Essentials: Communication, Content, and Structure

Communications

Class Meetings:	Tuesday, Friday 12:45 P.M. - 2:00 P.M.
Office:	HN1090J
Office Hours:	Tuesday, 11:30 A.M. - 12:30 P.M. and 2:30 - 3:30 P.M.
Email:	stewart.weiss@hunter.cuny.edu
Telephone:	(212) 772-5469 or (212) 772-5213 (department office)

Resources

Textbooks: Frank M. Carrano and Janet J. Prichard, *Data Abstraction and Problem Solving with C++*, Addison Wesley ISBN 0-321-43332-7, 5th edition. If you wish to obtain a previous edition, usually at a significantly smaller price, you may do so, but only if you accept the possibility that references to page numbers, exercises, and headings may be different.

Computing Facilities: Registered students will be given user accounts on the UNIX hosts in the 1000G lab of the Computer Science Department, located on the tenth floor of Hunter North. This lab is open 24 hours a day, 7 days a week and access to it is limited to students enrolled in selected courses. In addition, students will be able to use a secure remote login service such as ssh to access these accounts.

Website: All course materials, including lecture notes, slides, assignments, syllabi, and other resources, including this document, are posted on my website, at http://www.compsci.hunter.cuny.edu/∼sweiss/course_materials/csci235/csci235_fall10.php

Discussion Board: This class will use a Google group as a discussion board. Please see the section below entitled "Course Materials, the Web, and Blackboard" for the details.

Prerequisites

You are required to complete CSci. 135, CSci 150, and Math 150 with a grade of C or better to take this course.

Learning Goals

Material in this course supports or partially supports the following departmental learning goals: 1a: (understanding the basic foundations and relevant applications of mathematics and statistics, particularly those branches related to computer science) by using mathematics to analyze algorithm performance; 2c: (ability to apply principles of design and analysis in creating substantial programs and have experience working in teams on projects of moderately realistic scope); 3a: (ability to communicate ideas effectively) by requiring homework that is graded in part on clarity and proper use of the English language; 3c: (ability to perform competitively on the Computer Science GRE) by exposing them to some of the material on that exam.

Course Content

The principal objective of this course is to further your understanding of the design and analysis of algorithms and data structures. The course introduces the concept of abstract data types, as well as queues, stacks, lists, and binary trees. It also introduces algorithms for certain common problems such as sorting. More concretely, it will further your programming skills by covering recursion, pointers, and error handling. Lastly, it will show you how to improve your software engineering skills a little more, and to give you practical experience for more productive programming. This course demands that you write more complex software than you did in Software Design & Analysis I.

Doing Well in This Course

If you want to do well in this course then you should do all of the following:

- Read the assigned reading ***before*** the lecture, not after it.
- Make a list of questions and ask them during the lecture. If I do not think a question is appropriate for the class, I will answer it at another time.
- Submit all assignments on time.
- Study for exams.
- Do as many of the textbook's sample questions as you have time to do.
- Do your assignments yourself.

Grading, Exams, and Assignments

Your grade is computed strictly from two components, a programming component and an exam component. The programming component is 30% of your grade and the exam component is 70%. Each of these components is a weighted average of program grades and exam grades respectively.

Programming Assignments

I will assign three programming projects during the semester. This is not enough to become proficient. If you want to be proficient and have the time, you should make up your own small problems and write test programs to solve them. Every program must satisfy the programming rules stated in the Programming Rules document. The rules governing lateness, plagiarism, and grading are also contained there. I take plagiarism very seriously. The due dates and weights are listed below.

Programming Assignment	Weight Towards Program Component of Grade	Due Date
1	1/3	Oct. 1
2	1/3	Nov. 2
3	1/3	Dec. 7

Exams

There will be two midterm exams and one final exam. The midterm exams are exams in which you will write pseudo-code to describe algorithms and/or you will solve conceptual problems related to the course material. The final exam is no exception; it will cover the material from the end of the second exam to the end of the semester. *Please note that the final exam is not cumulative.*

Exam	Weight Towards Exam Component of Grade	Exam Date
1	30%	Oct. 8
2	30%	Nov. 12
3	40%	Dec. 17, 11:30 AM - 1:30 PM

Make-up Policy, and Incomplete Grades

All exams must be taken at the scheduled time. Failure to take an exam counts as a zero grade on that exam. The only exception is if you miss a midterm exam for a serious, documented medical illness; in that case I will schedule an alternative exam. Note the word "serious" in the preceding sentence. If you miss two or more exams for medical reasons, you should seek an official withdrawal and retake the course. I do not give out incomplete (IN) grades except for those students who have completed all work on time and who, for legitimate, documented medical or personal reasons, miss the final exam. I will not give an IN grade to someone who has fallen behind on the projects and does not hand the last project in on time.

Class Calendar

The last day to drop a class without a "W" is September 15. The last day to withdraw is November 17. There are no classes on September 10 and 17, nor on November 26. The last day of class is Friday, December 10.

Programming and System Access

Your first choice should be to use the 1000G lab that has been refurbished and equipped with new Linux workstations. This lab is open "24/7" and has 24 workstations. The advantage of this is that you will be sitting in front of the Linux host and will not be subject to potential disconnections that can take place when working remotely. You will also be much less affected by network delays. The disadvantage is that you have to be in school to use it.

The other choice is to work remotely. The Computer Science Department makes a UNIX host,

`eniac.geo.hunter.cuny.edu`,

available to students who have access to the lab. You will be able to access this host from any computer that has ssh client software. If you download the ssh client software to your home machine, you will be able to login from home.

There are several versions of ssh. OpenSSH is an open source version developed for the OpenBSD project. PuTTY ssh is another free version for Windows operating systems, available at

`http://www.chiark.greenend.org.uk/~sgtatham/putty/.`

Macintosh computers come with a command-line ssh client.

Course Materials, the Web, and Blackboard

All lecture notes that I write will be posted on my website, which, unlike Blackboard, does not require privilege to access. I rely on Blackboard only for communicating to all students and for posting grades. You should check Blackboard before each class in case there are announcements. Urgent announcements will always be sent by email to your Hunter email address, so you should make sure you read that email regularly.

Everyone in this class has been added to the Google group hc_csci23501. The group's website is

http://groups.google.com/group/hc_csci23501.

It will be the means by which general course-related questions will be addressed. (If you are not in the group, please send email to me to add you to it, or send a request to the group to join.)

If you have a course-related question of a general nature, one from which everyone may benefit, first check the discussion page on the website to see if it has been asked and answered there. If it has not been asked yet, then post the question there. Everyone in the class, including your instructor (me), will see the question in their email. I will answer the question when I see it, and you will see the answer in your email.

Anyone is free to answer a question if he or she thinks they know the answer. If the answer needs a bit of help, it will be given.

Academic Honesty

Hunter College regards acts of academic dishonesty (e.g., plagiarism, cheating on examinations, obtaining unfair advantage, and falsification of records and official documents) as serious offenses against the values of intellectual honesty. The college is committed to enforcing the CUNY Policy on Academic Integrity and will pursue cases of academic dishonesty according to the Hunter College Academic Integrity Procedures. In this class, I will enforce the University's Policy on Academic Integrity and bring any violations that I discover to the attention of the Dean of Students' Office.