DATA STRUCTURES — ISTC 2050

A. Course Description

- **Credits**: 3.00
- **Lecture Hours/Week**: 2.00
- **Lab Hours/Week**: 1.00
- **OJT Hours/Week**: 0
- **Prerequisites**:
  - ISTC 1300: Introduction to Programming
  - ISTC 1300: Introduction to Programming

- **Corequisites**: None
- **MnTC Goals**: None

This course introduces the student to the theory, design, and implementation of common data structures and related algorithms. Topics include linked lists, recursion, stacks, queues, search algorithms, sorting algorithms, graphs, and binary trees. Students will write numerous programs to demonstrate comprehension of the course topics.

**PREREQUISITE**: ISTC 1300

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

C. Outline of Major Content Areas

As noted on course syllabus

D. Learning Outcomes

1. Choose the appropriate data structure for modeling a given problem.
2. Compare and contrast searching and sorting algorithms.
3. Define and use common Abstract Data Types (ADT)
4. Understand complexity analysis and Big O notation.
5. Understand recursive solutions and their applications.

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

F. Learner Outcomes Assessment

As noted on course syllabus
G. Special Information

None noted