

# CIS 207 – Database Design and SQL SPRING 2026

Instructor: Prof D. Whitney

Email address: [dwhitney@cerritos.edu](mailto:dwhitney@cerritos.edu)

Home page: <http://www.cerritos.edu/dwhitney>

Location & Time: ONLINE. (Mandatory online orientation Monday, Jan 12, Online orientation quiz due by 1/16.)

Ticket number: CIS 207 - #32409 online

Phone number: (562) 860-2451 Ext. 4489

Text: Text & Study materials provided

Drop Date 4/28/2026

<b>BASIS FOR DETERMINING COURSE GRADE</b>			A >=90%
Orientation quiz Due end of 1 <sup>st</sup> week.	13		B >=80%
Lab Assignments 14 @ 20 points each	280		C >=70%
Exams, 3 @ 50 points each	150		D >=60%
Final Exam	50		F < 60%
Total		493	

### Tentative Schedule

The schedule is subject to change.

Wk	Date		Topics	Oracle Academy	LABS	Labs Due
	Mon	Fri	<b>DATABASE DESIGN</b>	<b>READ</b>	<b>START</b>	<b>Due Fri</b>
1	1/12	1/16	Overview of class, Introduction to Oracle Academy	Sec. 0,1		
2	1/19	1/23	Conceptual and Physical Models, etc <ul style="list-style-type: none"> <li>• Entities, Instances, Attributes</li> <li>• Relationships</li> <li>• ER diagrams</li> <li>• Drawing conventions</li> <li>• Matrix diagrams</li> </ul>	Sec. 2, 3	Lab 1	
3	1/26	1/30	Subtypes and Supertypes, etc <ul style="list-style-type: none"> <li>• Business Rules</li> <li>• Relationship types &amp; transferability</li> <li>• Many-to-Many relationships</li> <li>• CRUD</li> </ul>	Sec. 4, 5	Lab 2	
4	2/2	2/6	Normalization & First Normal Form, etc <ul style="list-style-type: none"> <li>• Second Normal Form</li> <li>• Third Normal</li> <li>• Unique Identifiers</li> <li>• Arcs, Hierarchies, and Recursive Relationships</li> </ul>	Sec. 6, 7	Lab 3	Lab 1
5	2/9	2/13	Historical data modeling <ul style="list-style-type: none"> <li>• Modeling attributes which change with time, Price etc.</li> <li>• Drawing conventions</li> <li>• Generic Modeling</li> </ul> <b>DD Exam 1</b>	Sec. 8		Lab 2
6	2/16	2/20	Relational Database concepts <ul style="list-style-type: none"> <li>• Basic mapping</li> <li>• Relationship mapping</li> <li>• Subtype modeling</li> </ul>	Sec. 9	Lab 5	Lab 3
			<b>DATABASE PROGRAMMING</b>			
7	2/23	2/27	Oracle Application Express <ul style="list-style-type: none"> <li>• Relational Database Technology</li> <li>• Anatomy of SQL statements</li> <li>• Selection criteria, data types</li> <li>• Limiting columns and rows</li> <li>• Comparison operators &amp; precedence rules</li> <li>• Columns, character &amp; Rows</li> </ul>	Sec. 1, 2	Lab 6	Lab 4

8	3/2	3/6	Logical Comparisons and Precedence Rules • Sorting • Functions <b>DD Exam #2</b>	Sec. 2, 3	Lab 7	Lab 5
9	3/9	3/13	Case and Character manipulation • Number & date functions • Conversion Functions • General and conditional expressions • Null Functions • Conditional Expressions	Sec. 4, 5	Lab 8	Lab 6
	3/16	3/20	<b>Spring Recess</b>			
10	3/23	3/27	Cartesian Products and Join operations • Non-equijoins • Self joins & Hierarchical Queries • Cross-joins and Natural joins • Inner Vs. Outer joins • Join Clauses • Outer joins	Sec. 6, 7	Lab 9	Lab 7
11	3/30	4/3	Group functions, etc • COUNT, DISTINCT, and NVL • GROUP BY and HAVING clauses • Rollup, Cube operations • Set Operations	Sec. 8, 9	Lab 10	Lab 8
12	4/6	4/10	Subqueries • Single-row Subqueries • Multiply-row Subqueries • Correlated Subqueries • Ensuring Quality Queries - Part 1	Sec. 10, 11	Lab 11	Lab 9
13	4/13	4/17	DML & DDL • INSERT and Updating values • Deleting rows • DEFAULT, MERGE statements • Creating Tables • Modifying tables • Data types	Sec. 12, 13	Lab 12	Lab 10
14	4/20	4/24	NOT NULL, UNIQUE constraints • PRIMARY KEY, FOREIGN KEY, & CHECK constraints • Managing constraints • In-Class Views • DML Operations and Views • Managing Views • Creating Views <b>DP Exam #3</b>	Sec. 14, 15	Lab 13	Lab 11
15	4/27	5/1	Sequences • Indexes and Synonyms • Security, Privileges • Grant & Revoke Privileges • User Access control • Regular Expressions	Sec. 16, 17	Lab 14	Lab 12
16	5/4	5/8	Database Transactions • Ensuring Quality Queries Part 2	Sec. 18, 19, 20*	Lab 15, 16* *(bonus!)	Lab 13, Lab 14, 15, 16*
17	5/11	5/15	<i>Make-up week and Exam review</i>			
18	5/18	5/22	<b>Final Exam, (after DP section 18)</b>			

**ORIENTATION:** This is a Fully ONLINE class. The online time of our class is "Asynchronous". *Asynchronous* courses take a more non-traditional approach. Students do not "attend" class at a set time, but rather, access pre-recorded lectures and digital curriculum materials and respond through email, and at a time of their own choosing. Zoom video conferences during our online time will be only as needed. This is different than a 'traditional' course where we all meet at a designated time every week. This does require your inner-self-discipline to accomplish weekly activities to maintain a good standing in the class.

*The Online Class Orientation document and the Online Orientation quiz are required to be completed by the end of the first week of class. You will find the document in Canvas/Files and the quiz in Canvas/Quizzes. If you don't complete this quiz, you are subject to be dropped from the Roster.*

**ORACLE ACADEMY:** You will be provided with access to the text and testing materials through the Oracle Academy website. Your user access code to this site will be provided by your instructor. You will also need access to the Application Express (APEX) SQL server. This again is accessible via a web browser. The user ID and password will be also provided by your instructor at orientation. Chrome or Mozilla Firefox are the preferred browsers. Internet Explorer or Edge does not work well with Oracle sites.

**LABS:** The lab assignments and links to lecture and supporting materials are found on the class web pages available through CANVAS. Log into CANVAS and your class then you will see the link class websites on the left menu. Additional information is on the class college website at <http://www.cerritos.edu/dwhitney> and the other at the CANVAS site. Please refer to these pages for more information.

The lab assignments and links to lecture and supporting materials are found in Canvas. There are three sites for this class. Cerritos College Canvas, the Oracle Academy site and APEX. Please refer to these pages for more information. Make sure that you either print out the separate sheets that contains the lab assignments or save the word file version of the lab assignment. In the word version of the lab assignment, you insert your answers below the questions.

Revisions to schedule will be made to the syllabus and posted on the web sites for this class. Lab, lectures, and supporting materials for this class are posted on the two sites. Some things are only available on the CANVAS site. The CANVAS site has syllabus, grades, and location to submit lab files. Instructions to log on to the site will be provided during orientations. It is the student's responsibility to retrieve their assignments from the Canvas as scheduled on the syllabus. All assignment must be submitted to your instructor via CANVAS. They will ONLY be accepted through submitted through CANVAS.

Some things are only available on the 'Academy site. The Academy site has exams, lecture notes, and quizzes not found in the Canvas. Instructions to log on to the site will be provided during orientations. The Canvas site contains the information like the class syllabus, lab assignments, some PowerPoint presentation, support material, links to Academy and APEX and other procedural materials

### **Recording Lecture Content:**

- Section 78907 of the California Education Code prohibits the use of any electronic audio or video recording devices (including cell phones, laptops, etc.) without the prior consent of the instructor.
  - This also includes prohibiting any type of recording online, zoom, or any video-conference content.
- Any student violating this section shall be subject to appropriate disciplinary action.

**Academic Honesty/Dishonesty Policy:** *The work submitted by each student in this class is expected to their own work, not the work of others. Please be sure to read the college's Academic Honesty/Dishonesty Policy found in the catalogue and schedule of classes. A copy of the catalogue is located at [www.cerritos.edu](http://www.cerritos.edu).*

*One or more of the following actions are available to the faculty member who suspects a student has been cheating or plagiarizing:*

1. Review-no action.
2. An oral reprimand with emphasis on counseling toward prevention of further occurrences.
3. A reduction of the grade earned on the specific work in question, including the possibility of no credit for the work.
4. A reduction of the course grade as a result of item 4 above, including the possibility of a failing grade for the course.
5. Referral to the Office of Judicial Affairs for further administrative action, such as suspension or expulsion.

### **Student Learning Outcome:**

- Students will be able to construct a syntactically correct Structured Query Language (SQL) statement.
- Students will be able to develop an ER diagram for a database entity.
- Students will be able to use SQL to address a selected topic in database.
- Students will be able to construct a Structured Query Language (SQL) statement using a subquery.
- Students will be able to construct a Structured Query Language (SQL) statement using case and character manipulation.

### **Attendance:**

- Attendance is very important. Please read the attendance policy in the college's catalog at [www.cerritos.edu](http://www.cerritos.edu) or in the schedule of classes. Students may be dropped from the class if they are considered to be excessively absent.
- Remember it is critical to keep in contact with your instructor.
- Students must connect with the instructor by the first night. Failure to do so may result in removal of their name from the roll to allow another student seeking admission to enter. If a student is unable to attend the first class meeting, the instructor must be notified before the first class meeting.

- For traditional (on campus) classes excessive absences will be defined as when the hours of absence exceed one more than twice the number of class hours per week.
- For online classes attendance students have a minimum of at least one communication with the instructor each week. Students that fail to communicate with the instructor for 3 weeks may be dropped.

Remember it is critical to keep in contact with your instructor. Roll-call/attendance is by emailing the instructor every week with the lab or chapter that you are working on. If you have not been heard from for 3 weeks or are not making academic progress you will be dropped from the class. **Re-Read this paragraph.**

### Financial Aid:

Any change in your enrollment may affect your financial aid award and disbursement amounts which could result in an over award, and you may owe a repayment of your financial aid funds. For further information please contact the Financial Aid Office at (562) 860-2451 Ext. 2397 or by e-mail at: [finaid-staff-list@cerritos.edu](mailto:finaid-staff-list@cerritos.edu).

### Student Accessibility Services

I have made every effort to make this course accessible to all students. If you encounter a problem accessing anything in this course or require an academic adjustment based on the impact of a disability, please discuss this with me and contact Student Accessibility Services (SAS) at 562.860.2451 ext. 2335 or [sasapply@cerritos.edu](mailto:sasapply@cerritos.edu).