CS 106A – General Information and Syllabus

Instructors

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Class Web Page

The web page for the class is: **`http://cs106a.stanford.edu`**. All course announcement and materials (lecture slides, handouts, assignments, etc.) will be posted to the website so make sure to check it regularly!

Course Overview

This course serves as an introduction to the fundamental techniques, programming constructs, and design strategies that form the basis of modern software. You will learn a new approach towards problem solving from a computational perspective and gain an understanding of how programming is applied across many domains. Specifically, at the end of the course, you should feel comfortable writing programs that interact with the user, manipulate graphical objects on the screen, and process and manipulate data.

Lectures and Discussion Sections

There will be four 50-minute lectures every Monday through Thursday, from 11:30am - 12:20pm in NVIDIA Auditorium. You will also attend a mandatory 50-minute discussion section each week led by one of our awesome section leaders. Section signups are handled online at **`http://cs198.stanford.edu/`**. Section signups will open on the first day of class (June 20th) and close at noon the next day (June 21st). We will send you an email with your section assignment by the evening of June 21st. Sections will begin the first week of class.

Text and Handouts

There are two textbooks for the course, both of which are available at the Stanford Bookstore. The main textbook is also available at the university library. Recommended

readings for each lecture will be posted on the lecture calendar. We will also post additional handouts and reference materials on the course website.

1) *The Art & Science of Java*. Eric Roberts (ISBN: 978-0321486127).
   This is the main textbook for the class. Starting in the second week, most of the readings will be assigned from this book. We definitely recommend having a copy for both the assignments and exams.
2) *Karel the Robot Learns Java.* Eric Roberts.
   This is a short (35-page) tutorial that introduces major concepts in programming through Karel the Robot. We will use the course reader for the first week of the course, and it will be useful for your first assignment. The reader is available electronically on the course website and in hardcopy from the Stanford Bookstore.

Note: Our exams are open-book, but you will ***not*** be able to use any digital materials (e.g. PDF version of the course reader) on the exam.

Assignments

There will be 6 programming assignments throughout the quarter, roughly one for each major topic we will cover. Assignments will require more time as the quarter progresses, so later assignments will be weighted higher (see section below regarding grading). With the exception of the last assignment, you will receive feedback on each assignment during an interactive, one-on-one session with your section leader, who will provide a rating on the following scale for both functionality and programming style:

++ *Plus-Plus:* An absolutely mind-blowing solution, the likes of which we see only a few times each quarter. If a section leader thinks an assignment is worthy of this rating, they will pass it along to the instructors for approval.

\+ *Plus:* A "perfect" submission or one that exceeds expectations for the assignment. To receive this rating, a submission often reflects additional work beyond the stated requirements, or gets the job done in a particularly elegant way.

✓+ *Check-Plus:* A submission that satisfies all the requirements for the assignment, showing solid functionality as well as style.

✓ *Check:* A submission that satisfied all the requirements for the assignment, possibly with a few small problems.

✓– *Check-Minus:* A submission that has problems serious enough to fall short of the requirements for the assignment.

– *Minus:* A submission that has extremely serious problems, but demonstrates some effort and understanding of the concepts.

−− *Minus-Minus:* A submission that shows little effort and does not represent passing work.

From previous quarters we expect most grades to be in the ✓ or ✓+ range. We have also found that using buckets for scores allows your section leader to spend more time talking about what you need to learn from the assignment without worrying about justifying each point.

After each assignment, your section leader will send out a sign-up form for an interactive grading session. We will explain the interactive grading process in more detail during the first lecture.

Assignments must be completed individually, though you are allowed to discuss high-level ideas with each other. Whenever you obtain help, you should credit those who helped you directly in the program (i.e. by adding a comment to the .java file). See the section on the Honor Code below.

Late Policy

Each assignment will be due at **5:00pm** on the day it is due, as specified on the assignment handout as well as the class calendar. Assignments must be submitted electronically as described on the course website. If you are having technical difficulties with the submission process, email your submission to your section leader **before** the deadline for the assignment.

We understand that things come up and you may need a little extra time to complete an assignment, so every student will be granted **three free "late days"** to be used during the quarter. Each late day allows you to turn in an assignment up to 24 hours late without any penalty. You can use late days individually, or combine two for a 48-hour extension on a single assignment. You may use your late days on any assignment and do not need to request permission (though it may be a good idea to email your section leader so they know that they should expect a late submission). After you have exhausted your three free late days, assignments turned in late will receive a penalty of one grade bucket per day (for example, a ✓+ will turn into a ✓, and so on). **Since this is a compressed quarter, assignments received later than 48 hours following the due date will not be graded**. This also means that you can't use all 3 free late days on the same assignment.

You can think about "late days" as pre-approved extensions to use at your discretion. As a result, getting an extension beyond the three free late days will generally not be

approved. Exceptions are made for very special circumstances, primarily extended medical problems or emergencies. **Extensions beyond the free late days can only be granted by the instructors (specifically, do not ask your section leader about extensions). To request an extension after exhausting your free late days, you must email the instructors at least 24 hours before the assignment deadline.**

LaIR Helper Hours

For most of you, this is your very first experience with computer programming. As a result, we provide extensive support and assistance throughout the quarter. Section leaders are available from 7-11pm from Sunday through Wednesday evenings in the basement of the Gates Computer Science building (room B08) to help with assignments or review course material. The latest schedule for helper hours can be found at **`http://cs198.stanford.edu`** under the "Helper Schedule" link.

Computer Facilities

The assignments in 106A will require extensive use of a computer. The preferred software is the Eclipse development environment that runs on both Mac OSX and Windows. Instructions for downloading and installing Eclipse are available on the course website. Eclipse should also be installed on all cluster and library computers across campus.

Exams

This course will have two written exams. The exams are **open-book but closed-notes**. This means that you may bring physical copies of both course texts to the exam. However, you may not use any additional typed or handwritten notes, including anything that was posted on the course website. Additionally, electronic devices are not allowed.

The midterm exam will take place **from 7pm – 9pm on Monday, July 18th (location TBD).** If you absolutely cannot make the regularly scheduled midterm, you must send a request via email to the instructors by 5:00pm on Monday, July 10th for an alternate exam time. Please include in your email all the possible times that you're available to take the exam from Monday, July 18th to Wednesday, July 20th.

The final exam is scheduled for 12:15pm to 3:15pm on August 12th (location TBD). Since this time is set by the University Registrar, **there will be no alternate time for the final exam (SCPD students see below)**. Please make sure that you can attend the final exam before enrolling in the course.

SCPD students can choose to take the exams on campus during the scheduled time or make arrangements through the SCPD office to take them remotely. In the latter case, exams should be sent back through the SCPD office by end of day PST on August 12th.

Grading

Your overall course grade will be calculated as a weighted average of the following categories:

50%	programming assignment (weighted toward the later assignments)
30%	final exam
15%	midterm exam
5%	section attendance and participation

Honor Code

Although you are allowed (and encouraged) to discuss high-level assignment ideas with other students, you should write your programs individually. Discussing assignments in such detail that another student could duplicate your code is not permitted. As mentioned earlier, when you receive help from other sources, you must credit them directly in the code by adding comments. **Any assistance used without proper citation may be considered plagiarism.**

Additionally, you are not allowed to copy code or code snippets from any sources. The only exceptions to this are the course textbook, handouts, and lecture examples, which you should cite when used. It is also a violation of the Honor Code to look at another student's code (including students from previous quarters) or show another student your code.

You may not upload your code to a public repository (such as github.com or bitbucket.com) or any other website where it can be publicly discovered. Posting code where it can be publicly discovered can be considered a violation of the Honor Code. If you would like to upload your code to a **private** repository, you may do so.

The full text of the Stanford Honor Code can be found at:
`https://communitystandards.stanford.edu`

Office of Accessible Education

Students who need an academic accommodation based on the impact of a disability must initiate the request with the Student Disability Resource Center (SDRC) located within the Office of Accessible Education (OAE). SDRC staff will evaluate the request with required documentation, recommend reasonable accommodations, and prepare an Accommodation Letter for faculty dated in the current quarter in which the request is being made. Students should contact the SDRC as soon as possible since timely notice is needed to coordinate accommodations. The OAE is located at 563 Salvatierra Walk, and their phone number is 650-723-1066.