ARKANSAS CODING ACADEMY

2023 SQL Programming Bootcamp Course Syllabus

Course Overview

This course guides beginners into confident SQL users that can write queries, manipulate tables, and store advanced code.
The course begins with an introduction to relational databases and the fundamentals of SQL and basic queries.
Next, students learn to create tables and views, subqueries, and conversion functions.
By the end of the course, students will be importing and exporting data and creating stored procedures.
This program has been designed for beginners and will move quickly. Students will learn from an expert in the field through a series of lectures, demonstrations, and hands-on practice.

Course Schedule

Monday 5:00 - 7:00 Wednesday 5:00 - 7:00 Friday 5:00 - 7:00

About the Instructor

Derrick is a Digital Solutions Architect at Acxiom, LLC. in Conway, Arkansas with over 21 years of coding and data modeling experience.
He is a UCA alum with a Bachelors in Computer Information Systems.
He later received his Masters in Business Administration with a concentration in Computer Information Systems from Baker College out of Flint, Michigan.

Course Outline

Week One

Concepts

- What is SQL? What can it do?
- What is a Database Management System (DBMS)?
- How is SQL used with a DBMS
- Installation of a DBMS and SQL Editor
- Populating your database
- Understanding the Different Types of Databases
- Understanding Common Terms and Definitions
- Basic SQL Syntax

SQL Code

- Basic How to Create tables
- How to select from a table
- How to use Aggregations
- How to Select Distinct Records
- Text Criteria and Operators
- How to use Wildcard Filters
- Numeric Criteria and Operators

Week Two

Concepts

- Joins
- functions
- Views
- Stored Procedures

SQL Code

- Inner and Outer Joins
- Group and Order by
- Table Manipulation- create, alter, truncate, drop
- SQL Functions

Student Lab Work

Week Three

Concepts

- Sub Queries
- Advanced Functions
- Logic Statements

SQL Code

- Single Table Sub Query
- Multile Table Sub Query
- Basic Math
- Advanced Date and Time Functions
- Advanced Text Functions
- Case when then logic
- Database Design
- Importing and Exporting data to/from Excel
- Primary Keys, Indexes, Constraints
- Referential Integrity
- Stored Procedures

Student Lab Work