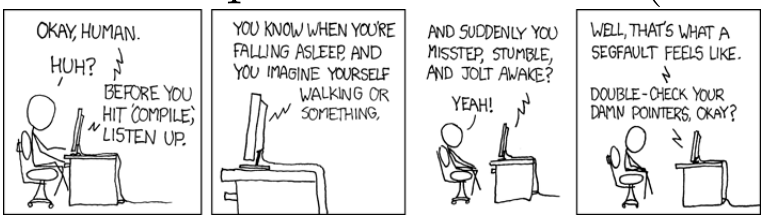
CSC1610 Computer Science I (Fall 2012)



Credit to xkcd

Instructor:	Christopher Stuetzle
e-mail:	stuetzlec@merrimack.edu
Office:	Mendel 251
Course:	TR 9:00AM – 10:40AM in Mendel 159
Office Hours:	M 9:00AM – 10:30AM
	T 1:30PM – 3:00PM
	W 2:30PM – 4:00PM
	By appointment
Website:	Blackboard
Required Textbook:	*Problem Solving, Abstraction and Design using C++* 6th Ed.
	Frank L. Friedman and Elliot B. Koffman.
	ISBN 0-13-607947-4

Official Course Description

An introduction to computer science techniques with an emphasis on algorithm development and structured programming. Topics include program development, modularity, streams, control structures, functions, recursion, and arrays. Satisfies the mathematics and science distribution requirement. *Four hours per week.*

Prerequisites

CS, EE, MA, IT, CE Majors/Minors

Course Objectives

The primary objectives of this course are to

1. understand the components of a computer system and data storage.
2. understand basic design and problem solving strategies using C++.
3. understand C++ datatypes, Input/Ouput (I/O), expressions, and errors.
4. understand the use of functions, parameter passing and return values from functions.
5. understand C++ control structures – if statements, counter and conditional logic.

6. understand strings and their use.

7. understand recursion.

Software

You can download Visual C++ Express, for free, from:
`http://www.microsoft.com/visualstudio/en-us/products/2010-editions/visual-cpp-express`
A handy tutorial is at:
`http://msdn.microsoft.com/en-us/bb530677.aspx`

Expectations

I expect that you will spend a significant amount of your time outside of class fully mastering the material. On average, you should plan on spending about eight (8) hours a week on work outside of class for this course. The time will be spent on programming projects, finishing labs, reading, and studying. Moreover, I expect students to follow a coding guideline when writing projects. This coding guideline will be taught along with the material, as well as provided in a separate document, and considered in the grading of every assignment. I further expect students to keep up with the assigned reading. Remember, you will only get out of this class what you put into it.

Lecture

Lectures shall be every Tuesday and Thursday from 9:00 a.m. to 10:40 a.m. They are a valuable part of your education. As such, I expect students to attend all lectures, pay full attention, and take notes when appropriate. You should read ahead in the textbook so you are prepared for each class.

Please respect your classmates by silencing your cell phones and other electronic devices before class begins. I will be doing the same. There will be **no text messaging, instant messaging, gaming, or surfing the web** during class. Do not leave cell phones on your desk. If you are disruptive in class I will ask you not to be. If you continue to be disruptive, I will ask you to leave.

Communication

I will be communicating through e-mail as needed. This will be the primary method for dissemination of information between us, so please check your e-mail at least once a day. I check my e-mail several times a day, so it is the quickest way to reach me with questions (aside from visiting office hours). I will also be archiving important announncements through blackboard.

If you are having trouble with an assignment or an upcoming exam, please do not suffer in silence. Let me know if you are struggling, either in my office hours or by scheduling an appointment. I'm interested in seeing students succeed and am more than happy to provide extra help.

Grading

If you wish to dispute a grade, you must do so **within one week** of receiving the grade. This is non-negotiable. Your final grade will be determined using the following percentage breakdown:

Activity	**Portion of Final Grade**
Coding Projects (10)	40%
Labs (10)	10%
Mid-Semester Exams (2)	30%
Final Exam	20%

Exams

There will be 2 mid-semster exams given (one covering chapters 1 through 4 and one covering chapters 5 through 8, see schedule) and one cumulative final exam. Each of the mid-semster exams is worth 15% of your final grade, and the final is worth 20%.

Exams will be announced well in advance. Make-up exams are not given except in cases in which a good verifiable reason is provided and I am notified **before** the exam. In the case of a verifiable serious illness or family emergency I also provide make-up exams.

Coding Projects

There will be 10 coding projects assigned throughout the semester. Each of these assignments will account for approximately 4% of your final grade, totalling 40%. Do not wait until the last minute to begin these assignments. Many will take several hours to complete. Projects must adhere to good coding and commenting practices.

Electronic submission of the projects to Blackboard is due by 11:59:59 p.m. on the date it is due (which will usually be 6 days after the day it is assigned), and printed copies of your solution to the assignment are to be handed in the following day in class. Late projects will not be accepted, and will receive a grade of zero (0).

Labs

There will be approximately 10 labs throughout the semester. Lab grades will be assigned based on completion of one or more goals, usually either a 0 (no work done), 1 (code does not quite work), or 2 (code works correctly). Labs will be given during class time as activities, and anything not finished by the end of the designated lab time should be completed by you as homework to be turned in before the next class. All labs should be submitted via Blackboard.

Academic Honesty

Integrity and honesty are extremely important qualities of any academic, future scientist or engineer. That being said, science is a collaborative effort. I encourage students to discuss course material outside of class and form study groups for exams. **However, you must do homework and course projects by yourself. If you need help, I will be happy to help you! You may not get help from anybody other than me on the projects and exams.**

Any violations of this policy will result in a zero (0) for the assignment or exam for the person receiving assistance AND the person giving assistance. The incident will be referred to the chair of the Computer Science Department and the Dean of Science and Engineering. A second violation will result in an automatic failure for the course.

This policy does not replace Merrimack College's Academic Integrity Policy nor does it replace the Computer Science Department's policies (attached to this document). These policies will also be enforced. If you don't know what is acceptable, just ask.

Students with Disabilities

If you need accommodations for a disability, please contact Elaine DiVincenzo, ADA Academic Coordinator, via e-mail at: Elaine.DiVencezo@merrimack.edu or by telephone at (978)837-5140. The ADA Office is located on the 3rd floor of McQuade in the Center for Academic Enrichment. The ADA Office is responsible for coordinating disability related accommodations and will issue Accommodation Letters and Plans to students with documented disabilities.

If you need special accommodations for exams, please do not wait until just before the exam to contact the Office of Disability Services. That way there is sufficient time to arrange the necessary accommodations.

Schedule

Week Of	**Sections**	**Lab**	**Project Assigned**	**Test**
9/3	1.2 – 1.6 (1.1, 1.7 on your own), 2.1 – 2.4	Lab 1	Project 1	–
9/10	2.5 – 2.6, 2.8, 3.1 – 3.4	Lab 2	Project 2	–
9/17	3.5 – 3.7, 3.9, 4.1 – 4.6	Lab 3	Project 3	–
9/24	4.7 – 4.9, Test Review	Lab 4	–	–
10/1	5.1 – 5.3, 5.6 – 5.7	–	–	Test 1
10/8	5.8 – 5.9, 5.11, Columbus Day!!	Lab 5	Project 4	–
10/15	6.1 – 6.7	–	Project 5	–
10/22	7.1 – 7.6, 7.8	Lab 6	Project 6	
10/29	8.1 – 8.3	–	–	–
11/5	8.4 – 8.6, Test Review	Lab 7	–	–
11/12	9.1 – 9.4 (9.5 on your own)	Lab 8	Project 8	Test 2
11/19	9.6 – 9.7, Thanksgiving Break!!!	–	Project 9/10	–
11/26	9.9 – 9.11, 9.13, 12.1 – 12.3	Lab 9	–	–
12/3	12.4 – 12.6, Final Review	Lab 10	–	–

Merrimack College Department of Computer Science
Academic Integrity Policy

The Computer Science Department subscribes to Merrimack College's definition of Academic Misconduct as all forms of cheating, lying and plagiarism; it includes the providing or receiving of assistance in a manner not authorized by the professor in material to be submitted for academic evaluation, or presenting as ones own the words or ideas of another person or persons for academic evaluation without proper acknowledgment. Examples of academic misconduct include copying from another student's exam, using unauthorized information from notes, calculators, phones, or computers during exams, copying all or part of another student's assignments such as code or diagrams and providing one's work to other students for their use. These examples are not exhaustive.

The Computer Science Department considers any instance of academic misconduct to be a serious offense. The penalty for an instance of academic misconduct may include, among other things, a zero for the assignment(s) in question, a failing grade for the course in question, or expulsion from the college. Any of these penalties may be imposed for any single instance of academic misconduct. The severity of the penalty imposed will depend on the severity of the misconduct as judged by the faculty member, department, and dean. Multiple instances of academic misconduct will generally result in increased severity of the penalty imposed. Any instance of academic misconduct will be reported to the department chair and the dean of the division in order that previous instances in other courses, departments and divisions can be identified and considered.

Plagiarism or copying of programs, homework, papers, or other assignments will not be tolerated, whether the copying is from other students or other sources, such as the Internet. Particularly, for programming projects, students should work independently except where collaboration is expressly permitted by the professor. While it is generally permissible for students to discuss assignments, strategies and techniques, they should be careful not to reveal specifics of their own work to others. Directly examining the code of others can easily lead to unacceptable similarities in structure and style. It is generally not permissible for one student to develop an assignment by altering the work of another student or altering work from other sources such as the internet unless expressly permitted by the professor. In general, it is expected that students will submit homework assignments and projects that are their own work.

Allowing another student to examine and/or copy your work constitutes an instance of academic misconduct both by you and by the other student. Thus academic misconduct includes not only taking others' work and submitting it as your own, but also allowing others to use your work or submit your work as their own. Students allowing others to copy their work will be charged with academic misconduct. They are subject to the same penalties listed above and will be reported to the Dean.

Examining and/or copying the work of another without their permission constitutes, in itself, a separate instance of academic misconduct. Thus it is not permissible to examine the work of others which is found either in printed form, as in a lab, or in electronic form, as on a public hard drive. Students who take the work of others in this manner will be charged with academic misconduct. They are subject to the same penalties listed above and will be reported to the Dean.

09/01/04