

CSC 112 A
Fundamentals of Computer Science
T Th 1:30 - 2:45pm Spring 2007

Instructor

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Course

Text:

C++ How to Program: Fifth Edition, Deitel and Deitel

Grading:

3 Tests	30%
Programming assignments	25%
Homework and quizzes	10%
CS experience	5%
Final exam	30%

Attendance: Regular attendance of class and lab is expected.

Tests, Quizzes, and the Final Exam: Three tests will be administered during class. The tests will cover the material from the assigned readings, lectures, and lab. All tests and exams will be closed book. Make-up tests will be administered only for **University excused absences**.

Homework: Homework will be assigned at least once a week. Homework will always be due before class the following lecture. **No** late homework will be accepted.

Programming Lab: You must register and attend the scheduled lab to receive credit for this course. Lab work and exercises will be done in the programming laboratory using Cygwin, Linux, or the Sun system. Students must bring their **laptop**, text, lab assignment, and any assigned pre-lab to lab.

- Students must earn at **least a 70 lab average to pass** this course.
- Lab starts the week of 1/22
- Lab meets in 17 Manchester
- Assignments have a due date, late work will be **penalized 10 points per day**.

CS Experience: The purpose of the CS Experience is to give you an opportunity to learn about other areas of Computer Science. You have two options: two seminars and two CS biography/reports (reports due by 4/26), or four seminars. To receive credit for a seminar you must attend the seminar and provide a summary (due **one** week after the seminar date). Acceptable seminars include: Math/CS Colloquiums, Brown Bag Lunch Meetings, lectures at other departments **with prior approval**. The subject matter of biographies/reports must have **prior approval**. Seminar summaries must be at least **100 words** long, while reports must be at least **250 words** long. Summaries and reports must be written in plain ASCII text (**not Word**) and emailed to the instructor.

Academic Integrity: All tests, programs, and homework must be done independently by each student. Copying of partial or complete work will not be tolerated and will be referred to the University Judicial System. Do not throw away or recycle any notes until the end of the semester. Should a question of authorship arise you will be expected to produce hand-written and printed documents that trace the development of your work.

Disabilities and special accommodations: If you have a disability that may require an accommodation for taking this course, then please contact the Learning Assistance Center (758-5929) within the first two weeks of the semester.

**Lecture
Schedule**

The following is the tentative lecture schedule for this course. Dates and topics may change during the semester!

Date	Lecture	Text
1/18	Course overview and the Unix operating system	
1/23	Review: variables, control structures, and functions	1, 2
1/25	Review: Scope, recursion, and function overloading	4, 5, 6
1/30	Programming tools: separate compilation, header files, and make	
2/1	Arrays	7
2/6	Sorting, searching and performance evaluation	7
2/8	Pointers	8
2/13	Pointers	8
2/15	Test 1	
2/20	Pointers, dynamic creation, and error checking (last day to drop course 2/21)	8
2/22	Reference variables and C-style parameters	
2/27	Pointers and arrays	8
3/1	C-strings, command line arguments, and array of pointers	8
3/6	structs and advance data types	4
3/8	ADT and classes: design, constructors, and destructor	4, 9
3/20	Classes: member definitions and overloading	10, 11
3/22	Test 2	
3/27	Classes and member definitions	11
3/29	First class objects	11
4/3	Operator overloading, friends	11
4/5	Pointers to classes and classes with pointers	11
4/10	Linked lists	21
4/12	Linked list implementation	21
4/17	Linked list and iterators	21
4/19	Test 3	
4/24	Inheritance	9
4/26	Polymorphism and templates (CSE biographies due)	23
5/1	Virtual functions, abstract classes and cloning	
5/8	Final exam 2:00pm	