

# Bemidji State University

## CS 2322: Computer Science II

### A. COURSE DESCRIPTION

Credits: 4

Lecture Hours/Week: \*.\*

Lab Hours/Week: \*.\*

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: None

Topics include recursion and the study of object-oriented concepts including encapsulation, inheritance and polymorphism. It includes the study of fundamental data structures including strings, lists, stacks, queues, containers classes, binary trees, and hash tables. Also includes a group-oriented software design and implementation project. Includes a two-hour lab. Prerequisite: CS 2321.

**B. COURSE EFFECTIVE DATES:** 08/20/1997 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. C++
2. Essentials of object-oriented programming
3. Introduction to recursion, binary trees and hash tables

### D. LEARNING OUTCOMES (General)

1. understand the principles of Object Oriented Programming.
2. program fluidly with control structures in C++.
3. use advanced features of Object Oriented Programming.
4. be able to use templates for the implementation of common data structures and algorithms.
5. implement the basic operations in Lists, Stacks and Queues.
6. manipulate binary trees, binary search trees and hash trees.
7. understand the advantages and disadvantages of recursive procedures.

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

None

### F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

### G. SPECIAL INFORMATION

None noted