

**NorthWest Arkansas Community College**  
**Division of Business and Computer Information**

**CISM 1433 SQL Concepts (On Demand)**

**Course Number and Title**

PROG CISM – SQL Concepts

**Catalog Description**

This course will cover SQL as a language. Students will learn to use SQL to manipulate data in tables including trigger and stored procedures. This course will also offer an introduction to database design and data normalization. Emphasis will be given to applying student skills to real world situations. (Outside lab time may be required.)

**Prerequisites**

CISQ 1103 Intro to Computer Information (may be a co-requisite)

**Credit hours/Contact hours/Load hours**

3/3/3

**Target Audience/Transferability**

This course is for students seeking introductory training and hands-on experience in using SQL as a language and help students prepare for future courses in database management and / or prepare students to utilize databases in application development.

**Student Learning Outcomes**

The students completing this course will:

- Demonstrate competence in developing and maintain databases.
- Utilize SQL to Create, Retrieve, Update, and Delete data.
- Utilize SQL to create database objects including: Tables, Triggers, and Stored Procedures.
- Demonstrate competence in developing an effective Database design
- Demonstrate competence in database normalization
- Demonstrate competence in joins and subqueries
- Demonstrate competence in using aggregate functions and filtering grouped data.

**Topics**

- Create and alter tables using T-SQL syntax (simple statements)
- Create and alter views (simple statements)
- Design views
- Create and alter DML triggers
- Query data by using SELECT statements
- Implement sub-queries
- Implement aggregate queries
- Create and alter stored procedures (simple statements)
- Modify data by using INSERT, UPDATE, and DELETE statements
- Combine datasets
- Work with functions
- Manage transactions
- Evaluate the use of row-based operations vs. set-based operations
- Implement error handling

**Forms of Assessment**

Assignments

Quizzes  
Exams  
Final Project