

# BT-2300: BUSINESS DATABASE SYSTEMS (ACCESS)

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## Cuyahoga Community College

**Viewing: BT-2300 : Business Database Systems (Access)**

**Board of Trustees:**

March 2022

**Academic Term:**

Fall 2022

**Subject Code**

BT - Business Technology

**Course Number:**

2300

**Title:**

Business Database Systems (Access)

**Catalog Description:**

Relational database theory, objects and application design. Database design and implementation techniques. Problem solving strategies using database software for accurate and timely storage, retrieval, manipulation and interpretation of data in a business environment.

**Credit Hour(s):**

3

**Lecture Hour(s):**

2

**Lab Hour(s):**

2

## Requisites

**Prerequisite and Corequisite**

IT-1090 Computer Applications or IT-109H Honors Computer Applications.

## Outcomes

**Course Outcome(s):**

Demonstrate the use of proper database terminology.

**Objective(s):**

1. Define entity, keys, tables and relationships.
2. Define terms specific to database applications.
3. Define SQL.

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**Course Outcome(s):**

Demonstrate an understanding of database structure (entities, attributes, tables, and relationships).

**Objective(s):**

1. Plan and build tables.
2. Assign data types.
3. Identify entity(field) properties.
4. Join fields to define relationships.

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**Course Outcome(s):**

Maintain and query a database.

**Objective(s):**

1. Determine the information that a query should provide in relation to a business scenario.
  2. Build, edit and run queries in a database application.
  3. Implement basic SQL commands in order to query an application database.
  4. Apply input masks to fields within tables.
  5. Import records from external sources.
  6. Import, edit and delete records.
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**Course Outcome(s):**

Create forms and reports specific for business scenarios.

**Objective(s):**

1. Identify specific fields to include in a business report.
  2. Create and edit reports.
  3. Identify fields from one or more tables to include on a form.
  4. Apply filters in forms in order to display selective criteria.
  5. Customize visual properties of forms and reports.
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**Course Outcome(s):**

Implement advanced queries to retrieve selective criteria.

**Objective(s):**

1. Create queries by implementing wildcards.
  2. Build queries in order to identify duplicate records in a table.
  3. Create queries in order to identify unmatched records in fields from two or more tables.
  4. Create queries that identify top or bottom percentages of records from a recordset.
  5. Establish data validation within queries.
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**Course Outcome(s):**

Collaborate with others to share and analyze data.

**Objective(s):**

1. Export data in a variety of file formats.
  2. Import data from an external database.
  3. Link data in a table to an external database.
  4. Integrate an application database with external applications.
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**Course Outcome(s):**

Automate tasks relating to databases.

**Objective(s):**

1. Build, run, and maintain macros to automate tasks in a database application.
  2. Create action buttons to run macros.
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**Methods of Evaluation:**

1. Class participation and discussion
2. Homework assignments
3. Hands-on computer lab projects
4. Comprehensive projects
5. Objective examinations
6. Hands-on computer lab examinations

**Course Content Outline:**

1. Organization of data: database concepts, terminology and relationships
2. Database Tables
  - a. Fields, records, properties, joins
3. Queries

- a. Criteria
  - b. Wildcards
  - c. Boolean operators
  - d. Calculated Fields
  - e. Aggregate Functions
4. Forms
    - a. Views
    - b. Themes
    - c. Subforms
    - d. Filters
  5. Reports
    - a. Views
    - b. Subreports
    - c. Thees
    - d. Conditional Formatting
  6. Advanced Queries
    - a. Pattern matches with wildcards
    - b. Parameter
    - c. Crosstab
    - d. Finding duplicates
    - e. Finding unmatched records
    - f. Lookup fields
    - g. Input masks
    - h. Data Validation
    - i. Orientation to SQL
  7. Sharing and Analyzing Data
    - a. Importing Data
    - b. Exporting Data
    - c. Integration with external applications
    - d. Add hyperlinks
    - e. Add attachments
  8. Automating Tasks
    - a. Creating a data macro
    - b. Create an event-driven macro
    - c. Editing a macro (application)
    - d. Running a macro (application)
    - e. Orientation to VBA

## Resources

Shellman, Mark & Vodnik, Sosha. (2019) *New Perspectives on Microsoft Access 2019 Comprehensive*, Boston: Course Technology.

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Poatsy, Mary Ann & Williams, Jerri & Rutledge, Amy. (2019) *Exploring Microsoft Office 365 Access Comprehensive*, New York: Pearson Higher Learning.

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Gashkin, Shelly and Graviett, Nancy. (2020) *GO! with Microsoft Microsoft Office 365 Access 2019 Comprehensive*, New York: Pearson Publishing.

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## Resources Other

Microsoft Access 2019 Release

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