Course Acronym:	CIS
Course Number:	28
Descriptive Title:	Database Management Using Microsoft Access
Division:	Business
Department:	Computer Information Systems
Course Disciplines:	Computer Information Systems
Catalog Description:	This course offers instruction in the use of relational database management systems within a Windows environment. Students learn database concepts and terminology. Topics include designing, creating, and modifying table structures and relationships, and creating complex queries. Students create forms for viewing, entering, and editing data, and create reports that summarize and group information. Skills are applied to typical business operations such as inventory and human resources.
Prerequisite:	Computer Information Systems 13 with a minimum grade of C, or equivalent experience
Co-requisite:	
Recommended Preparation:	
Enrollment Limitation:	
Hours Lecture (per week):	2
Hours Laboratory (per week):	3
Outside Study Hours:	4
Total Course Hours:	90
Course Units:	3
Grading Method:	Letter Grade only
Credit Status:	Credit, degree applicable
Transfer CSU:	Yes
Effective Date:	Prior to July 1992
Transfer UC:	No
Effective Date:	
General Education: ECC	
Term:	
Other:	
CSU GE:	

Term:	
Other:	
IGETC:	
Term:	
Other:	
Student Learning Outcomes:	**SLO #1 Concepts and Terms** Understand database concepts and terminology. **SLO #2 Table Structures** Design, create, and modify table structures and relationships. Modify tables to include default values, validation rules, input masks, and indices. **SLO #3 Queries** Create single-table and multi-table queries. Use queries to perform calculations on data contained in tables. **SLO #4 Creating Forms** Create forms for viewing, entering, and editing data.
Course Objectives:	1. Understand database concepts and terminology. 2. Design, create, and modify table structures. 3. Modify tables to include default values, validation rules, input masks, and indices. 4. Create single-table and multi-table queries. 5. Use queries to perform calculations on data contained in tables. 6. Create forms for viewing, entering, and editing data. 7. Present data from tables by creating reports that summarize and group information.

Major Topics:	**I. Relational database concepts and terminology (1.5 hours, lecture)**
	
	  A. Databases
	  B. Tables
	  C. Fields
	  D. Records
	  E. Primary keys
	
	II. Tables (3 hours, lecture)
	
	  A. Entity relationship diagrams
	  B. Design view vs. datasheet view
	  C. Data types
	  D. Field properties
	     1. Field length
	     2. Input masks
	     3. Default values
	     4. Validation rules

          5.   Validation text

III. Relating tables (3 hours, lecture)

    A.   Primary and foreign key relationships
    B.   Cardinality
         1.   One-to-one
         2.   One-to-many
         3.   Many-to-many
    C.   Referential integrity
    D.   Cascading updates and deletes

IV. Modifying tables (1.5 hours, lecture)

    A.   Add records
    B.   Find records
    C.   Delete records
    D.   Copy records
    E.   Edit records
    F.   Sort records

V. Simple "select" queries (6 hours, lecture)

    A.   Design view
    B.   Sorting
    C.   Criteria
         1.   Relational operators
         2.   Boolean logic

VI. Complex queries (7.5 hours, lecture)

    A.   Multi-table queries
    B.   Calculated field queries
    C.   Action queries
         1.   Make table
         2.   Append
         3.   Update
         4.   Deletes

VII. Basic forms (3 hours, lecture)

    A.   Selecting data from tables or queries
    B.   Creating forms in design view vs. the wizard
    C.   Columnar, tabular, datasheet and justified layouts
    D.   Form sections
         1.   Header
         2.   Detail
         3.   Footer

E.   Navigation forms

F.   Tab order

VIII. Advanced form topics (3 hours, lecture)

A.   Sub forms
B.   Form, section and properties
  1.   Format properties
  2.   Data properties
  3.   Event properties
    a.   Macro builder
    b.   Expression builder
  4.   Other properties

C. Controls

1.
  1.   Text box vs. labels
  2.   Buttons
  3.   Options groups
  4.   Combo and list boxes

IX. Basic reports (1.5 hours, lecture)

A.   Selecting data from tables or queries
B.   Grouping and grouping options
C.   Summary options
D.   Report sections
  1.   Report, page and group headers
  2.   Detail
  3.   Report, page and group footers

X. Advanced report topics (3 hours, lecture)

A.   Report, section and field properties
B.   Controls

XI External data (3 hours, lecture)

A.   Importing
B.   Exporting
C.   Data types

XII. Relational database concepts and terminology (2.5 hours, lab)

A.   Databases
B.   Tables
C.   Fields
D.   Records
E.   Primary keys

XIII. Tables (5 hours, lab)

    A. Entity relationship diagrams
    B. Design view vs. datasheet view
    C. Data types
    D. Field properties
        1. Field length
        2. Input masks
        3. Default values
        4. Validation rules
        5. Validation text

XIV. Relating tables (5 hours, lab)

    A. Primary and foreign key relationships
    B. Cardinality
        1. One-to-one
        2. One-to-many
        3. Many-to-many

    C. Referential integrity

    D. Cascading updates and deletes

XV. Modifying tables (2.5 hours, lab)

    A. Add records
    B. Find records
    C. Delete records
    D. Copy records
    E. Edit records
    F. Sort records

XVI. Simple "select" queries (7 hours, lab)

    A. Design view
    B. Sorting
    C. Criteria
        1. Relational operators
        2. Boolean logic

XVII. Complex queries (8.5 hours, lab)

    A. Multi-table queries
    B. Calculated field queries
    C. Action queries
        1. Make table
        2. Append
        3. Update
        4. Deletes

XVIII. Basic forms (5 hours, lab)

    A. Selecting data from tables or queries
    B. Creating forms in design view vs. the wizard
    C. Columnar, tabular, datasheet and justified layouts
    D. Form sections
    E. Navigation forms
    F. Tab order

XIX. Advanced form topics (5 hours, lab)

    A. Sub forms
    B. Form, section and properties
        1. Format properties
        2. Data properties
        3. Event properties
            a. Macro builder
            b. Expression builder
        4. Other properties
        5. Controls
            a. Text box vs. labels
            b. Buttons
            c. Options groups
            d. Combo and list boxes

XX. Basic reports (2.5 hours, lab)

    A. Selecting data from tables or queries
    B. Grouping and grouping options
    C. Summary options
    D. Report sections
        1. Report, page and group headers
        2. Detail
        3. Report, page and group footers

XXI. Advanced report topics (5 hours, lab)

    A. Report, section and field properties
    B. Controls

XXII. External data (6 hours, lab)

    A. Importing
    B. Exporting
    C. Data types

Total Lecture Hours:	36
Total Laboratory Hours:	54
Total Hours:	90

Primary Method of Evaluation:	2) Problem solving demonstrations (computational or non-computational)
Typical Assignment Using Primary Method of Evaluation:	Objectives: 1. To build expressions that use the IIF and DATEPART functions 2. To use the Summation Function 3. To find duplicates in a table. Open the Violins database and submit a screen print for each query design screen for grading that answers the following specifications: A. Create a query from the Orders table that will show Order ID, Shipped Date, and the following calculated fields. 1. Bill Date: Add 31 days to the value stored in Shipped Date. Name the query BILLING. 2. Day: Use DATEPART function to return a numeric value for the day of the week. 3. Make a copy of this query and rename it IFDAY. Add a calculated field named Day of Week that uses the IIF function to return a value for the data stored in the "Day" field. Sunday=1, Monday=2, Tuesday=3, etc. B. Create a query to list those places where the customer is from the same city, state and country. Note: State=Region. C. Create a crosstab query that will display total units in stock by Vendor Name and by Category. Name the query CROSS1. Print only the first page of the report. D. Create a summation query using the same information as in C. above but this time it will not show the details in spreadsheet form. E. Limit the summation query to violins and violas only. F. Using the Union statement, create a query to list all the company names and countries for all the companies you bill and those to which you ship product.
Critical Thinking Assignment 1:	Manager Miller is concerned that his business is failing. He worries that the sales staff is not contacting the customers concerning the minimal orders some of them are placing. He is asking you to produce a list that will look at the valuation for each order, then total that by customer. If the customer's total of all orders is under $5,000, print a message that says, "CALL NOW." If the valuation is not lower, then print no message.
Critical Thinking Assignment 2:	Manager Harris feels our sales staff is putting undue stress on our warehouse workers by rushing shipment orders. He would like a report to analyze the number of days between the order date and the date the product is required to be at its destination. He wants you to show for each order the order date, the required date and the difference in days between the two. If the lead time is less than 30 days, print the message, "STRESS OUT." He is counting on you to format the output and include whatever information that you think he will need.
Other Evaluation Methods:	Homework Problems, Multiple Choice, Performance Exams, Quizzes, True/False, Written Homework
Instructional Methods:	Demonstration, Lab, Lecture, Multimedia presentations
If other:	Internet Presentation/Resources
Work Outside of Class:	Problem solving activity, Required reading, Skill practice, Study
If Other:	
Up-To-Date Representative Textbooks:	Michael Alexander and Richard Kusleika. Microsoft Access 2019 Bible. John Wiley and Sons, 2019. (Discipline Standard)

Alternative Textbooks:	Gaskin, Shelly and Vargas, Alicia. GO! Microsoft 365: Access 2019, 1st edition. Pearson, 2020.
Required Supplementary Readings:	
Other Required Materials:	Any capacity Flash Drive
Requisite:	Prerequisite
Category:	sequential
Requisite course(s): List both prerequisites and corequisites in this box.	Computer Information Systems-13
Requisite and Matching skill(s):Bold the requisite skill. List the corresponding course objective under each skill(s).	**Computer literacy including the skills in the use of software applications such as Access, an operating system, and file management.** CIS 13 -Solve common business problems using appropriate information technology applications and systems.
Requisite Skill:	equivalent experience
Requisite Skill and Matching Skill(s): Bold the requisite skill(s). If applicable	
Requisite course:	
Requisite and Matching skill(s):Bold the requisite skill. List the corresponding course objective under each skill(s).	
Requisite Skill:	
Requisite Skill and Matching skill(s): Bold the requisite skill. List the corresponding course objective under each skill(s). If applicable	
Enrollment Limitations and Category:	
Enrollment Limitations Impact:	
Course Created by:	David Miller
Date:	12/01/1987
Original Board Approval Date:	
Last Reviewed and/or Revised by:	Randy Harris

Date:	08/31/2020
Last Board Approval Date:	12/19/2022