the second week there is no tuition or fee cancellation. Students who wish to withdraw from the class can initiate a withdrawal request on Pipeline. You will receive a transcript notation of WP (passing), WF (failing), or WN (no graded work) at the time of withdrawal. No withdrawals can be initiated after the end of the tenth week. Students enrolled in the 10th week and beyond will receive a grade. Because withdrawing from courses may have negative academic and financial consequences, students considering course withdrawal should make sure they fully understand all the consequences before taking this step. More information on this can be found at:
http://reg.wayne.edu/pdf-policies/students.pdf

Student services:

- The Academic Success Center (1600 Undergraduate Library) assists students with content in select courses and in strengthening study skills. Visitwww.success.wayne.edu for schedules and information on study skills workshops, tutoring and supplemental instruction (primarily in 1000 and 2000 level courses).
- The Writing Center is located on the 2nd floor of the Undergraduate Library and provides individual tutoring consultations free of charge. Visit http://clasweb.clas.wayne.edu/writing to obtain information on tutors, appointments, and the type of help they can provide.