

# Competency Profile

## Microsoft Access

**BTC: CAP 146 – MS Access (5 credits)**

**WCC: BIS 161 – Database Management I (3 credits)**



Course is an introduction to basic database management program. Students will demonstrate efficient use of a database program by creating tables, forms, queries, macros and reports.

### 1. Structuring a Database

- 1.1 Define data needs & types
  - Define table fields
  - Define appropriate table field data types for fields in each table
  - Define tables in databases
- 1.2 Define & print table relationships
  - Create relationships
  - Modify relationships
  - Print table relationships
- 1.3 Add set, change or, remove primary keys
  - Define & modify primary keys
  - Define & modify multivalued primary keys
- 1.4 Split databases

### 2. Creating & Formatting Database Elements

- 2.1 Create databases
  - Create databases using templates
  - Create blank databases
- 2.2 Create tables
  - Create custom tables in Design view
  - Create tables by copying the structure of other tables
  - Create tables from templates
- 2.3 Modify tables
  - Modify table properties
  - Evaluate table design using the Table Analyzer
  - Rename tables
  - Delete tables
  - Summarize table data by adding a Total row
- 2.4 Create fields & modify field properties
  - Create commonly used fields
  - Modify field properties
  - Create & modify multivalued fields
  - Create & modify attachment fields

### 2.5 Create forms

- Create forms using Design view
- Create datasheet forms
- Create multiple item forms
- Create split forms
- Create Subforms
- Create PivotTable forms
- Create forms using Layout view
- Create simple forms

### 2.6 Create reports

- Create reports as a simple report
- Create reports using the Report Wizard
- Create reports using Design view
- Define group headers
- Create aggregate fields
- Set the print layout
- Create labels using the Label Wizard

### 2.7 Modify the design of reports & forms

- Add controls
- Bind controls to fields
- Define the tab order of controls
- Format controls
- Arrange controls
- Apply AutoFormats to forms & reports

### 3. Entering & Modifying Data

- 3.1 Enter, edit & delete records
- 3.2 Navigate among records
- 3.3 Find and replace data
- 3.4 Attach documents to & detach from records
- 3.5 Import data
  - Import data from a specific source
  - Link to external data source
  - Save & run import specifications

*See page two for skill areas 4, 5 & 6*

## 4. Creating & Modifying Queries

### 4.1 Create queries

- Create queries based on single tables
- Create queries based on more than one table
- Create action queries
- Create crosstab queries
- Create subqueries
- Save filters as queries

### 4.2 Modify queries

- Add tables to & remove tables from queries
- Add criteria to queries
- Create joins
- Create calculated fields in queries
- Add aliases to query fields
- Create sum, average, min/max, & count queries

## 5. Presenting & Sharing Data

### 5.1 Sort data

- Sort data within tables
- Sort data within queries
- Sort data within reports
- Sort data within forms

### 5.2 Filter data

- Filter data within tables
- Combine document versions

### 5.3 Create and modify charts

- Create charts
- Format charts
- Change chart types

### 5.4 Export data

- Export data from tables
- Export data from queries
- Save & run export specifications

### 5.5 Save database objects as other file types

### 5.6 Print database objects

## 6. Managing & Maintaining Databases

### 6.1 Perform routine database operations

- Open databases
- Back up databases
- Compact & repair databases

### 6.2 Manage databases



- Encrypt databases using passwords
- Configure database options
- Print database information using
- Print database information using the Database Documenter
- Reset or refresh table links using the Linked Table Manager

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### Assessment:

Using SAM/MCAS or other comparable exam, students pass at 80% or better.

### College Textbook Reference:

-  BTC: [Microsoft Access 2007](#), Levels 1 & 2; Benchmark Series; Rutkosky, Sequin, Rutkosky  
 WCC: [Microsoft Access 2007](#); Executive Editor – John Kane; Wiley Publishing

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