

# San José State University

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Office Hours	F 12:00 PM – 1:00 PM(WebEx)
Class Days/Time	M W 12:00 PM– 1:15 PM
Classroom	Online(WebEx)
Prerequisites	

## Course Goals

1. To introduce students to the purpose of Database systems and databases, as well as common users of systems.
2. To teach students about the relational model and relation algebra.
3. To teach students about SQL, the standard language for interacting with a database.
4. To teach students about design theory (such as normalization, etc.) and algorithms that help determine given database's tables are organized in a reasonable way.
5. To teach students about real world database system usage, architectures and components. Some example systems that might be considered are: MySQL, Postgres, and SQLite.
6. To teach students about SQL, the standard language for interacting with a database.
7. To teach students how to interact with a database system from a programming language such as Java and Python.

## Course Learning Outcomes (CLO)

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

- x Write relational algebra queries and predict given a database instance what such a query will return.
- x Design a database by creating Entity/Relationship Diagram for a given problem.
- x Being able to identify functional dependencies, check and perform a decomposition in a given normal form.
- x Use Data Definition Language to define database schemas.
- x Construct data retrieval procedures using the Data Manipulation Language (schema, index, normalization, view, trigger, constraints). Write SQL commands to create databases, create tables,



## University Policies

Per [University Policy S16](http://www.sjsu.edu/senate/docs/S16-9.pdf) (<http://www.sjsu.edu/senate/docs/S16-9.pdf>), relevant information to all courses, such as academic integrity, accommodations, dropping and adding, consent for recording of class, etc. available on Office of Graduate and Undergraduate Programs [Syllabus Information web page](http://www.sjsu.edu/gup/syllabusinfo/) <http://www.sjsu.edu/gup/syllabusinfo/>

# CS 157A / Introduction to Database Management Systems, Spring 2021, Course Schedule

This detailed

