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

   In this course, students will use visual database application tools to learn database design concepts (entities, attributes, relationships, and primary/foreign key definitions), design and create databases and tables, create filter and sort queries, use summary functions, establish referential integrity and constraints, and create multiple table queries, forms, reports, and interactive reports. (3 credits: 2 lecture/1 lab)

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

C. OUTLINE OF MAJOR CONTENT AREAS

   1. Relational database concepts: tables, fields, primary and foreign keys.
   2. Query design tools
   3. Filter, sort, summary functions
   4. Interactive report generation
D. LEARNING OUTCOMES (General)

1. determine use cases/user stories
2. identify database entities
3. determine table attributes
4. determine appropriate attribute data types
5. determine primary key
6. determine table relationships
7. create table
8. modify table structure
9. add rows to table
10. create select query
11. set query search criteria
12. set wildcard query search criteria
13. create parameterized query
14. use logical operators
15. determine query sort keys
16. create simple single-table report
17. create form using bound controls
18. create simple join query
19. create report using a simple join query
20. use aggregate functions (min, max, avg, etc.)
21. use aggregate functions with search criteria
22. use aggregate function with grouping
23. create crosstab query
24. apply database maintenance guidelines
25. perform table structure modifications
26. perform data updates (insert, update, delete)
27. perform record search using form
28. perform record filtering using form
29. create update/delete query
30. specify validation rules
31. identify and assign foreign keys
32. perform database backup, recovery, compact, and repair
33. perform record import/export using text, Excel, and XML files
34. perform report grouping and sorting
35. add report subtotals and totals
36. add report sort and filter controls
37. create multi-table reports
38. 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