

CS56, Spring 2011, Syllabus

Basic Facts

Instructor	Phill Conrad	Lecture	TR 12:30-1:45pm, Phelps 2516
TA	Kyle Klein	Lab (discussion section)	W 6:30-7:20pm or 7:30-8:20pm
Grader	Julian Claudino		
Web Site	http://www.cs.ucsb.edu/~pconrad/cs56	Wiki	http://foo.cs.ucsb.edu/56wiki

About the Course

- Our goal is to learn Java---but not just to learn Java for the sake of learning Java. After all, some of you already "know Java", at some level.
- Our bigger goals are:
 - to practice using big APIs to get stuff done--a very relevant real world job skill!
 - to learn how to learn a new language or technology--something you'll do a lot in your career
 - to learn about a few specific topics: the JVM, threads, Swing GUIs, etc..
 - to learn some professional-level, real-world programming practices.

The way I'm planning to teach the course is a bit different from what you may have experienced before--I'm trying to create a learning environment that *mirrors how real world software is developed* more than is the case is traditionally structured courses.

So, the emphasis will be on:

- open source, and sharing code, not keeping code secret
- collaboration
- writing code, that, where possible is actually useful and usable.

Note that "sharing code" doesn't mean "stealing code". We still don't take credit for other people's work---academic honesty still applies. It just 'looks different' in this course.

The official course description is here:

<p>CMPS 56. Advanced Applications Programming (4) STAFF <i>Prerequisite: Computer Science 24</i> Not open for credit to students who have completed Computer Science 20. Students are encouraged to complete Computer Science 32 prior to enrolling in Computer Science 56.</p> <p>Advanced application programming using a high-level, virtual-machine-based language. Topics include generic programming, exception handling, programming language implementation; automatic memory management, and application development, management, and maintenance tools; event handling, concurrency and threading, and advanced library use.</p>
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Grading: we'll still have three exams--two midterms and a final. That part of the course will be traditional. Those count 20% of your grade each.

And, there will be some traditional lab and homework assignments (and perhaps quizzes) where "everybody in the class does roughly the same thing" ---those make up another 20% of your grade.

But the remaining part of your grade--the last 20%--is determined by something I call "choice points". These deserve a whole separate section of explanation (see below.)

Choice points: you choose which assignments to do

There will be a large variety of assignments that you can do to earn choice points. To earn a "perfect score" (100%) for this 20% component of your grade, you need to earn 1000 choice points. If you only earn 800, then an 80% will be recorded for that 20% of your grade.

Some choice points are worth more points, and some worth fewer.

Most choice points assignments can be found in [56mantis] the bug tracking system we are using in this course.

You can also earn choice points by making helpful edits on the wiki--e.g. posting lecture summaries, links to useful resources, or making typo corrections.

Other opportunities include volunteering to make presentations on various technical topics, or doing book reports on books related to Java (approved in advance by the instructor.)

Finally, participation in lecture may sometimes be rewarded with choice points.

Choice points are NOT extra credit--but if you accumulate more than 1000, up to three hundred choice points may be used to raise your final average in the class up to 2 points. (The points will be recorded as extra credit). (Each point raises your final course average by 0.01%)

You may not earn more than 1200 total choice points--any points in excess of 1200 will not count towards your grade (though you'll probably learn a lot from having undertaken the work to earn them.)

Choice Point Deadlines

- You may earn up to 1200 choice points over the course of the quarter
- Choice Points 1 for 300 points has a due date of Friday 5pm during the week of the 1st midterm (04/22)
- Choice Points 2 for 300 points has a due date of Friday 5pm during the week of the 2nd midterm (05/20)
- Choice Points 3 for 300 points, Choice Points 4 for 100, and Choice Points 5 for 200 (extra credit) each have a due date of 5pm Friday on the last day of instruction.

How to interpret these "due dates":

- Unless told otherwise in the instructions for a particular choice points assignment, you may complete any choice point assignment at any time.
- However, the points have to be "recorded" somewhere to count towards your grade.
- Before 04/22 5pm, you have the possibility to earn up to 1200 choice points.
- After 04/22 5pm, if you haven't yet completed/submitted any choice points work, the maximum number you can earn is now 900.
- After 05/20 5pm, if you haven't yet completed/submitted any choice points work, the maximum number you can earn is now 600.
- You may "work ahead"---that is, if you earn 500 points for your first assignment, we'll count 300 towards Choice Points 1, and the remaining 200 towards Choice Points 2.
- However, once a deadline has passed, only choice points earned before that deadline may be applied to that assignment.

Final Course Grades

Regardless of any other policies spelled out here, the average used to determine your final letter grade may be no higher

- 10 points higher than your exam average (if you have no extra credit choice points)
- 10.01-12.00 points higher than your exam average (each extra credit choice point earned allows you to go 0.01 above your exam average, up to a maximum of 12.00).

Thus,

- reasonably good performance on exams is very important to earning a good final grade in the course.
- an A or B should not be out of reach for anyone that has a reasonably good mastery of course concepts (enough to earn a B or C on the exams), and puts in hard work on the labs and choice point projects.

To convert final averages to letter grades, a standard 10 point scale will be used with, (except for A+ grades), the upper 3% and lowest 3% of each 10 point range representing the + and - grades. (For example, 93-100 is an A, 90-93 is an A-, 87-90 is a B+, etc.) Because of the generous extra credit policy, "rounding up" for students close to a border line is unlikely and not by any means guaranteed. If you want your grade to be "rounded up", earn it by doing the extra credit work, rather than begging for it. That helps both of us preserve our dignity.

A+ grades: These may be awarded to the very best performing students in the class—but the cutoff for A+ grades will be determined at the end of the course at the discretion of the instructor (there is no pre-determined cutoff---an average of 97 or more doesn't guarantee you an A+ grade.)

200 choice points for participation in a Research Study

The instructor is participating in a study funded by the National Science Foundation to evaluate certain techniques in Computer Science Education.

Part of that study involves comparing the learning of students in one section of CS56 with the learning of students from another section of CS56.

Federal law and UC policy require "informed consent" whenever a person is invited to participate as a subject in a research study.

- You have the right to choose to participate, or NOT participate in the research study, and
- If you do participate, I am required by the protocol of this study to provide you with an incentive in the form of extra credit.
- If you do not participate, I am required by the protocol to give you another opportunity to earn the same extra credit.

The "extra work" required to participate is minimal:

- there are a few opinion surveys you will be asked to fill out at the beginning of the quarter, and at the end of the quarter
- most of the other elements of participation involve doing work that will be required of all students (as part of the course) whether they participate in the study or not.

If you participate in the study, your confidentiality will be protected. You will be assigned a participant number, and during the course, only one person not connected with the course (NOT the instructor or TA) will have access to the key that connects your real name to that number. All survey responses will be made anonymously using that number. All data about the study that is kept outside UCSB will be recorded using only that number--no information that identifies you as an individual will be shared. Furthermore, raw study data is kept on a secure server and is not released to the public.

All data reported outside UCSB (e.g. grades on assignments and exams) will reported only using the confidential participant number. Data that could identify an individual will NEVER be released to the public. For grades, only aggregate data and statistics—for example, min, max, average, std. deviation, median, and similar statistical measurements—will be released.

Your decision to participate or not will NOT be shared with the instructor or TA until all other course grades have been determined. That information, along with the key that connects your "id" to your real identity will be kept by a third party until just before final grades are reported to the registrar. Only at that point will the extra credit for participation be added to your grade.

More information about this study will be shared with you on Thursday, March 31st in class, and you'll have an opportunity to ask questions. Between then and Tuesday April 5th, you will have the opportunity to ask further questions by email, or during scheduled office hours.

On Tuesday April 5th, in class, you'll be given the opportunity to choose to participate, or not participate in the study.

You also will have the right to withdraw from the study at any time up until the last day of class (you'll be given information about whom to contact if you wish to withdraw.)

Other Policies

Attendance

This course moves quickly. So attendance is very important.

We'll be trying to master the material from about 14 chapters in the book, at about 2 chapters per week. We need to go at that pace, because we'll lose a couple of weeks to exams, and the last few lectures the quarter, you can't really start anything new, because there isn't time to put it into practice with programming assignments. If you don't put it into practice, you aren't very likely to learn it in any way that is going to stick with you, so there isn't much point in just "going through the motions".

As a result, there will be something you have to turn in at almost every class. In this way, attendance is taken, and required.

These things you have to turn in will be a combination of in-class activities, and homework completed outside of class, but handed in on paper during class.

Quizzes may occur at anytime, announced or unannounced. Missed quizzes may not be made up, except per the "personal day/sick day" below—if you miss a quiz for any reason, and have already used your personal day/sick day, you will have to make up the points with extra credit.

Thus attendance is required, and reading the assigned readings is required.

Missing in-class activities—and the Sick Day/Personal Day

If you miss a class, you miss the opportunity for the points on that in-class assignment, or homework that was due. Period.

There is no makeup, except for

- excused absences arranged and agreed to by the instructor in advance, for official UCSB activities
- one "sick-day/personal day" per student, per quarter.

To make up an assignment from a "sick-day/personal-day", you must email me within 48 hours of the absence, to make an appointment to make up the assignment during the next scheduled office hours following your absence (or at an appointment time to be negotiated, if you have a conflict with those hours.) This make up must happen within one week of the absence, or 24 hours before the final exam, which ever is earlier.

- If its a homework (rather than a quiz) **complete the assignment before you come to office hours** for your make up.
- You must come during **office hours** (or an appointment) and **stay while it is graded**, and see that the grade recorded in by the instructor or TA Gauchospace (or the equivalent) before you leave.
- **You may not just "drop it off", or give it to me or the TA during lecture, or lab, or turn it in with another assignment.**
 - Why? Because of the administrative burden that having "extra bits of random grading" floating around represents.
 - We can offer this makeup opportunity only because **you** are accepting the responsibility to make sure that the grade gets recorded.

In rare cases, if there is a documented family emergency, documented extended illness, documented required court appearance, or other situation beyond the students' control (with documentation) the instructor may grant additional make up days entirely at the instructor's discretion—but this is not a guarantee or a right.

Accommodations for disabilities

Information about how UCSB supports students with disabilities is available at the campus ADA website: <http://www.ada.ucsb.edu>. If you require any special accommodations due to disabilities, please let me know as soon as possible. You may contact me by email to request an appointment: .

Standard Disclaimer

This syllabus is as accurate as possible, but is subject to change at the instructor's discretion, within the bounds of UC policy.

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