



DSO 552: SQL Databases for Business Analysts
Fall 2019
1.5 units

Instructor: *Abbass Sharif, PhD*
Office: *BRI 308 F*
Office Hours: *Thursday 11am-12pm or by appointment*
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Sections: *16186 (Monday 3:30pm-6:20pm, JKP 212)*
16292 (Monday 6:30pm-9:20pm, JKP 110)

COURSE DESCRIPTION

Structured query language (SQL) is the language of databases. Whether students run reports or collect data for analysis, they need to know SQL to add, delete, edit, retrieve, and view records. In this course, the students will learn the basic structure of relational databases, how to read and write simple and complex SQL statements, as well as advanced database manipulation techniques.

This course provides a step-by-step overview on how to design and implement a SQL database. Students will learn how to create SQL statements for data storage, data collection, data computation and reporting.

COURSE OBJECTIVES

Upon successful completion of this course, students will be able to:

1. Explain the value and mechanics of relational databases using SQL
2. Describe SQL tools from top IT vendors
3. Explain the basics of a data-driven business decision making process
4. Discuss data-driven business processes in the context of a global market
5. Demonstrate database application in a global business context with case studies
6. Describe the basics of the data management and storage industry
7. Describe the basics of business analysis
8. Apply knowledge of large-scale SQL databases to manage, query and analyze business processes
9. Perform database management and analytics related to different industries
10. Apply the USC-CT framework to their assigned business problems
11. Research and analyze business data to gain business insight and help better decision-making
12. Design and implement a comprehensive database application
13. Describe the impact of social responsibility, ethics, and proper corporate governance in SQL data analysis for American corporations

COURSE MATERIALS

There is no required text book for this class. The professor will be posting notes on blackboard.

GRADING

<u>Assignments</u>	<u>% of Overall Grade</u>
<i>Homework</i>	60%
<i>Final Exam</i>	40%
<i>TOTAL</i>	100%

HOMEWORK

There will be a weekly homework after each lecture to reinforce learning, and provide practice applying the concepts to real life scenarios. Homework will include coding database operations and practical questions.

EXAM

There will be only one exam in this class. The exam will be in class, and it will be closed notes.

STATEMENT ON ACADEMIC CONDUCT AND SUPPORT SYSTEMS

Academic Conduct:

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Part B, Section 11, “Behavior Violating University Standards” policy.usc.edu/scampus-part-b. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct>.

Students with Disabilities:

USC is committed to making reasonable accommodations to assist individuals with disabilities in reaching their academic potential. If you have a disability which may impact your performance, attendance, or grades in this course and require accommodations, you must first register with the Office of Disability Services and Programs (www.usc.edu/disability). DSP provides certification for students with disabilities and helps arrange the relevant accommodations. Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me (or to your TA) as early in the semester as possible. DSP is located in GFS (Grace Ford Salvatori Hall) 120 and is open 8:30 a.m.– 5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776. Email: ability@usc.edu.

Support Systems:

Student Counseling Services (SCS) - (213) 740-7711 – 24/7 on call

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention. <https://engemannshc.usc.edu/counseling/>

National Suicide Prevention Lifeline - 1-800-273-8255

Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. <http://www.suicidepreventionlifeline.org>

Relationship & Sexual Violence Prevention Services (RSVP) - (213) 740-4900 - 24/7 on call

Free and confidential therapy services, workshops, and training for situations related to gender-based harm. <https://engemannshc.usc.edu/rsvp/>

Sexual Assault Resource Center

For more information about how to get help or help a survivor, rights, reporting options, and additional resources, visit the website: <http://sarc.usc.edu/>

Office of Equity and Diversity (OED)/Title IX compliance – (213) 740-5086

Works with faculty, staff, visitors, applicants, and students around issues of protected class. <https://equity.usc.edu/>

Bias Assessment Response and Support

Incidents of bias, hate crimes and microaggressions need to be reported allowing for appropriate investigation and response. <https://studentaffairs.usc.edu/bias-assessment-response-support/>

USC Support & Advocacy – (213) 821-4710

Assists students and families in resolving complex issues adversely affecting their success as a student EX: personal, financial, and academic. <https://studentaffairs.usc.edu/ssa/>

Diversity at USC – <https://diversity.usc.edu/>

Tab for Events, Programs and Training, Task Force (including representatives for each school), Chronology, Participate, Resources for Students

USC Emergency Information

Provides safety and other updates, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible. emergency.usc.edu

USC Department of Public Safety – UPC: (213) 740-4321 – HSC: (323) 442-1000 – 24-hour emergency or to report a crime.

Provides overall safety to USC community. dps.usc.edu

TENTATIVE COURSE OUTLINE AND ASSIGNMENTS

	Topics/ Daily Activities	Deliverables with Due Dates
Aug 26, 2019	SQL Basics	
Sep 2, 2019	Labor Day (NO CLASS)	<i>Labor Day (NO CLASS)</i>
Sep 9, 2019	Working with Multiple Tables	<i>HW1</i>
Sep 16, 2019	Grouping and Summarizing	<i>HW 2</i>
Sep 23, 2019	Subqueries and Data Cleaning	<i>HW 3</i>
Sep 30, 2019	Advanced SQL Concepts ¹	<i>HW4</i>
Oct 7, 2019	Advanced SQL Concepts	<i>HW 5</i>
Oct 14, 2019	Final Exam	

¹ Advanced topics in SQL include data cleaning, query optimization, window functions, and cloud computing