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 database 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