CSC 2110: Data Structures and Algorithms

Course Syllabus

Professor:

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Office Hours: Monday - Thursday 8:00-9:30

Teaching Assistant:

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Office Hours: Tuesday and Thursday 11:30-2:00

Class Lectures:

404 Bruner Hall
Monday - Friday: 9:30-11:20

Introduction

This course involves the examination of abstract data types, fundamental data structures, and algorithms.

Through exercises and programming assignments, by the end of this course, you will have been introduced to the following:

Programming Skills to Learn

1. Advanced knowledge of C++
2. Ability to understand a program
3. Working with existing code: Modifying or extending a given program
4. Debug an incorrect (syntax and logic) program

<u>Problem Solving Skills to Learn</u>
1. Algorithm Creation
2. Abstract Data Types
3. Object-Oriented Programming
4. Templates
5. Recursion
6. Data Structures
7. Classes
8. Lists
9. Stacks
10. Queues
11. Algorithm Efficiency
12. Searching
13. Sorting

This course is the 2nd course in programming course sequence. A good understanding of pointers and structures in C++ is **<u>required</u>** for this course.

Textbook

Data Abstractions & Problem Solving with C++, by Carrano and Henry, Sixth Edition

Schedule

See the class website for the list of class chapters/topics, semester schedule, due dates for assignments, and exam dates for this class.

Grading and Assessment

The grade distribution for this class is shown below.

In-Class Assignments	10%
Programming Assignment One	9%
Programming Assignment Two	10%
Programming Assignment Three	11%
Programming Assignment Four	12%
Exam 1	11%
Exam 2	11%
Exam 3	11%
Final Exam	15%

In-Class Assignments

The in-class assignments are intended to provide students with the opportunity to apply what they are learning in this course. The duration of in-class assignments will vary.

Programming Assignments

The assignments are intended to provide students with the opportunity to apply what they are learning in this course on an assignment of a larger scale. Assistance on assignments is provided by weekly office hours for the instructor and TA, as well as via e-mail correspondence with the instructor and TA. Every assignment has a given due date, and must be submitted through the corresponding iLearn dropbox. **No late assignments will be accepted. (Five minutes late is still late!)**

Assignments will be posted on the class iLearn website.

Each assignment will be graded on a number of factors. Always be sure that a turned in assignment *compiles without warnings or errors* even if it is not complete. Programs that do not compile successfully (using the gcc/g++ compiler) may receive **no credit**.

Additional procedural information on assignments may be handed out or made available on the website as required.

Exams

Material covered on the exams will be based on the assigned chapters and in-class lectures. There are **NO** make-up exams after the scheduled times. If a student notifies the instructor IN ADVANCE, then an **early** make-up exam *MAY* be arranged at the discretion of the instructor. The instructor's decision is final.

Miscellaneous

The class syllabus, schedule, and other information will be available on the class website as it is developed. You are responsible for checking the class website regularly for information such as due date changes and assignments.

NOTE: Do NOT use the class iLearn web-site e-mail server for corresponding directly with the instructor. You MUST use the e-mail instructor's e-mail listed at the top of this syllabus.

Grading Issues

Requests for re-evaluation of assignments are limited to five (5) calendar days after the assignment is returned. Every assignment submitted for re-grading must be given to the instructor in its entirety and will be completely re-graded. Assignments will NOT be re-evaluated in the classroom.

Ethics and Academic Integrity

All work in this class must be done individually. If you use material found on the web, AND have received permission from the instructor to use said material, you must reference any and all material you use. Anyone cheating on work in this class will receive a failing grade for the work and will be subject to the university's academic dishonesty policy. **Cheating involves giving unauthorized assistance or receiving unauthorized assistance on work assigned in this class**. If you have any questions regarding an assignment or exam, see the instructor.

A Statement of Ethics will be provided for you to read, sign, return, and follow. Violators of the ethics code will be reported to the Chair of the Department of Computer Science and penalties will be levied as described in the Statement of Ethics.