

**CSC 453, ITC 453**  
**Data Management, Database Management System, Advanced DBMS**  
**California State University Dominguez Hills**  
**Department of Computer Science and Technology**  
**Fall 2020**

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## **Syllabus**

### **GENERAL INFORMATION**

**Class Time:** Monday 5:30PM-6:45PM  
Wednesday 5:30PM-6:45PM  
**Class Location:** online  
**Professor:** Dr. Alireza Izaddoost  
**Email:** aizaddoost@csudh.edu  
**Office:** NSM E-115  
**Office Phone:** 310-243-2873  
**Office Hours:** Tuesday and Thursday 10 AM-12 PM; by Appointment

### **Course description**

The main object of this course is to provide a general overview of database management systems and database application systems. The topics include relational database query using structured query language (SQL), data modeling with entity-relationship (ER) model, database design using normalization, database implementation with different DBMS products such as SQL Server, Oracle, MySQL. The course is centered on the concepts, skills and techniques, and hands-on experiences of relational database design, management, implementation, and application.

### **Textbook**

(Recommended) Modern Database Management (12th Edition), by Jeffrey A. Hoffer  
**ISBN:** 978-0133544619 **Copyright Year:** 2015

**Prerequisites:** CSC 123

### **Software**

MySQL Community Downloads <https://dev.mysql.com/downloads/installer/>

### **Course goals:**

This course aims to expose students the general concepts, techniques, and skills of database design, implementation, and application. Students are expected to best practice in data modeling using ER model, transferring ER model into database schema, relational model and normalization, designing database using data description language (DDL), managing database using data management language (DML), and querying database using SQL. With hands-on experiences, students will develop their professional executive techniques skills in database design and application.

### **Course outcomes:**

Upon the end of this course, successful students will:

- Familiarize with the general concepts of data management, database, relational database, data modeling, database query, database design, and database implementation.
- Master the skills of using structured query language (SQL) to query relational databases with various forms and enhancements.
- Understand the relational model and normalization, including various normal forms.
- Be able to use normalization to design relational databases.
- Be able to use entity-relationship (ER) model to model real-world data and transfer data models into database designs.
- Be able to construct database using data description language (DDL) and manage database using data management language (DML).
- Know how to redesign database from existing database using reverse database engineering.

### **GENERAL POLICIES:**

### **Required Computer Software/Hardware Capabilities**

- Computer
  - You must have access to a reliable computer for this course. If you are on campus and do not have a laptop, you can check out a laptop from the IT User Services Help Desk via Technology Checkout Program. In addition, the Toro Student Computer Lab offers on campus access to workstations with a wide variety of commonly used software. Visit the CSUDH Online Courses Technical Requirements page for more information on technology requirements.
- Zoom
  - This course will use Zoom web conferencing software for online meetings/office hours/online lectures.
- Email

- All email communications from this course will go through your Toromail, the CSUDH student email system.
- Internet and Campus Wireless Network
  - You must have Internet access to participate in this course. If you are on campus, connect your laptop and mobile device to the internet using the eduroam campus wireless network.

### **Knowing Your Responsibilities**

CSUDH provides you with a wide variety of academic assistance and personal support, but it is up to you to know when you need help and to seek it out. It is your responsibility to keep informed and to obey the rules, regulations and policies which control your academic standing and your life as a CSUDH student. Meeting deadlines, completing prerequisites and satisfying the degree and certificates requirements, as found in the curriculum guides in this catalog, are all part of your duties as a student. Consult this catalog, the college and school announcements and the schedule of classes for the information you need. Watch for official announcements.

### **Netiquette**

Just as respectful conversational techniques are expected in an on campus classroom, proper netiquette is important when taking an online class.

### **CSUDH Standards of Student Conduct**

All students must conform to the Standards of Student Conduct, which have been established by students and college staff and have been approved by the Board of Trustees. The Standards of Student Conduct are listed in the Academic Policies section of the university Catalog.

### **Accessibility at CSUDH**

Access to publications, instructional material, computer software, hardware and electronic information, as well as access to the campus are critical for the educational and career achievement of all persons. CSU Dominguez Hills seeks to enable that access with this directory of information and services.

The policy of the CSU is to make its programs, services, and activities accessible to students, faculty, staff, and the general public who visit or attend a campus-sponsored event, with disabilities.

### **Instructor's Rights**

An instructor has the right to remove a student from class at any time he/she considers a student's actions to be interfering with a proper collegiate environment. The instructor may also refer the incident to the Director of Student Discipline & Student Life for disciplinary action as warranted.

### **Academic Honor Code**

Programming assignments must be done individually (otherwise mentioned by instructor as a group assignment). Failure to do so will result in a violation of the CSUDH Academic Honor Code. The following cases will be considered as violations: identical code, and extremely similar code. Violations will be reported to the Office of Vice President of Academic Affairs.

### **Attendance Policy**

Students are expected to attend the classes, complete all requirements on time, and are responsible for all related material.

### **ADA Statement**

Students with disabilities, who believe they may need an academic adjustment in this class, are expected to contact me as soon as possible to better ensure receipt of timely adjustments.

### **Definition of Cheating and Plagiarism**

CSUDH is dedicated to a high standard of academic integrity among its faculty and students. In becoming part of the California State University academic community, students are responsible for honesty and independent effort. Disciplinary action will be taken against any student who alone or with others engages in any act of academic fraud or deceit. (Read University Regulations in University Catalog).

### **AMERICANS WITH DISABILITIES ACT:**

CSUDH adheres to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations for students with temporary and permanent disabilities. If you have a disability that may adversely affect your work in this class, I encourage you to register with Disabled Student Services (DSS) and to talk with me about how I can best help you. All disclosures of disabilities will be kept strictly confidential. NOTE: no accommodation can be made until you register with the DSS. For

information call (310) 243-3660 or to use the Telecommunications Device for the Deaf, call (310) 243-2028 or go to: <http://www4.csudh.edu/dss/>

### **COMPUTER INFORMATION LITERACY EXPECTATIONS**

It is expected that students will:

1. Use Microsoft Word for word processing unless otherwise approved by the instructor,
2. Be familiar with using email as a communication tool and check your official campus email account at least every other day;
3. Be able to access websites and online course materials which may require Flash and other plug-ins;
4. Use the library databases to find articles, journals, books, databases and other materials;
5. Be able to create an effective PowerPoint presentation;
6. Be able to record audio (ideally video) to share with the instructor via the web; and
7. Have regular access to a computer and internet access for the term of this course.

### **ACADEMIC INTEGRITY**

Academic integrity is of central importance in this and every other course at CSUDH. You are obliged to consult the appropriate sections of the University Catalog and obey all rules and regulations imposed by the University relevant to its lawful missions, processes, and functions. **All work turned in by a student for a grade must be the students' own work.** Plagiarism and cheating (e.g. stealing or copying the work of others and turning it in as your own) will not be tolerated, and will be dealt with according to University policy. The consequences for being caught plagiarizing or cheating range from a minimum of a zero grade for the work you plagiarized or cheated on, to being dropped from the course.

Students are reminded of the university policy with regard to scholastic honesty. In this course, submission for credit of any assignment, program, test, or examination that is not the student's original work or contains portions of someone else's work (friend/tutor) without being clearly and specifically identified as such, as well as cheating on tests or examination, are violations that will automatically result in a F grade in the course and university disciplinary action.

1. Do not show another student a copy of your homework or projects before the submission deadline.
2. Do not email your project to another student, even if they promise they will not copy it.
3. The penalties for permitting your work to be copied are the same as the penalties for copying someone else's work.
4. If you choose to do your work on your computer, make sure that your computer account is properly protected. Use a good password, and do not give your friends access to your account or your computer system.
5. Do not leave printouts, or thumb drives around a laboratory where others might access them.

**Electronics Device Usage:** During exams/quizzes using any kind of unapproved electronic devices will result in automatic failure for the course (this includes checking messages on the phone from your friend); if there is an emergency inform the instructor. CSUDH Academic Integrity policies are listed in the Catalog. Students are supposed to know what they are, including definitions of cheating, plagiarism, and dishonesty. The following link can be referred for additional information: <http://www4.csudh.edu/student-rights/academic-integrity/>.

**Student Academic Appeal Process:** Authority and responsibility for assigning grades to students rests with the faculty. A grade appeal is permitted when a student can show clear evidence that a grade was contrary to procedures as specified in the course syllabus, was based on prejudice, was capricious, or was the result of computational or clerical error. The presumption is that the grades assigned are correct until there is a clear demonstration otherwise. The burden of proof is heavy, and it rests with the student who is appealing.

**Incompletes:** The grade of I is intended for the rare circumstance when a student who has been successful in a class has an unexpected event occur shortly before the end of the class. I will not consider giving a student a grade of I unless the following three conditions have been met.

1. It is within two weeks of the end of the semester.
2. The student has a grade of C or better in the class.
3. The reason that the student cannot complete the class is properly documented and compelling.

### **Behavioral Standards**

Disruptions of class will not be permitted. Behavior that persistently or grossly interferes with classroom activities is considered disruptive behavior and may be subject to disciplinary action. Such behavior inhibits other students' ability to learn and an instructor's ability to teach. The instructor may require a student responsible for disruptive behavior to leave class pending discussion and resolution of the problem and may also report a disruptive student to the Student Affairs Office (WH A-410, 310- 243-3784) for disciplinary action. Examples of disruptive behavior include:

- o Being late to class regularly and distracting instructor and students.
- o Allowing a cell phone or pager to repeatedly beep audibly.
- o Playing music or computer games during class in such a way that they are visible or audible to other class members.
- o Exhibiting erratic or irrational behavior.
- o Behavior that distracts the class from the subject matter or discussion.

- Making physical or verbal threats to a faculty member, teaching assistant, or class member.
- Refusal to comply with faculty direction.
- Performing a distracting repetitive act such as talking to others
- Email harassment
- Sleeping or reading a newspaper and/or magazine

The contents of course material provided by the instructor, the links contained therein directly and indirectly, and the contents of the said links, are copyrighted. They are provided exclusively for non-profit educational use by the students currently enrolled in this course and for the duration of this semester. No other use or any use by others is allowed without authorization of the instructor in this course and copyright holder(s). **No videotaping or recording** without instructors' prior permission is allowed in class.

**Assignments – Projects**

Programming language: We will be using the Java programming language and SQL.

Projects which do not compile will receive no credit.

All assignments will be reviewed and graded after submission. There is no assignment correctness pre-check.

If code for some portion of the project introduces errors that cannot be resolved, comment out that portion to receive credit for the logic.

**Course policies:**

- Deliverables (Class Assignments, Projects) submitted **late are not accepted** without obtaining instructors permission prior to due date. **Email late assignments** to instructor **will not be graded**.
- Deliverables (Class Assignment, Projects) not submitted before the end of the final class will earn 0%.
- Any exceptional, non-academic circumstances need to be discussed with the instructor as soon as they arise, prior to the due date of the deliverable. At the time of the discussion, NO make-up work will be assigned.
- The instructor reserves the right not to award credit for deliverables that are incomplete. Partial credit is awarded at the instructor's discretion, and only for work that merits such an award.
- Assignments that are incomplete or incongruous with the specifications may be returned to the student.
- Students shall not make any recording (audio or video) of a classroom lecture without having obtained the prior written permission from the instructor
- Students not allowed to take photo from the paper exams during the exam results review in classroom or in the office.
- Extra Credit: The instructor may assign extra credit assignments at any point during the semester.

**Exams and project:** There will be two exams. The **first exams** will be given during the 8<sup>th</sup> week, the **final exam** will be given on the date posted in the final examination schedule printed in the campus Class Schedule. The exams will be closed book/notes and include material from the book and lectures. Students are responsible for the any and all materials that will be presented in lecture and textbook. No makeup or early exams will be administered; unless there are serious, unforeseen, and unavoidable circumstances and the student notifies the instructor as soon as possible.

The exams are divided into two parts: Theory and Programming.

The theory portion is closed book and you need to answer on a paper (paper-based) with **camera ON** and **having an appropriate distance from the webcam that shows you are only writing on paper and nothing else**. More details and policies will be provided before the exams

There will be a **group project** for students to practice the professional skills that are discussed in the course. Each group will have 3 students. At the end of the semester, each group have to present their project and submit a report. The detail of report will be announced later.

**GRADING:**

The weighting of the coursework is listed below:

- **Midterm exam 30%**
- **Final Exam 40%**
- **Assignments/Quizzes 20%**
- **Final project presentation and report 10%**

**GRADES:**

The following grading scale will be used:

Percent	Grade
92% - 100%	A
88% - 91%	A-
84% - 87%	B+
80% - 83%	B
75% - 79%	B-
70% - 74%	C+
65% - 69%	C
60% - 64%	C-
55% - 59%	D+
50% - 54%	D
<54%	F

**\* Planned Topics and tentative schedule**

	Week	Topic	Activity
1	Aug. 24,26	The Database Environment and Development Process	
2	Aug. 31, Sep 2	Modeling Data in the Organization	
3	Sep. 7, 9	Modeling Data in the Organization	
4	Sep 14,16	The Enhanced E-R Model	
5	Sep 21,23	The Enhanced E-R Model	
6	Sep 28, 30	Logical Database Design and the Relational Model	Quiz1
7	Oct. 5,7	Logical Database ...+ Physical Database Design and Performance	
8	Oct. 12,14	Exam review + Midterm (30%)	Oct. 14=> Midterm
9	Oct. 19,21	Introduction to SQL	
10	Oct. 26, 28	Introduction to SQL	
11	Nov. 2,4	Advanced SQL	
12	Nov. 9	Advanced SQL	
13	Nov. 16,18	Advanced SQL	
14	Nov. 23, 25	Database Application Development (JDBC)	Quiz 2
15	Nov.30, Dec. 2	Final Projects Presentation	
16	Dec 9	Final exam (40%)	

\* Planned topics will be conducted according the above table. However, the schedule of the topics schedule or timetable may be varied)