

# Bemidji State University

## CS 3528: Data Structures and Algorithms

### A. COURSE DESCRIPTION

Credits: 4

Lecture Hours/Week: \*.\*

Lab Hours/Week: \*.\*

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: None

Study of advanced abstract information storage structures, including priority queues, binary trees, generalized trees, and graphs. Study of algorithm development techniques, including divide and conquer, greedy algorithms, and dynamic programming. Includes learning a programming language not used in CS 2321 and CS 2322. Prerequisites: CS 2322 and MATH 2210 or consent of the instructor.

**B. COURSE EFFECTIVE DATES:** 01/14/2013 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Algorithm Development Techniques
2. Binary & Generalized Trees
3. Information Storage Structures
4. Priority Queues

### D. LEARNING OUTCOMES (General)

1. have the ability to think critically and independently while applying the appropriate data structures for solving computational problems.
2. knowledge of the usage of various data structures.
3. knowledge of the operations performed on data structures for its maintenance, different associated algorithms, and their complexity.

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

None

### F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

### G. SPECIAL INFORMATION

None noted