

## Course Information Form (CIF)

**Course Code:** CIS 138

**Course Title:** Database Applications (MS Access)

**Department:** Business/Computer Science and Technologies

**Effective Date:** Summer 2026

**PCS Code:** 1.2 - Occupational/Technical Instruction

**CIP Code:** 11.0802

**Repeatability:** 0

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### Credit Hours

**Catalog Notation:** 3-0-3

**Credit Hour Distribution:**

Lecture: 3

Lab: 0

Clinical: 0

**Total: 3**

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### General Course Information

#### Catalog Description

Introduction to database use and applications. Create files and business reports, including file design and maintenance, report generation, and advanced concepts. Credit not given for both CIS 138 and CTC 177 + CTC 178 + CTC 179.

#### General Course Objectives

The student will learn to use a database application program to create tables, queries, forms, and reports.

#### Minimum Placement Levels

**English**

None

**Reading**

None

**Math**

None

#### Prerequisites

None

#### Methods of Evaluation

9 lessons, 9 projects, 12 exams, GMetrix and MOS exams.

#### Instructional Materials and Additional Supplies

[Microsoft Access 365 In Practice](#), SIMnet

## Course Content

### General Learning Outcomes (GLOs)

- Technology: Students will demonstrate the ability to evaluate, select, and appropriately use current and emerging tools.

### Course Segments and Student Learning Outcomes

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Creating a Database and Tables	<ol style="list-style-type: none"> <li>1. Explain data organization concepts, use the Access Navigation Pane, and identify objects.</li> <li>2. Create and manage a database.</li> <li>3. Create and use a table in datasheet view.</li> <li>4. Create records by importing data from Excel.</li> <li>5. Modify formatting in Datasheet View.</li> <li>6. Organize data using Search, Sort, and Filter Tools.</li> </ol>	4	0	0
Using Design View, Data Validation, and Relationships	<ol style="list-style-type: none"> <li>1. Create a table in Design view.</li> <li>2. Modify field properties.</li> <li>3. Explain Data Integrity and Data Validation.</li> <li>4. Create data validation rules.</li> <li>5. Explain the design of relational databases.</li> <li>6. Generate hard copy of the contents of a table.</li> <li>7. Explain the compact and repair utility.</li> </ol>	3	0	0
Creating and Using Queries	<ol style="list-style-type: none"> <li>1. Create a query using the Simple Query Wizard.</li> <li>2. Create a query in Design view.</li> <li>3. Modify a query with criteria.</li> <li>4. Modify a query using filters.</li> <li>5. Create multiple criteria in a query using the AND and OR operators.</li> <li>6. Create a parameter query.</li> <li>7. Create calculated fields in a query.</li> <li>8. Create a summary query using aggregate functions.</li> </ol>	4	0	0
Creating and Using Forms and Reports	<ol style="list-style-type: none"> <li>1. Create a simple form using quick create options.</li> <li>2. Create and modify a form in Layout view.</li> <li>3. Modify data input options in a form.</li> <li>4. Create and modify a simple report.</li> <li>5. Create and modify a report in Layout view.</li> <li>6. Reorganize a report with grouping, sorting, and totals in Layout view.</li> <li>7. Modify a report using conditional formatting.</li> <li>8. Generate hard copy of a report.</li> </ol>	4	0	0
Templates, Advanced Relationships, and Macros	<ol style="list-style-type: none"> <li>1. Create a database using Templates and Application Parts.</li> <li>2. Create and customize a Relationship through the Lookup Wizard.</li> <li>3. Create advanced table relationships.</li> <li>4. Create and modify a basic macro.</li> <li>5. Create and modify user interface macros.</li> </ol>	5	0	0
Creating Advanced Queries and Reports	<ol style="list-style-type: none"> <li>1. Create and use action queries.</li> <li>2. Create advanced queries.</li> <li>3. Create a report in Design view.</li> <li>4. Modify a report in Design view.</li> <li>5. Create calculated controls on a report.</li> <li>6. Create a subreport.</li> <li>7. Create and format a chart.</li> </ol>	5	0	0

<b>Course Segment</b>	<b>Learning Outcomes</b>	<b>Lecture Hours</b>	<b>Lab Hours</b>	<b>Clinical Hours</b>
Creating Advanced Forms	<ol style="list-style-type: none"> <li>1. Create a form in Design view.</li> <li>2. Modify form properties.</li> <li>3. Create a one-to-many form.</li> <li>4. Create calculated controls on a form.</li> <li>5. Modify the appearance of a form.</li> <li>6. Create data validation rules for controls.</li> <li>7. Create a combo box to find records on a form.</li> <li>8. Create tab controls and navigation forms.</li> </ol>	5	0	0
Integrating Applications	<ol style="list-style-type: none"> <li>1. Explain importing and exporting concepts.</li> <li>2. Create data by importing from Excel.</li> <li>3. Create objects by importing from other databases.</li> <li>4. Create data by importing from a text file.</li> <li>5. Generate data for other applications and formats.</li> </ol>	5	0	0
Designing and Managing Databases, and Using SQL	<ol style="list-style-type: none"> <li>1. Create documentation of database design.</li> <li>2. Rearrange the Navigation Pane.</li> <li>3. Generate performance analysis using the Performance Analyzer tool.</li> <li>4. Reorganize the database with the Database Splitter tool.</li> <li>5. Modify database security using Access security tools.</li> <li>6. Explain basic SQL.</li> </ol>	5	0	0
Customizing Access and Using OneDrive and Office Online	<ol style="list-style-type: none"> <li>1. Modify Access settings.</li> <li>2. Modify Office account options.</li> <li>3. Organize files and folders in OneDrive.</li> <li>4. Modify sharing settings for OneDrive files and folders.</li> <li>5. Revise and download documents using Office online.</li> <li>6. Create content using other Microsoft 365 applications, including Forms, Sway, and OneNote.</li> </ol>	4	0	0
Preparing for Certification Exam	<ol style="list-style-type: none"> <li>1. Use GMetrix to complete at least one CertPREP practice exam to demonstrate readiness to take MOS certification exam.</li> </ol>	1	0	0

**Total Contact Hours**

<b>Lecture Hours</b>	<b>Lab Hours</b>	<b>Clinical Hours</b>
45	0	0