

CS240

Programming in C (and UNIX)
Syllabus

Spring 2009

Instructor: Prof. Patrick O'Neil, Dept of CS

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Phone: 617-287-6468 , Dept. Secretary: 617-287-6440, -6441, -6442

Home: 617-354-6460, Wkdays other than Mon/Wed & Wkends 9:30 AM to 10:00 PM

Class Meets: Mon & Wed 5:30 to 6:45 PM, M-1-201

Office Hours: Mon & Wed directly after class, in classroom or (if long) ro my office.
Or by special arrangement

***** PHONE ME ANYTIME FOR ADVICE, ANSWERS, HELP *****

Grader: Paskorn Champrasert, email: paskorn@cs.umb.edu

Prerequisites: CS110 or programming experience and permission of instructor

NOTE ON CANCELLED CLASSES: In the past, there have been occasional mistaken announcements about classes being cancelled, either written on the room blackboard or announced by a student who knows the Instructor to be sick. Often there will be a replacement for an Instructor who must be absent, so you should not leave the classroom until ten minutes past the normal start of class, UNLESS a representative of the Math & CS Department who is known to you tells you that the class is cancelled.

Texts:

- User Guide to UNIX Systems, Handout in class/ on Course Homepage: www.cs.umb.edu/cs240/
- The C Programming Language, 2nd Ed., Kernighan & Ritchie, Prentice Hall
- UNIX for Programmers and Users 2nd Edition, Graham Glass & King Ables, Prentice Hall

Purpose of Course: CS240 is the first course for SERIOUS PROGRAMMERS who intend a CAREER in this area, and many people who did fine in Introductory programming will find it difficult. BE WARNED — if this course does not fit your needs, you may wish to transfer out! Some of the topics covered are the following.

UNIX: UNIX Guide handout, online Guide, and Text by Glass & Ables. Getting around the system: editing, creating directory files, mail, access to other directory files, compilation, assembly, makefiles, script files, gdb debugger, etc. The Guide handout and online guide (find it at <http://www.cs.umb.edu/helproot/>) gives you advice on how to choose from a number of UNIX flavors to find the specific commands that fit the environment at UMB. You are responsible for all the skills you need to create working programs in C.

C: Kernighan and Ritchie Chapters 1-8 and Appendices, several programming projects concentrating on structure and layout of memory, use of GCC, GDB Debugger, attention to CPU performance measurements.

Basic concepts — Words, bytes, ASCII code, two's complement arithmetic, number base conversion, etc.

(see other side)

Students With Disabilities. Section 504 of the Americans with Disabilities Act of 1990 offers guidelines for curriculum modifications and adaptations for students with documented disabilities. If applicable, students may obtain adaptation recommendations from the Ross Center for Disability Services, M-1-401, (617-287-7430). The student must present these recommendations and discuss them with each professor within a reasonable period, preferably by the end of Drop/Add period.

Grading: Breakdown of grades (total of 150 points)

-> Three twenty-minute quizzes in class, drop lowest one: 30 points

These quizzes will be on the homework or reading, at the beginning of the class period, and will be announced one class in advance. If you miss the quiz, you get a zero, but one grade is dropped.

-> Homework (Program Projects): 10 points

Program Projects: You will receive several projects to program in the C language, usually with more than a week lead-time (you might need all of this time). I think of the homework as a big help in learning the needed material, and I GUARANTEE there will be many Quiz and Exam questions that you will ONLY be able to answer by doing the homework. I also **WARN YOU** that I tell my grader to **GRADE EASY** on homework, so **THERE ARE A LOT OF HIGH GRADES: DON'T DEPEND ON HOMEWORK GRADES TO PULL UP YOUR AVERAGE! YOU MUST DO WELL ON QUIZZES AND EXAMS, ESPECIALLY EXAMS WHICH COUNT FOR THE MOST POINTS!**

-> Three Exams, drop lowest one: 110 points; There will be a Make-Up for Exam 1.

There will be three exams counting equally, of which the lowest one will be dropped, for a total of 110 points (73% of the final grade). The third exam will be given during final exam period, but will count the same as the others, so you can skip the final if you're happy with your average.

Exams and Quizzes will allow open book and open notes, but this will not save you if you have missed work. You cannot learn the course during the Exams and Quizzes!

Missing an Exam: If you miss the first exam, or feel you didn't do as well as you should have (up to a grade of A-), I will provide a make-up exam, intended to be somewhat more difficult (but you will have had a few more classes, so that's fair). If you miss a later exam, that will be an exam grade dropped. I basically want to make sure that going into the WITHDRAWAL period, nobody stays in because they think they simply had bad luck on the first exam.

Incomplete: If you miss a second Exam, you will receive an F unless you are in good standing on previous Quizzes and Exams and you have at least a "C-". If you miss the third Exam and have a C or better average, I will examine you to make sure you can pass an exam on the final material. It is your responsibility to contact me about absence. The only alternative to receiving a low grade after failing to withdraw by the withdrawal date is a solid documented medical or life crisis to receive an "Incomplete", and for that you must have a passing grade at the time and must contact me in a timely manner. This is school policy, and cannot be changed by me.

NOTE WITHDRAWAL DATE: The University requires that you withdraw from the course by Thursday, **April 9, 2009** or receive a letter grade. I will see that Exam 1 and the Make-up for Exam 1 are graded in time for you to make a decision by that date. Note that students who are warned to withdraw and do not should not expect to receive a later INCOMPLETE in the class.