

Course Syllabus

Instructor	
Name:	Prof. Blank
E-mail:	blank@caltech.edu
Office:	ANB 115

Course Website
https://cs1.caltech.codes Visit early. Visit often.

Instructor	
Name:	Jedi Tsang
E-mail:	tsang@caltech.edu
Office:	ANB 245

Lecture
ANB 105 MWF 01:00 PM – 01:55 PM

Course Philosophy

We have structured the course around our four core values:

CS and programming are for everyone!

We have taken care to design and implement CS 1 to be accessible to students interested in any option, **regardless of prior experience**. We firmly believe that every student can gain valuable, lifelong skills from this course! We will only consider the course successful if we are able to serve you in whatever discipline you end up working in. Inclusivity, of all kinds, is one of our core values, and we strive to ensure that everyone feels included and welcome in all aspects of the course.

Our projects cover diverse disciplines!

As CS 1 is a part of core, we aim to provide points of connection to as many other fields as possible. To accomplish this, we've designed weekly projects to be "themed" around different disciplines (physics, chemistry, engineering, math, etc.). We're aiming to have at least one project that feels relevant and cool to every student. (If we miss on this, please please let us know so we can add/edit for the future.)

CS 1 material is sequenced to set you up for success!

The course is separated into three modules: (0) Reading and Modifying Python code, (1) Using Python to Get Things Done, and (2) Another Programming Language and Preparation for Future CS Courses. Here's more details, in case you're curious:

- In Module 0, we will imagine that you're working in an existing codebase (perhaps, for research) and help you navigate how to work with code in this context. We start here, because, realistically, most code you write won't be from scratch.
- In Module 1, we will work on helping you create a mental model of what Python is doing; so, you can effectively debug your own code and write small programs from scratch.
- In Module 2, we will switch to the Java programming language to compare and contrast with Python. This isn't only because we want to prepare you for future CS courses! Lots of research, in many fields, is not done in Python! Languages like C++, C, Rust, and Julia all require some understanding of features that learning Java sets you up for!

CS 1 is not an easy course, but we want you to succeed!

Our goal is to help you succeed. Please ask for help if you need it. Productively struggling is good, but struggling in silence is needless and painful. If you are stuck on any single issue for more than a half-hour, ask for help at office hours. We allocate a ton of TA and Professor time (more than twenty people-hours) to office hours because we want to provide as much help as possible, and we hope you will find them as helpful as we have in the past!

Late Policy

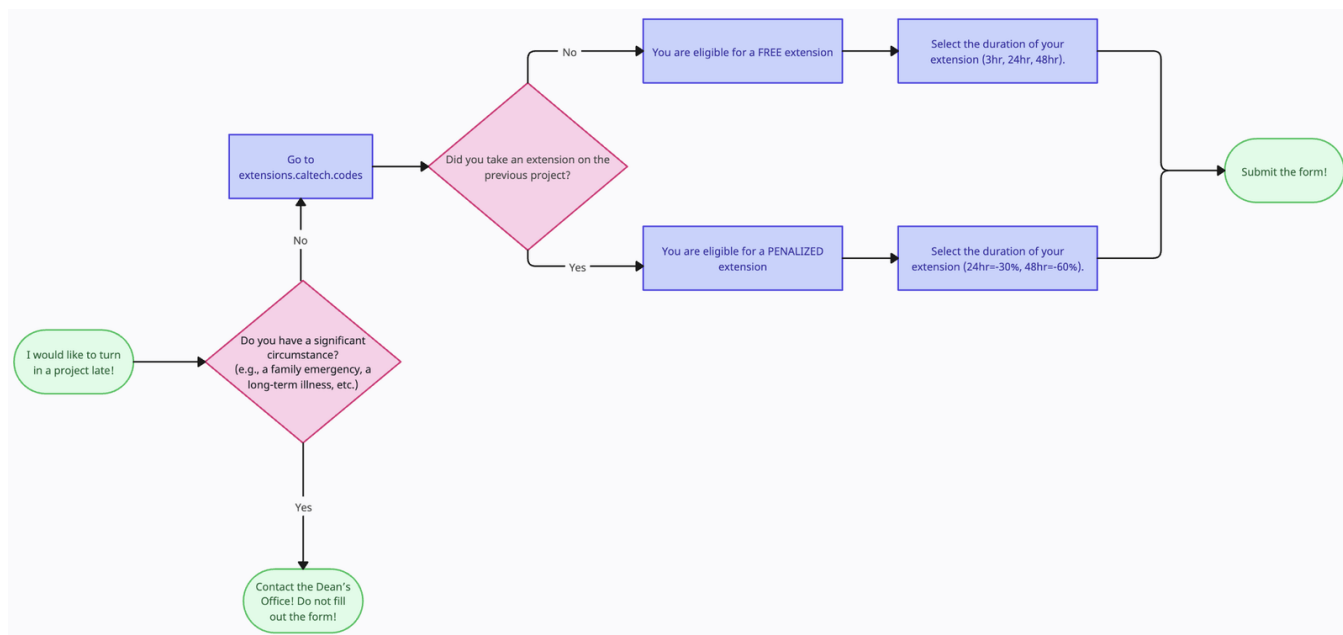
We've designed a late policy that is very intentional in providing flexibility while also making sure students do not fall so far behind that they might not be able to pass. Please see below for details.

To handle our policy, we have written a tool that will tell you what options are available to you at any given point:

<https://extensions.caltech.codes/>

Please do not e-mail us asking for an extension. You must use the website form. There are limits and restrictions on extensions which the form outlines. Please read these **before** you need an extension!

This flowchart outlines common scenarios in which a student may need an extension:



Grading Scheme

To pass, you must meet the following criteria:

- Earn a minimum of 40% on quiz01
- Earn a minimum of 60% on quiz02
- Earn a non-zero score on every project
- Earn a total average of at least 75% cumulatively on the projects and quizzes.
- Pass at least 65% of the diagnostics (we will drop your worst two)

To calculate your shadow grade, we will use the following formula:

$$0.5 \times (\text{Quiz Average}) + 0.4 \times (\text{Project Correctness Average}) + 0.1 \times (\text{Diagnostic Average})$$

Contacting Course Staff

For all course-related questions, please email cs001@caltech.edu. If there is something particularly sensitive that you would rather only the instructors see, you can email Prof. Blank **and** Jedi together.