**BARTON COMMUNITY COLLEGE**

**COURSE SYLLABUS**

# **GENERAL COURSE INFORMATION**

Course Number: PRGM 1025

Course Title: C++ Programming

Credit Hours: 3

Prerequisite: Computer experience

Division/Discipline: WTCE

Course Description: This course is an introduction to the C++ programming language. Topics covered in this course include: C++ language conventions and rules, data types and operators, control structures, functions, arrays, and pointers. Multiple programming projects.

# **INSTRUCTOR INFORMATION**

# **COLLEGE POLICIES**

Students and faculty of Barton Community College constitute a special community engaged in the process of education. The College assumes that its students and faculty will demonstrate a code of personal honor that is based upon courtesy, integrity, common sense, and respect for others both within and outside the classroom.

Plagiarism on any academic endeavors at Barton Community College will not be tolerated. The student is responsible for learning the rules of, and avoiding instances of, intentional or unintentional plagiarism. Information about academic integrity is located in the Student Handbook.

The College reserves the right to suspend a student for conduct that is determined to be detrimental to the College educational endeavors as outlined in the College Catalog, Student Handbook, and College Policy & Procedure Manual. (Most up-to-date documents are available on the College webpage.)

Any student seeking an accommodation under the provisions of the Americans with Disability Act (ADA) is to notify Student Support Services via email at [disabilityservices@bartonccc.edu](mailto:disabilityservices@bartonccc.edu).

# **COURSE AS VIEWED IN THE TOTAL CURRICULUM**

In this course students will be taught the fundamental programming methods with the C++ programming language. It provides a solid foundation of computer programming, especially for those who are pursuing careers in computer science and technology.

# **ASSESSMENT OF STUDENT LEARNING**

Barton Community College is committed to the assessment of student learning and to quality education. Assessment activities provide a means to develop an understanding of how students learn, what they know, and what they can do with their knowledge. Results from these various activities guide Barton, as a learning college, in finding ways to improve student learning.

Course Outcomes, Competencies, and Supplemental Competencies:

1. Apply software development principles
   1. Identify program requirements
   2. Design an algorithm to solve a problem
   3. Implement an algorithm using Java
   4. Apply testing strategies to a program
   5. Create proper program documentation
2. Recognize the proper use of the following programming components in C++: variables, I/O, control structures, methods, arrays, and pointers
   1. Recognize variable types
   2. Identify input and output alternatives
   3. Explain the proper use of sequential, conditional, and repetitive control structures
   4. Describe the use of functions in a program
   5. Identify arrays and the uses of array processing
   6. Explain pointers and their operations
3. Apply programming components to solve problems with C++
   1. Create and modify variables
   2. Apply user input and output as well as file I/O
   3. Implement sequential, conditional, and repetitive control structures
   4. Apply functions
   5. Implement arrays and process array contents
   6. Create and modify pointers
4. **INSTRUCTOR'S EXPECTATIONS OF STUDENTS IN CLASS**

# **TEXTBOOKS AND OTHER REQUIRED MATERIALS**

# **REFERENCES**

# **METHODS OF INSTRUCTION AND EVALUATION**

# **ATTENDANCE REQUIREMENTS**

1. **COURSE OUTLINE**