COMC 2722: Database Design & Management with SQL

A. COURSE DESCRIPTION

Credits: 3
Lecture Hours/Week: 2
Lab Hours/Week: 2
OJT Hours/Week: *.*
Prerequisites: None
Corequisites: None
MnTC Goals: None

Structured Query Language (SQL) is the standard language for defining, maintaining, and querying relational databases on all platforms from mainframes to microcomputers. This course covers relational database design and implementation using SQL. Topics include: select and sort queries, multiple table queries, subqueries, outer joins, aggregate functions, table updates, database design, entity-relationship (E-R) modeling, normalization, and database implementation, modifications & administration. (Prerequisite: none) (3 credits: 2 lecture/1 lab)

B. COURSE EFFECTIVE DATES: 10/16/2001 - Present

C. OUTLINE OF MAJOR CONTENT AREAS
D. LEARNING OUTCOMES (General)
   1. Describe database management
   2. Describe relational data base concepts
   3. Determine relational query results
   4. Describe query concepts
   5. Create data dictionary
   6. Describe table design concepts
   7. Create tables
   8. Create record selection queries
   9. Perform query sorts
  10. Perform grouping queries
  11. Use Sum, Avg, and Count functions
  12. Perform nested queries
  13. Describe multiple table queries
  14. Create multiple table (join) queries
  15. Perform self-join queries
  16. Add data records
  17. Update database records
  18. Delete data records
  19. Describe view concepts
  20. Create views
  21. Describe database administration issues
  22. Describe database normalization rules
  23. Describe table index concepts
  24. Create table index
  25. Determine database model entities
  26. Determine entity attributes
  27. Determine database model relationships
  28. Determine entity instance cardinality
  29. Determine entity instance dependencies
  30. Determine first normal form
  31. Determine second normal form
  32. Determine third normal form
  33. 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
   None noted