SOUTHEAST COMMUNITY COLLEGE
CONSTRUCTION MANUFACTURING AND TECHNOLOGY DIVISION
Computer Information Technology Program
Revision Date: August 22, 2022
Syllabus Statements

I. CATALOG DESCRIPTION

Course Number:	INFO1411
Course Title:	Database Concepts
Prerequisite(s):	BSAD1010
Corequisite(s):	INFO1151, INFO1171
Catalog Description:	This course is an introduction to database management. Students gather information and identify business rules, then use this information to develop and normalize data models. Using data models, students use Structured Query Language (SQL) in a variety of relational database management systems (RDBMS) to implement a database.
Credit Hours:	3
Class Hours:	45
Lab Hours:	0
Total Contact Hours	45

II. COURSE OBJECTIVES: *Course will:*

A. Introduce relational database terms and concepts.
B. Provide students hands-on experience using Access to create tables, relationships, and queries.
C. Examine methods used to identify and define business rules for a database.
D. Provide training and experience creating an Entity-Relationship database model.
E. Introduce methods for normalizing a database.
F. Provide training and experience using Structured Query Language (SQL) to implement and query a database.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES:

A. Student Learning Outcomes: *Student will be able to:*
1. Recognize and setup relationships between tables in Microsoft Access.
2. Create and use queries using various selection criteria in Microsoft Access.
3. Create and modify relationship reports using Microsoft Access.
4. Recognize relational terms and concepts.
5. Collect information to establish business rules.
6. Demonstrate an understanding of relationships and integrity constraints.
7. Demonstrate data modeling using entity-relationship models.
8. Differentiate between normalized and non-normalized database design.
9. Demonstrate an understanding of methods used to create basic views/queries.
10. Differentiate between subqueries and inner joins.
11. Identify SQL syntax.
12. Design and evaluate SQL code to create specific queries used to answer business-related questions.

B. General Education Learning Outcomes (GELOs)
1. GELO #3: Critical Thinking & Problem Solving
2. Outcome 1: Collect, identify, interpret and analyze data.

IV. CONTENT/TOPICAL OUTLINE

- **A.** Relationships using Access
- **B.** Query design
- **C.** Database design
- **D.** Database design stages
- **E.** The Entity-Relationship Model
- **F.** Normalization
- **G.** Structured Query Language (SQL) for implementing a database
- **H.** Structured Query Language to retrieve information
- **I.** MySQL introduction

V. INSTRUCTIONAL MATERIALS

- **A.** Required Text(s): The eBook is available through Direct Digital Access (DDA) in Canvas on the first day of class and is billed to your student account.
- **B.** Other Resources: Instructor handouts, Microsoft Office 365, required SQL software available as a free download
- **C.** Computer and Internet access

VI. METHODS OF PRESENTATION/INSTRUCTION

- **A.** Methods of presentation typically include a combination of the following:
  Classroom Course:
  - **1.** Lecture presentation with computer demonstrations.
  - **2.** Engaged learning discussion and problem-solving activities

VII. METHODS OF EVALUATION

- **A.** Methods of evaluation, although determined by the individual instructor, traditionally includes a combination of the following:
  - **1.** Problem-solving participation activities
  - **2.** Homework assignments
  - **3.** Tests

VIII. SPECIFIC COURSE REQUIREMENTS

- **A.** This course will not qualify as a prerequisite if the student receives a final grade below a C (70%).