

Minnesota State College Southeast

COMC 1714: Introduction to Visual Database Application Tools

A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 2

Lab Hours/Week: 2

OJT Hours/Week: *.*

Prerequisites: None

Corequisites: None

MnTC Goals: None

Databases store information in a structured form that enables multiple users to update rows, validate input, and generate queries and reports. This course covers database design concepts, filtering and sorting records, table relationships, referential integrity, import and export tools, visual database management tools, Windows forms, web forms, bound controls, report generation, iterative process, and source control. (Prerequisite or concurrent: COMC 1730 Introduction to Programming with .Net or instructor consent) (3 credits: 2 lecture/1 lab)

B. COURSE EFFECTIVE DATES: 05/04/1998 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

D. LEARNING OUTCOMES (General)

1. Identify database entities
2. Assign fields to tables
3. Determine appropriate field types
4. Determine primary key
5. Determine table relationships
6. Create database
7. Add records to table
8. Create simple single-table report
9. Create simple form
10. Create query
11. Set query search criteria
12. Set wildcard query search criteria
13. Create parameterized query
14. Use logical AND operator
15. Use logical OR operator
16. Determine query sort keys
17. Create simple join query
18. Create report using a simple join query
19. Use aggregate functions (min, max, avg, etc.)
20. Use aggregate functions with search criteria
21. Use aggregate function with grouping
22. Create crosstab query
23. Apply database maintenance guidelines
24. Perform table structure modifications
25. Perform data updates (insert, update, delete)
26. Perform record search using form
27. Perform record filtering using form
28. Create lookup field
29. Create multivalued field
30. Create update/delete query
31. Specify validation rules
32. Identify and assign foreign keys
33. Use subdatasheet
34. Perform database backup, recovery, compact, and repair
35. Perform record import/export using text, JSON, and XML files
36. Perform report grouping and sorting
37. Add report subtotals and totals
38. Add report sort and filter controls
39. Create multitable reports
40. Create multitable forms
41. Create advanced subforms & forms
42. Utilize iterative development process
43. Utilize source control
44. Display professional attitude

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

This course was previously called Microsoft Access