

CS 450/550: Database Concepts

Spring 2026 Course Syllabus

Course Number	CS450/550
Semester	Spring 2026
Meeting Time	3:00 PM – 4:15 PM, MW
Delivery	Online via Zoom
Instructor	Himarsha R. Jayanetti
Email	hjaya002@odu.edu
Office Hours	Tuesday 9:00 AM – 10:00 AM via Zoom
Prerequisites	CS381 / CS330 / CS361

Motivation

According to the U.S. Bureau of Labor Statistics, database administrators earned a median annual wage of \$104,620 and database architects earned \$135,980 in 2024. This course prepares students with fundamental database knowledge and hands-on skills in database design, SQL, data modeling, and database technologies.

Course Description

Laboratory work required. Three-level database architecture. Relational database model and algebra. SQL, entity relationship modeling, functional dependencies, normalization, transactions, concurrency, and recovery.

Goals and Objectives

Students will develop a strong foundation in database architecture, relational modeling, SQL, ER modeling, normalization, transactions, concurrency, and recovery.

Course Delivery Method

Lectures will be delivered live via Zoom and recordings will be available on Canvas when possible. Students are expected to have access to a computer and reliable internet connection.

Course Topics

Introduction to Databases
Introduction to RDBMS
Normalization
Entity Relationship Diagrams (ERD)
Database Design (DDL)
Relational Algebra
MySQL Workbench Labs
Course Project

Grading Criteria

Component	Weight
Homework (5)	25%
SQL Laboratory Work (10)	20%
Course Project (1)	25%
Case Study (1)	10%
Quiz (10)	10%
Discussion (10)	10%
Total	100%

Grading Scale

Grade	Range
A	93–100
A-	87–92
B+	84–86
B	80–83
B-	77–79

C+	74–76
C	70–73
C-	67–69
D+	64–66
D	60–63
D-	57–59
F	0–56

Late Submission Policy

0–24 hours late: -10%

25–48 hours late: -20%

After 48 hours: Not accepted

Student Responsibilities

Students should expect approximately 8 hours per week outside class. Attendance at live lectures is recommended but not mandatory. Participation in assignments, labs, discussions, and projects contributes to the final grade.

Academic Integrity

Cheating, plagiarism, fabrication, and facilitation of academic dishonesty are prohibited and may result in course failure and referral to university authorities.

Educational Accessibility

Students requiring accommodations should work with the Office of Educational Accessibility (OEA).

Accommodations will be provided according to university policy.

Honor Pledge

I pledge to support the honor system of Old Dominion University. I will refrain from any form of academic dishonesty or deception, such as cheating or plagiarism.