



BAKER COLLEGE

STUDENT LEARNING OUTCOMES

CS2150 C++ Programming
3 Semester Credit Hours

Student Learning Outcomes and Enabling Objectives

1. Analyze a problem and integrate an appropriate solution into C++ code.
 - a. Select an appropriate name, data type, and initial value of a memory location.
 - b. Identify the components of a C++ program.
 - c. Demonstrate competency of input/output.
 - d. Build, execute, and print a C++ program.
 - e. Demonstrate ability to detect and fix errors.
2. Demonstrate the ability to create and implement various types of functions in C++.
 - a. Create and invoke a function that returns a value.
 - b. Indicate how to pass a String variable.
3. Demonstrate the ability to work with C++ structures.
 - a. Implement the various types of looping structures.
 - b. Perform the opening and closing of a sequential access data file.
 - c. Read from a sequential access data file.
4. Create array structures.
 - a. Create arrays: declare, initialize, populate, and store arrays.
 - b. Manipulate arrays: display, sort, search, and update arrays.
 - c. Perform the useful application of parallel arrays.
5. Demonstrate the fundamentals of Object-Oriented Programming (OOP).
 - a. Demonstrate the ability to create, analyze, and use classes.
 - b. Encapsulate object data.
 - c. Use friends in the same or multiple classes.

Big Ideas and Essential Questions

Big Ideas

- Analyze real-world problems and convert into executable code
- Functions

- Arrays
- Structures
- Object-Oriented Programming (OOP)
- Exception handling

Essential Questions

1. What are the common components of a C++ program?
2. Why do functions play a role in a systematic approach to problem solving?
3. How are specific programming techniques utilized to produce proper programs?
4. How can computer code be made more reusable and easier to maintain?

These SLOs are approved for experiential credit.

Effective: Fall 2023