

C/C++ Programming (CS 1160) Fall 2013

Time and Place: 2 - 3:15 PM Tuesday and Thursday in ITTC 328

Web-site: <http://www.cs.uni.edu/~fienu/cs1160f13/>

Class Email List: Send messages to Google group for the course at CS-1160-01-fall@uni.edu

Instructor: Mark Fienup (fienu@cs.uni.edu)

Office: ITTC 313

Phone: 273-5918 (Home 266-5379)

Office Hours: M 10:00-11:45, 1:10-2:30; T 1:10-2; W 10-11:45, 1:10-2:30; Th 1:10-2; F 9-11:45

Prerequisite: None - no previous programming experience is expected!

Required Text: *Starting Out with C++: From Control Structures through Objects*, Brief Version, 7th edition, by Tony Gaddis. Addison Wesley, 2011. ISBN-13: 978-0-13-277289-1.

Course Goals: The goal of this course is to teach you the skills necessary to design, read, and write simple C and C++ programs. Both the procedural and object-oriented design paradigms will be covered.

Assignments: Assignments will consist mainly of weekly or bi-weekly programming assignments.

Pedagogic Approach: In class, I'll tend to break up the lecture with active (and group) learning exercises to aid learning. While this is not formally graded, part (5%) of your grade will be based on your participation in (and attendance for) these in-class activities. Students benefit by (1) increased depth of understanding, (2) increased comfort and confidence, (3) increased motivation, and (4) being better prepared to work in groups on the job. This might sound great, but it will require you (and me) to work differently to prepare for class. Before the class, you must read the assigned reading, thought about what I asked you to think about, etc.; otherwise you won't be able to effectively participate during class.

Grading policy: There will be three tests (including the final). Tentative test dates and the weighting of course components are:

In-class Work:	5 %
Assignments:	29 %
In-class Test 1:	22 % (about Oct 3)
In-class Test 2:	22 % (about Nov 7)
Final:	22 % (Wednesday, Dec 18 from 1 - 2:50 PM in ITT 328)

Grades will be assigned based on straight percentages off the top student score. If the top student's score is 92%, then the grading scale will be, i.e., 100-82 A, 81.9-72 B, 71.9-62 C, 61.9-52 D, and below 52 F. Plus and minus grades will be assigned for students near cutoff points.

Scholastic Conduct: You are responsible for being familiar with the University's Academic Ethics Policies (<http://www.uni.edu/pres/policies/301.shtml>). Copying from other students is expressly forbidden. Doing so on exams or assignments will be penalized every time it is discovered. The penalty can vary from zero credit for the copied items (first offense) up to a failing grade for the course. If an assignment makes you realize you don't understand the material, ask questions designed to improve your understanding, *not* ones designed to discover how another student solved the assignment. The solutions to assignments should be **individual, original** work unless otherwise specified. Remember: discussing assignments is good. Copying code or test-question answers is cheating.

Any substantive contribution to your assignment solution by another person or taken from a publication (**or the web**) should be properly acknowledged in writing. Failure to do so is plagiarism and will necessitate disciplinary action. In addition to the activities we can all agree are cheating (plagiarism, bringing notes to a closed book exam, etc), assisting or collaborating on cheating is cheating. Cheating can result in failing the course and/or more severe disciplinary actions.

Special Notices:

- In compliance with the University of Northern Iowa policy and equal access laws, I am available to discuss appropriate academic accommodations that may be required for students with disabilities. Requests for academic accommodations are to be made during the first three weeks of the semester, except for unusual circumstances, so arrangements can be made. Students are encouraged to register with Student Disability Services, 103 Student Health Center, to verify their eligibility for appropriate accommodations.
- I encourage you to utilize the Academic Learning Center's free assistance with writing, math, science, reading, and learning strategies. UNI's Academic Learning Center is located in 008 ITTC. Visit the website at <http://www.uni.edu/unialc/> or phone 319-273-2361 for more information.

Tentative Schedule for C/C++ Programming Fall 2013

Lect #	Tuesday		Thursday	
1	8/27	Ch 1: Intro. to Computers and Programming	8/29	Ch 2: Simple C++ program
3	9/3	Ch 3: Expressions and Interactive I/O	9/5	Math and random # functions and file I/O
5	9/10	Ch 4: if-statements	9/12	Local scope and switch-statement
7	9/17	Ch 5: Looping statements	9/19	More practice with loops
9	9/24	break/continue statements; nested loops	9/26	Ch 6: Intro. to functions
11	10/1	Review for Test 1	10/3	Test 1
13	10/8	Functions: pass-by-reference, static variables, default parameters, overloading, and driver programs	10/10	Ch 7: Intro. to arrays
15	10/15	Arrays as parameters	10/17	Parallel arrays and two-dimensional arrays
17	10/22	Grade Book example	10/24	Ch 8: Searching and simple sorts
19	10/29	Ch 9: Bubble sort and intro. to pointers	10/31	More on pointers and arrays
21	11/5	Review for Test 2	11/7	Test 2
23	11/12	"Walking" pointers and dynamically allocated arrays	11/14	Pointers to dynamically allocated arrays and indirect sorting
25	11/19	Ch 10 and 11: C++ strings, structures and enumerated types	11/21	Ch 13: Intro. to classes
Thanksgiving Break				
27	12/3	Classes	12/5	Ch 14: More about classes
29	12/10		12/12	Review for Final Exam
Final: 1 - 2:50 PM Wednesday (December 18) in ITT 328				