

**CS 123 - Advanced Computing**  
Semester, year  
Section, Time, Room #

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**Your name and Phone Number**  
Office and Office Hours  
E-Mail address (and Course Web Page address if available)

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COURSE TITLE: Advanced Computing

COURSE NUMBER: CS 123

CREDIT: 3 Semester hours

COURSE PREREQUISITE: CS 101, 120

COURSE DESCRIPTION: Continuation of CS 155 with emphasis on advanced programming techniques, including recursion and pointers. Introduction to elementary data structures such as queues, stacks, lists, strings, and trees. Discussion of professional ethics. Programming methodology with emphasis on object-oriented programming.

COURSE OBJECTIVES: To teach advanced features of the C++ programming language. To introduce how to organize data in memory using a variety of structures. To write programs to solve problems utilizing different data structures. To develop and understanding of the issues involved in professional ethics.

COURSE CONTENT: Advanced topics of the C++ program structure: dynamic data, pointers, recursion. Introductory topics in elementary data structures, queues, stacks, lists, strings, trees. Emphasis on modular program development. Professional ethics.

COURSE REQUIREMENT: Class attendance

In-class tests

Design and code programs in C++

Comprehensive final examination

COURSE EVALUATION: Grading is a weighted average of scores earned on the in-class test, the programming assignments and the Final examination.

Accommodation Statement: In accordance with the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act of 1973, the University offers reasonable accommodations to students with eligible documental learning, physical and/or psychological disabilities. Under Title II of the Americans with Disabilities Act (ADA) of 1990 and Section 504 of the Rehabilitation Act of 1973, a disability is defined as a physical or mental impairment that substantially limits one or more major life activities as compared to an average person in the population. It is the responsibility of the student to contact Developmental Services prior to the beginning of the semester to initiate the accommodation process and to notify instructors within the first three class meetings to develop an accommodation plan. Appropriate, reasonable accommodations will be made to allow each student to meet course requirements, but no fundamental or substantial alteration of academic standards will be made. Students needing assistance should contact Development Services.