

CSCI 140(L)
Introduction to Algorithmic Design
Course Syllabus – Spring 2010



COURSE INFORMATION

Instructor	Donald Yessick, Ph. D.
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Description:	Introduction to Algorithm Design using C. Laboratory demonstrates the topics and principles presented in the lecture
Textbooks	J. Hanly and E. Koffman, <i>Problem Solving and Program Design in C. 6th Ed.</i>

COURSE OBJECTIVES

The objective is to provide an understanding of how computer programming works and to provide hands-on practice writing computer programs to solve problems. The course begins with a brief overview of computers, programming languages, compilers, and strategies for problem solving and algorithm design. An introduction to the language, including data types and variables, operators, program structure, and system input/output, is followed by more detailed treatment of input and output, control structures, and user-defined methods and classes. This course provides the foundation for other programming classes, teaching students how to design algorithms to solve small problems and implement those algorithms in a programming language.

STUDENT LEARNING OUTCOMES

Upon completion of the course, students should be able to:

1. Use a problem-solving process to design an algorithmic solution to a problem
2. Implement the basic elements of a C program.
3. Select the most appropriate data types for a given problem
4. Add appropriate and useful comments to a program.
5. Correctly implement arithmetic, relational, and logical operations in a program.
6. Implement the different methods of input and output (including text files) in a program.
7. Use methods from existing classes to solve a given problem.
8. Select and implement appropriate control structures in a solution to a given problem.
9. Define and implement appropriate user-defined methods to solve a given problem.
10. Define and implement small programs to solve a given problem.
11. Execute a walk-through of a program containing expressions, control structures, and I/O statements.
12. Implement both one and two-dimensional arrays of objects in solutions to given problems.

CLASS POLICIES

Attendance: You are expected to attend class. Attendance means that you arrive for class on time and that you remain

until the end of the class. Federal law mandates accurate class attendance records. Absences in excess of the maximum 25% of scheduled class meetings will result in a failing grade in most circumstances. For each absence over 6 absences, your final grade may be dropped by one letter grade. You are responsible for all assignments and material discussed in class during your absence. If an emergency prevents you from attending class, it is your responsibility to obtain notes from a classmate and study them for understanding. If the notes, web pages and text do not provide sufficient understanding, please see me. The responsibility for obtaining and completing all missed work rests solely upon the student.

Grading:

Projects (9)	45%
Exams (3)	30%
Final Exam (Comprehensive)	25%

General Grading Policies: Except in cases of actual error, final grades are permanent. Final "I" grades will not be permitted except in cases of prolonged, continuous, and excused absences in the latter half of the course. Under no circumstances will an "I" grade be given when more than half of the coursework has not been completed. Final "W" grades will be given only in very rare and exceptional cases. A "W" will never be given simply to replace a grade that you would prefer not to receive.

Grading Structure:	Final Average	Grade
	90 - 100	A
	87 - 89	B+
	80 - 86	B
	77 - 79	C+
	70 - 76	C
	67 - 69	D+
	60 - 66	D
	59 and below	F

Academic Integrity: Students have the responsibility to know and observe the requirements of the *Coastal Carolina University Code of Student Conduct* handbook on *Standards of Academic Conduct*:

A. Prohibited Conduct

1. Plagiarism, cheating and all other forms of academic dishonesty

a. Examples of plagiarism include but is not limited to the following:

(i) Words, sentences, ideas, conclusions, examples and/or organization of an assignment are borrowed without proper acknowledgment from a source (for example, a book, article, electronic documents, or another student's paper).

(ii) A student submits another person's work in place of his/her own.

(iii) A student allows someone else to revise, correct or edit an assignment without explicit permission of the instructor.

(iv) A student submits work without proper acknowledgment from commercial firms, Web sites, fraternity or sorority files or any other outside sources, whether purchased or not.

(v) A student allows another person to take all or any part of a course, including quizzes, tests, and final examinations.

(vi) A student submits any written assignments done with the assistance of another without the explicit permission of the instructor.

(vii) A student knowingly aids another student who is engaged in plagiarism.

b. Examples of cheating include but is not limited to the following:

(i) A student uses unauthorized information, materials or assistance of any kind for an assignment, quiz, test, or final examination.

(ii) A student knowingly aids another student who is engaged in cheating.

2. Furnishing false information to any University official, faculty member or University office

3. Forgery, alteration or misuse of any University document or record

4. Disruption or obstruction of teaching, research, administration, academic discipline proceedings, or other activities when the behavior disrupts the environment and violates the standard of fair access to the academic experience

This code forbids cheating, fabrication or falsification of information, plagiarism, copying others' work, and complicity in academic dishonesty. Your evaluation in this course includes a judgment that your work is free from academic dishonesty of any type; and grades in this course WILL BE adversely affected by academic dishonesty. The normal penalty is ZERO CREDIT on the work involving dishonesty, and/or a course grade of "F". You are expected to inform ME of any known cases of academic dishonesty involving other students. ALL assignments are INDIVIDUAL EFFORTS.