DATABASE SYSTEMS — ISTC 1050

A. Course Description
  - **Credits:** 3.00
  - **Lecture Hours/Week:** 2.00
  - **Lab Hours/Week:** 1.00
  - **OJT Hours/Week:** 0
  - **Prerequisites:**
    - ISTC 1015: Supporting Business Applications
  - **Corequisites:** None
  - **MnTC Goals:** None

This course focuses on the fundamentals of relational databases; their use, design and implementation. The course will include entity-relationship modeling, logical and physical design and normalization. The use of Structured Query Language (SQL) for data manipulation will be emphasized. The course will also cover concepts of client/server, distributed and object-oriented databases, big data security, and data warehousing. Prerequisites: ISTC1015 Supporting Business Applications

B. Course Effective Dates: 8/20/07 – Present

C. Outline of Major Content Areas
   - As noted on course syllabus

D. Learning Outcomes
   1. Design relational databases according to normalization practices, annotating the design in Entity-Relationship diagrams.
   2. Explain various database science concepts such as big data, NoSQL databases, and data warehousing.
   3. Summarize database administration concepts of concurrency control, locking and recovery strategies.
   4. Utilize SQL commands for data definition, data retrieval, and data manipulation in single and multiple table environments.

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

F. Learner Outcomes Assessment
   - As noted on course syllabus
G. Special Information

None noted