Computer Science 10
The Beauty and Joy of Computing

Syllabus: Course Information and Policies
cs10.org
Spring 2020

1. Course Description

Computing is one of the biggest forces of innovation and societal transformation of today. It has opened up wonderful new ways for people to connect, design, research, play, create, and express themselves. Knowing the fundamentals of computing allows a person to understand and relate to the why's and how's of this transformation. Computing is more than just computer literacy, but is about the empowering experience that comes when one learns how to solve problems like a computer scientist.
CS10, The Beauty and Joy of Computing, provides a bird's-eye view on the field of computer science and introduces fundamental concepts using the visual programming language Snap and the industry-standard programming language Python.
We aim to get students excited about computing by showing them the breadth of the field together with the societal transformations and challenges that come along with the technical knowledge. Passing the course gives students a strong enough background to continue on to the CS61 series. There are no prerequisites to taking CS10.

2. Teaching Staff

The teaching staff for CS10 are listed on the website. If you need to contact a TA, the best way to do so is by posting a private note on Piazza (mentioned below). However, you can email any of the TAs; you can find their emails on the website under the Staff section. For logistic related questions, please email the Head TAs at **cs10@berkeley.edu.**

3. Programming Language(s)

Snap is an entirely browser-based blocks language supported on Chrome, Firefox, and Safari. Later in the semester, we will use Python 3.

4. Course Materials

There are no textbooks or materials that you need to purchase for this class because we provide them all for you. All lecture slides and reading assignments are posted on our course website.

5. Course Websites and Computer Resources

A. Course Websites

cs10.org

This is our main course website! You will find the class calendar, assignments, lecture slides, lab exercises, and office hours posted on our main course website. Everything you need for CS10, including this handy document, is linked to from this page.

www.piazza.com

We automatically enroll everyone on Piazza, however if you join the class late, you need to add yourself. ENROLL HERE. Piazza is a forum for you to discuss with your fellow classmates things that you have questions about. It is also our main method of communication for us as instructors to inform you of any updates and reminders in the class.

www.bcourses.berkeley.edu

You are automatically enrolled in the CS10 course on bCourses. If you are not enrolled, please email the head TA. Grades on reading quizzes, homework, and project assignments will be displayed on the class site on bCourses.

www.gradescope.com

The results of your exams will be displayed on Gradescope. Only exam scores will be displayed here. Clobbered scores will not be displayed here. Regrade request for exams and assignments should be submitted through Gradescope. If you are not already on Gradescope, you can add the course with this code: **9J8P23.**

B. Computer Accounts

You will need a CS10 "class account" to use the lab computer. To get a class account go to this link and log-in with your CalNet ID.
Even if you plan to use your personal computer for the course projects, you must still get a class account whether you think you'll use it or not. Class accounts are required for completing the in-lab Snap midterm and final. You can return to the page linked above for forgotten login names or passwords. **Please note that we cannot recover your account username or password for you.**

C. Computer Labs

The computing laboratory for CS10 is located in 200 Sutardja Dai, although CS10 computer accounts can also be used to log in to the computers in any EECS computer lab in Soda and Cory Hall. The labs are normally available for use at all times (24 hours, 7 days a week), but you need your Cal Student ID Card for evening access to the lab (swipe your Cal ID Card against the card readers by the door of the lab or building in which you are trying to enter). Other classes also use the labs so please be respectful is there are no seats available during a time that is not your designated section.

6. Class Breakdown

A. Lecture

Lecture is one hour each week on Monday and Friday. Lectures cover material that will provide the conceptual basis for lab work. Professor Dan Garcia is the lecturer, and throughout the course of the semester, there will be several guest speakers in fields that are relevant to the topics covered in the class.

B. Lab

There are two 2-hour lab sessions each week in the Apple Orchard (200 Sutardja Dai Hall) where you will work with a partner on self-paced lab exercises. There will be one Teaching Assistant and several lab assistants to answer any questions you may have. Please attend the lab section that you are registered for.
Weekly reading quizzes (see below) are generally given during the beginning of the first lab of each week. Some weeks are different, but we will notify the class via Piazza if this is the case.
In order to submit a lab, you must get "checked-off" by your Teaching Assistant or by the designated lab assistants. See the Grading and Test section for more details.

C. Discussion

Discussion sections are one hour every Monday. These sections review material from lecture and lab and have extra practice problems.

D. Office Hours

The instructor and Teaching Assistants each hold at least one office hour every other week. Their office hour times are listed on the course website under the **"Weekly Schedule" section**. Any changes to office hour times will be listed on the course website and often be announced on Piazza. The weekly schedule is "live" meaning that you can page through each week to see if there are any changes in scheduling.

7. Assignments and Activities

Each week there will be problems assigned for you to work on, most of which will involve writing and debugging programs. Throughout the course you will also (concurrently) work on longer projects and homework assignments, as well as take a couple exams. There is often a lot going on, so please be sure ask questions and double check the course calendar!
A *typical* week will have one reading quiz, two lab check-offs, and one longer assignment due. (Some weeks there won't be all or any of these due.)

- **Lab work** is designed to be completed during your lab sections, but can be worked on at any time. You are highly highly encouraged to complete lab work with a partner! Some labs are long, but your lab work is not directly graded; however, it is often very useful to save problems for reference when working on projects or preparing for exams. We have oral **lab check offs** which are short questions that assess your progress and review material. Completion of the corresponding lab check off will count as a submission for the lab.

- **Reading Quizzes** are given out almost every single week in the first lab of the week. There are a few exceptions to this where they are given out in the second lab of the

week and will be noted on the course website's calendar. Reading Quizzes will test your understanding of the readings due that week.

- **Homework** assignments have varying degrees of complexity, meant to illustrate and explore topics you've been learning. The due dates and specifications for each homework are available on the website under the "Homework" column of the calendar. There will be a total of 3 homeworks. You are encouraged to discuss the homework with other students, but your work must be your own. We will also have some assignments which may be completed with a partner.

- **Projects** are larger assignments that you design intended to teach you how to combine ideas from the course in interesting ways. In each of these projects you (and your partner) will design the problem you are trying to solve, with feedback from your TA. There will be two projects. Projects are your chance to build something you want to! You are encouraged to complete projects in pairs; your partner can be another student in your section or in a different section.

- **Exams** are given out three times during the semester - the Quest, the Midterm, and the Final exam. The exams will test your knowledge of the course material. The Midterm and Final Exam consist of an online portion and a paper portion; the Quest only has a paper portion. The online portion will be completed during lab section, whereas the paper portion will be completed in either lecture or a specified time in the evening. The times and locations and the exams will be noted on the course website's calendar.

- **Online "With-Computer" Exams** are given as part of the Midterm and Final exams. They test your ability to code on lab computers. You will be given a series of questions and are expected to complete them in your lab section.

8. Grading and Tests

Your course grade is computed using a point system with a total of 500 points. The grade scale, as well as the breakdown of points per assignment can be found on the front page. You can check on your progress in CS10 through bCourses. Assignments and grades will be regularly updated.
If you ever have concerns about your grade or performance speak with your TA immediately!

A. Weekly Reading Quizzes

Reading quizzes must be taken during the lab section that you are enrolled in via Signup Genius. The readings on the reading quizzes are displayed on the weekly calendar on the course website.
The reading links are labeled as required (that will be tested) and optional (for your own exploration of the topic).
There are 12 reading quizzes, each worth 2 points. Only 10 reading quizzes count toward your grade. This means that we will automatically drop the two lowest reading quiz scores.
Reading quizzes will be open-note. There is no page limit on your notes, but they must be handwritten.
Reading Quiz Make-Up Policy: If you know you're going to miss a reading quiz due to an excused absence, notify your TA as soon as you know so you that you can arrange a time to make it up. You **will not** be permitted to make-up a reading quiz for unexcused absences.

B. Lab Check-Offs

To submit a lab, you must get "checked-off" by the TA or designated lab assistants.
To get "checked-off", both you and your partner will need to discuss a lab exercise of the reviewer's choice so we can check your understanding of the material. Lab "check-offs" are each worth 2 points. There are 18 labs (max 36 points) in the semester, but you are required to get "checked-off" for all 15 labs (30 points) as to accommodate unforeseen absences. All labs are worth 2 points.

C. Exams

i. Quest

The quest is one hour long and held during lecture time. It is worth **25** points and is designed to give you a feel of your level of comfortability with the class material so far. It will cover material from the beginning of the class up to the second to last lecture before the quest. The quest will take place on **Monday, February 10th during lecture**.
For the quest, you will be allowed to bring **1** page of notes (8.5"x11", front-and-back, handwritten).

ii. Midterm Exam

The midterm is held in the evening for 2 hours to give you more time to complete it than lecture would allow. Please check the CS10 website for the location and time. It is worth **75** points. It will cover material from the beginning of the class up to the second to last lecture before the midterm.
There are two portions to the midterm exam, the online Snap programming portion and the paper portion. The online Snap programming portion (worth 15 points) will take place during the first lab section the week of the midterm exam on lab computers (you must have your class account to do this!). This portion will require you to program something in Snap and submit your file to bCourses. You must attend the section that you are enrolled in on Calcentral to take this portion. The paper portion (worth 60 points) will take place during the evening on the date specified on the CS10 website and will cover readings, lectures, and labs. This paper portion will take place on **Monday, March 18th at a TBD time**.
For the midterm, you will be allowed to bring **2** pages of notes (8.5"x11", front-and-back, handwritten).
Due to the quick turnaround of scores, there are no make-ups for the midterm exam. There is no need to tell us if you cannot make the midterm exam. See the Clobber Policy for why.

iii. Final Exam

The final is held during finals week. Please reference schedule.berkeley.edu for the location of the final exam. It is worth **100** points. Any material covered in the readings, lectures, and labs are fair game.
There are two portions to the final exam, the online Snap programming portion and the paper portion. The online Snap programming portion (20 points) will take place during the second lab section of the last week of class on lab computers (you must have your class account to do this!). This portion will require you to program something in Snap and submit your file to bCourses. You must attend the section that you are enrolled in to take this portion. The paper

portion (80 points) will take place during finals week. This portion will take place on **Wednesday, May 13th from 7-10 PM**.
For the final, you will be allowed to bring **3** pages of notes (8.5"x11", front-and-back, handwritten).
If you have scheduling conflicts with the final exam, please notify the Head TA as soon as possible.

D. Extra Credit / EPA / Sprinkle Points

The philosophy of EPA (**E**ffort, **P**articipation, and **A**ltruism) will be discussed in the lecture. The short version is: Over the course of the semester, there will be instances for extra credit. Participating in class via iClickers, answering questions on Piazza, as well as attending labs and discussions are ways to earn extra credit. The amount of points that you accumulate over the semester may help bump you up a grade level i.e. from an A- to an A. There is no set count of sprinkle points - the merits of the sprinkle points are determined by the professor as final grades for the class are determined.

9. Grading Policies

If you have any questions about grading policies over the course of the semester, please direct them to the Head TA.

A. Slip Days

Each student is given 3 slip days. Each slip day is a 24 hour window of time on which you can work on your assignment and submit it without any late penalties. You start using your slip days as soon as it is past 11:59 PM of an assignment's due date and time. For example, if an assignment is due Friday at 11:59 PM and you submit your assignment on Saturday at 12:01 AM, you will have used a slip day. There's no point in rushing to complete an assignment if you're planning to use a slip day, since each slip day is worth 24 hours. If you turn in something before the 24 hour window is up for a particular slip day, you still will have used up the whole slip day. It is to your benefit to take advantage of these generous grace periods! You can check for yourself on bCourses of how many slip days you have used over the course of the semester by looking at how many assignments you have submitted late.

B. Late Policy

If you cannot turn in an assignment on time, contact your TA (and partner on partner assignments) as early as possible. Late project submission requires approval by your TA. For each day a project is late, one-third of the total points you would have earned on the assignment will be deducted. No credit will be given for late homework or projects. For labs, you are allowed one late lab through the semester with no point deductions. After that, every late lab you submit will receive half credit.
If you submit assignments past the allotted 3 slip days, we will distribute your slip days among your late assignments as to minimize the magnitude of the late point deductions on your assignments. For example, if you were 3 days late on your Midterm Project and 2 days late on Homework 1, we will apply all three slip days to your Midterm Project (since it's worth 60 points) and take the late point deductions on your Homework 1.

C. Regrade Request

You are allowed to request a regrade on each assignment if you feel that you believe we have made a major error in grading. You are only allowed one regrade per assignment. To request a regrade, you must fill out the Regrade Request form (make sure you're signed into your Berkeley email account to access the form!). You may request regrades up to 1 week after the release of the assignment's grade. Regrades may result in a raising OR lowering of the grade in question and you may NOT request a regrade for extra credit on any assignment.

D. Clobber Policy

The Clobber Policy allows you to either ONE of --
1.) Erase your quest score and replace it with your midterm exam score.
2.) Erase your midterm exam score and replace it with your final exam score.
3.) Erase your quest score and replace it with your final exam score.
4.) Erase your quest AND midterm score and replace it with your final exam score.
The One clobber policy exists so that if you add the class late or had to miss the quest or midterm due to unforeseen circumstances, you will be able to receive a grade for the exams.

E. Passed/Not Passed (P/NP) Grading

To receive a Passed grade in the course a student must get at a C- in the course. When taking the class P/NP, a student will not receive an NP if they at minimum turn in all the course assignments **on-time**. This includes: homework 1, homework 2, homework 3, lab check-offs, midterm project, final project, and explore post.

10. Late Adds to the Class

University policy states that you may not add the class five weeks into the semester. Please email Head TA, along with your lab TA, once you have added the course.
Make-up work entails the completion of Reading Quizzes, Lab Check-Offs, and Homeworks 1 and 2. There is no need to make-up the Quest Exam; the clobber policy will count as your Quest score. You must submit all of your assignments to your Teaching Assistant because the bCourses assignment slots will have closed by the time you complete each assignment.
To calculate how much time you have to complete your make-up work, divide the amount of class you have missed by two. For example, if you joined two weeks late, you will have one week from the day you joined the class to complete your make-up work. **You must complete your make-up work by this deadline.**

11. Ask Questions!

Your first and most important resource for help in learning the material in this course is your fellow students. Work closely with your project partner. You are responsible for helping each other learn.
If you have questions that others might have as well, regarding projects, homeworks, course policies, etc., post your questions to Piazza, the course messaging service. Piazza allows you to answer questions from other students. Your contributions (questions and answers) to this online forum will also contribute to your participation score in the course.

The class will have a staff of undergraduate Lab Assistants (LAs). Each LA will have scheduled hours to be in the lab. Whenever an LA is in the lab, you may request that s/he answer questions about labs, homework, or exams (but not do them for you).
The instructor and the TAs who teach the discussion sections are also available to answer questions. You may drop in during office hours, make appointments for other times, or email us.

12. Collaborative Learning

With the obvious exception of exams, we encourage you to discuss all of the course activities with your friends and classmates as you are working on them. You will definitely learn more in this class if you work with others than if you do not. Ask questions, answer questions, and share ideas liberally.
To encourage participation, you will receive a small number of points for Effort, Participation and Altruism. This grade will not be given until the semester is over, and is a confidential value determined by the course staff. Effort is a measure of how hard you "try". E.g., Do you come to lab? Do you attend review sessions? Do you come to office hours? Do you keep up with the lab activities (whether or not you get them right)? Participation measures whether you speak up in lab and lecture and help make the class dynamic and interactive. Do you contribute to the community of the class? Online participation certainly counts. Altruism measures how much you help your fellow students learn. One of the best ways to learn is to teach someone else.
Since you're working collaboratively, keep your project partner and TA informed. If some medical or personal emergency takes you away from the course for an extended period, or if you decide to drop the course for any reason, please don't just disappear silently! You should inform your project partner and your TA, so that nobody is depending on you to do something you can't finish.

13. DSP Accommodations

Please let the Head TA and your TA know **as soon as possible** if you need disability-related accommodations in this class. With a letter from the Disabled Students Program (http://dsp.berkeley.edu) detailing your situation, we will be adequately prepared and more than willing to discuss and make any appropriate arrangements.

14. Academic Honesty

Cooperation has a limit and in CS10 that limit is copying lines of code or using ideas that are not your own code. Homeworks should be completed and turned in individually unless the homework calls for a partner. Feel free to discuss the Homeworks with others beforehand; just submit your own work in the end. By discussing assignments, we mean talking about high level ideas (for example, you may discuss how to debug and clarify the spec questions; you may not discuss the solution). Projects are to be completed in groups of 2 or 3, but you may discuss them more broadly than with your partner(s). However, you should not be sharing lines of code with others or reading code from other people's projects. Write your own programs and keep them to yourself.
We expect you to hand in your own work, take your own tests, and complete your own projects. The assignments and evaluations are structured to help you learn. The course staff works hard to put together this course, and we ask in return that you respect the integrity of the course by not misrepresenting your work.
The EECS Department Policy on Academic Dishonesty says, "Copying all or part of another person's work, or using reference materials not specifically allowed, are forms of cheating and

will not be tolerated." The policy statement goes on to explain the penalties for cheating, which range from a zero grade for the test up to dismissal from the University for a second offense. Rather than copying someone else's work, ask for help. You are not alone in this course! The TAs, academic interns, and instructor are all here to help you succeed. If you ever need help in this course, let us know in person, during office hours, or via email/Piazza.
If you have any question as to if what you are doing constitutes academic dishonesty, please reach out to a staff member. If any academic dishonesty is detected, saying, “I did not know that was academic dishonesty,” will not be accepted.