

GROSSMONT COLLEGE

Official Course Outline

COMPUTER SCIENCE INFORMATION SYSTEMS 296 – INTRODUCTION TO C++ PROGRAMMING

<u>1. Course Number</u>	<u>Course Title</u>	<u>Semester Units</u>	<u>Hours</u>
CSIS 296	Introduction to C++ Programming	4	3 hours lecture 3 hours laboratory

2. Course Prerequisites

None.

Recommended Preparation

A "C" or "CR" grade or higher in CSIS 119 or equivalent.

3. Catalog Description

This is an introductory course in C++ programming. Topics covered include basic language syntax, functions, data types, pointers, strings, structures, software tools, and an introduction to classes. This course is intended for persons with a prior background in any programming language.

4. Course Objectives

The student will:

- Design and prepare programs in C++ syntax.
- Create functions with parameters passed by value and by reference.
- Analyze problems for use of proper data types.
- Create abstract data storage.
- Edit, compile, run and debug C++ programs within an integrated set of software tools.
- Manipulate string data with C++.
- Write a simple program using object oriented programming and classes.

5. Instructional Facilities

A computer classroom with at least one microcomputer workstation per student.

6. Special Materials Required of Student

Electronic storage media.

7. Course Content

- Historical survey of C and C++.
- Portability.
- C++ program structure and language syntax.
- Decisions (branching) in C++.
- Iteration in C++.
- C operators.
- Data structures including standard data types and abstract data types.

7. Course Content continued

- h. Functions and pointers.
- i. Input/Output.
- j. Structures and unions.
- k. Packaging of data structures.
- l. Libraries.
- m. Strings with pointers.
- n. Source editors, compilers, and debuggers.

8. Method of Instruction

- a. Lecture.
- b. Hands-on demonstrations.
- c. Student lab exercise sessions.
- d. Team and individual projects in a lab environment.

9. Methods of Evaluating Student Performance

- a. Projects and hands-on exercises.
- b. Written tests and quizzes.
- c. Research paper concerning a major aspect of the course.
- d. Final written or performance examination.

10. Outside Class Assignments

- a. Textbook reading assignments.
- b. Problem solving exercises.
- c. Prepare several computer programs written in C++ including documentation.

11. Texts

- a. Required Text(s):
 - (1) Kelley, AI and Ira Pohl. C by Dissection. New York, NY: Addison-Wesley, latest edition.
- b. Supplementary texts and workbooks:
 - None.

Date approved by the Governing Board: 4/03