CS106B — Course Information

Welcome!

On behalf of the entire staff, I'd like to welcome to you to CS106B. Many of you are continuing from A in the winter and we're so pleased that one quarter wasn't enough to satisfy your curiosity. The material in the second course is even more interesting and inspiring and I'm excited to be able to share it with you. The assignments do get more complex and time-consuming as we move onward, but we still have our excellent section leaders and lots of LaIR coverage to help you through. I hope you will find the time worth your investment and enjoy your growing mastery of the art of programming!

Lecturer:	Julie Zelenski
Email:	**zelenski@cs.stanford.edu**
Office:	Gates 192 (first floor, B wing), phone 725-8596
Hours:	W 3:30-5pm. It's also always okay to drop by my office anytime and see if I'm around. If I'm swamped, I'll say so.
	F 3:30-5pm I'll hold "Co Ho hangout hours"— informal conversation while sipping sophisticated and tasty caffeinated beverages.

Head TA:	Yves-Antoine Lu
Email:	**yal@leland.stanford.edu**
Office:	Gates 193A (first floor, B wing), phone 723-6059
Hours:	MWF 1-2 pm

Lectures: MWF 2:15 - 3:05 pm
TCseq 201

Sections: You must sign up for a weekly 50-minute section to confirm your enrollment in this class. Section signups will be available from Thursday, March 30, at 5:00 P.M. until Sunday, April 2, at 5:00 P.M. The signup form is on the web at the **http://cs198.stanford.edu/section/**. Sections begin next week. Note that the section times listed in the Time Schedule are preliminary and are subject to change. The definitive section times are those that appear on the web-based signup form. When you sign up for CS106 via Axess, just use 1 as the section number, since that is effectively meaningless.

Pre-reqs: The prerequisite for taking CS106B is CS106A, as it is taught at Stanford. If you have taken an introductory programming course elsewhere, you should almost certainly take CS106X instead. The CS106A and B courses form a logical sequence, and it is hard to jump in midstream. The second course relies heavily on the first, not only for programming concepts, but also for several tools and techniques that are specific to Stanford's approach. CS106X, which meets at 11am MWF in Gates B-03, combines the material from CS106A and CS106B into a single course that gets you to the same eventual destination without assuming anything about your background.

Units: CS106B is offered for 3 to 5 units. Undergraduates must take the course for 5 units of credit. Graduate students may enroll for 3 units to squeeze into a limited tuition allowance, however this is solely a bookkeeping change and has no effect on the course requirements.

Textbook: There is one required text for this class, *Programming Abstractions in C,* authored by Eric Roberts and published by Addison-Wesley.

Handouts: Any course handouts will be distributed at the beginning of lectures and leftover paper copies will be put in the bins in the entryway to the Gates B-wing. If you miss class and don't get to the bins before all leftovers are gone, you can always print your own copy from the web site.

E-mail: We ask that you have an e-mail account that you check regularly. Please add your address to our class mailing list. Every now and then we may have time-critical information to share that can't wait until the next class meeting, in which case we will send e-mail to the class list. To sign up, send e-mail to `majordomo@lists` and include the following text in the **body** of the message (the subject of the mail is ignored):

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subscribe cs106b
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If all goes well, you'll receive mail confirming your addition. Please note that only staff members are to post messages to the list. If you need help or have questions, the right place to send e-mail is to your section leader or Julie or Yves. Please plan on keeping up with your e-mail so that you don't miss any important announcements.

Web site: Thanks to our trusty TA Yves, we have a keen one-stop-shopping web site at **http://www.stanford.edu/class/cs106b/**. Using any Web browser, you can grab copies of handouts (published in Adobe PDF), check out the latest syllabus, and get general course information. The site includes a "Policies and Procedures" section which gives details on things as how the lateness is handled, specific examples of acceptable and unacceptable collaboration, and so on. Please make an effort to review these important policies so you understand the course administration. You should also check the web page periodically for course announcements. Visit our site and tell us what you think!

Exams: The midterm and final will be in-class, open-book/open-note examinations. The midterm will be held in an extended class period on Friday, April 28. An alternate time will be provided for students who have conflicts, more on that as the date approaches.

The final will be Tuesday June 6, 12:15 - 3:15 pm. All students are expected to take the final at the official time, there will be no alternate exam given, so please make your travel plans accordingly.

Programs: There will be seven or so assignments, mostly programs, with one or two written problem sets. The accompanying syllabus gives you the preliminary assignment schedule. (Note this schedule is by no means set in stone, do expect adjustments as we go.) The only way to learn programming is to work at it, so expect to spend lots of time on your assignments. Your programs will be graded interactively in a one-on-one session with your section leader. Your section leader will explain in the first section how to schedule such grading sessions.

Software: The official CS106 programming environment is Metrowerks Code Warrior Professional Release 5 on the Macintosh. There are a variety of public library and dorm Macintosh clusters on campus that have this compiler available. We will make a very strong effort to also support Visual C++ version 6.0 on the PC platform. We hope that managing both platforms will go smoothly, but, if supporting multiple versions gets to be a problem, we may fall back to requiring CW Pro 5 on the Mac.

Late policy: Assignments are due at the beginning of class on the day specified. The cumulative nature of the assignments makes it difficult for students to catch up once they have fallen behind, therefore, late assignments are very much discouraged.

That said, there are unforeseen emergencies (illness, bike accidents, disk crashes, network troubles, etc.) that cannot always be planned for in advance. Instead of having to ask for special allowances on an individual basis, we give each of you the privilege of granting yourself a small extension in case of crisis. You have two "late days" which you may use to extend the due dates of any assignments without penalty. To avoid any ambiguity, a "day" is defined as a class day. Thus, if your assignment was due on Friday but turned in the following Monday, that assignment would be one day late. In all cases, assignments **will not be accepted** more than one calendar week after the original assignment due date.

Although late days are not intended to cover poor planning or procrastination, we won't ask for justification and will assume you will use your self-granted extensions fairly and wisely. Late days are valuable, and it pays to keep some around for the harder assignments toward the end of the quarter.

Further extensions are not even considered until you have exhausted your own supply for legitimate needs. They are rarely granted and then only for extraordinary circumstances (such as extended medical problems or other emergencies). In such a situation, send e-mail to Yves Lu no later than 24 hours before the program is due. Only Yves is authorized to approve extensions. In particular, do not ask your section leader.

Grading: This class is offered with either letter grade or CR/NC grading option. Course grades will be determined using the following weights:

50%   Programs and problem sets
20%   Midterm
30%   Final

To receive a passing grade, you must complete satisfactory work for **both** the assignments and the exams.

In addition to the regular assignment grades, section leaders will keep track of your discussion section attendance and participation. This score will be used to determine borderline grades.

Syllabus: A rough outline to give you an idea of what is planned—expect adjustments as we go. Reading should be done in advance of the lectures for maximum benefit. There will be about seven assignments, almost one a week, and you will generally be given a week or so to do each.

Week	Topics	Reading	Due that week
1	Administration, pointer and dynamic memory review		
2	Functional and procedural recursion, recursive backtracking	4, 5, 6.1	Assign 1: Recursion
3	Game strategy, recursive sorting, analysis of algorithms	6.2, 7	Assign 2: Backtracking
4	Abstract data types, editor buffer, interface/implementation	8, 9	Assign 3: ADTs
5	Stacks, queues, polymorphism	10	**Midterm** Fri Apr 28th 2:15-4:15pm
6	Symbol tables, hashing, binary trees	11.1-11.2, 13	Assign 4: Modular construction
7	Functions as data, mapping, iterators, expression trees	11.3-11.7, 14.1-14.3	Assign 5: Stacks & Queues
8	Parsing, sets, heaps	14.4 -14.5, 15	Assign 6: Parsing
9	Graphs	16	
10	Wrap		Assign 7: Graphs
11			**Final** Tue June 6th 12:15 -3 15 pm