

# Minnesota State College Southeast

## 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