

**J. Sargeant Reynolds Community College
Course Content Summary**

Course Prefix and Number: CSC 202

Credits: 4

Course Title: Computer Science II

Course Description: Examines data structures, introduction to object-oriented design, and algorithm analysis. Covers data structures (including sets, strings, stacks, queues, arrays, records, files, linked lists, and trees), polymorphism, inheritance, exceptions, interfaces, abstract data types, algorithm analysis (including searching and sorting methods), and file structures. Prerequisite: CSC 201 with a grade of "C" or better. Lecture 4 hours per week.

General Course Purpose:

Course Prerequisites and Co-requisites:

Prerequisite: CSC 201 with a grade of "C" or better

Student Learning Outcomes:

Upon completing the course, the student will be able to

- a. Complete the study of data types in a high level language;
- b. Understand the notion of abstract data types and various implementations;
- c. Understand recursion and advanced programming techniques;
- d. Understand the various applications of data structures; and
- e. Understand the general principals of programming.

Major Topics to Be Included:

- a. Records
- b. Stacks
- c. Queues
- d. Linked lists
- e. Recursion
- f. Binary trees
- g. Sorting and searching
- h. Vocabulary and principles of programming, data design, and debugging

Date Created/Updated (Month, Day, Year): August 1, 2019