

CS105: Introduction to Computer Science

Dr. Patrick Young

Autumn 2019

Course Staff & Office Hours

All e-mail addresses listed in this section are @stanford.edu unless otherwise marked.

Lecturer: Dr. Patrick Young
Gates 194
Office Hours: Check Canvas
e-mail: patrick.young @
Note: please identify yourself as a CS105 student when sending me e-mail.

Please do **not** leave me voice mail—use e-mail instead.

Grading Issues E-Mail: for grading issues, e-mail your assigned TA directly at the e-mail account listed below. You will be assigned a TA for grading after you submit the first assignment.

Teaching Assistants:
Sarah Johnson, sarah24 @
Julia Truitt, jtruitt @
Ivy Wang, wangivy @

I will be holding office hours in my office (Gates 194) the location of the TAs' office hours is yet to be determined. TA Office Hours' time and location will be posted on Canvas. TA Office Hours will begin the second week of classes.

Office hours are subject to change. For the latest information on office hours, please check Canvas.

Discussion Sections

Discussion sections are optional, but highly recommended. Times and location TBD but will probably be on Thursdays. Sections will start the third week of classes (the week starting October 7th).

Grading

Midterm	25%
Final	25%
Assignments	50%

All students must have a passing grade in both the exam component (midterm and final) of the class and the homework component of the class in order to pass the class.

CS105 is targeted to non-technical students, and we've found that letting in a large number of students with more advanced computer science skills is detrimental to the class. Therefore we will be allowing in only a limited number of students who have taken CS106A. Students who have taken classes higher than CS106A may not take the class. Students who have already taken CS106 (or its equivalent at another university) please check in with our Head TA for permission to take the class.

Teaching Assistant Assignment

After the first assignment, each student will be assigned a TA or grader. This TA will be responsible for grading all your assignments. Grading issues should be directed to your assigned TA. You are welcome to come to any TA for office hours or discussion.

Grades on Canvas

We will be posting your grades on the Canvas website (see below). Please make sure you check your grades as soon as they are posted. Any missing grades or grading errors must be reported within one week of the posting date. All grades will become final, one week after they are posted.

Course Assignments

Unfortunately mastering computer languages requires extensive practice. Because of this, CS105 will require some fairly extensive class assignments. In order to compensate for the time and effort you will put into this class, CS105 is a 5-unit class. (Please note that only grad students are allowed to take the class for fewer than 5-units). Be prepared to put in a considerable amount of time for the class, particular in the later assignments.

Homework will generally go out on Wednesday and be due the following Wednesday. There will be no assignment given out the first week of classes.

Late Policy

Assignments must be submitted by the start of Wednesday lecture. Assignments turned in late will be penalized 10% for each 24-hour period which has passed since the original due date and time. No assignment may be turned in more than a week after its original due date.

I realize that you do have other classes. You have a late allowance of four late days which can be used to excuse late assignments. This allowance may be used for a single assignment or it may be divided for use on multiple assignments. For example, if you turn in one assignment four days late, you've just used up your entire late allowance. However, if instead you turn in the assignment two days late you still have two additional late days which you can use for another assignment. To take advantage of this, submit your assignment late on Coursework and e-mail your TA notifying them that you are turning in the assignment late. For late days used on the first assignment before you have a TA assigned, e-mail the Head TA.

Please remember that you are working under the Stanford Honor Code. If you are working on a late assignment you must not discuss the assignment with other students and you may not look at any published solutions until after the assignment is turned in. You should also excuse yourself from discussion class, as necessary, to avoid seeing assignment solutions.

Working Together

You have the option of working with a partner on each assignment. You may switch partners between assignments, but should only have a single partner for any given assignment. Assignments will be turned in with a coversheet. If you work with a partner, make sure your

coversheet includes both your name and your partner's name. Details on the cover sheet will be provided with the first assignment. For most assignments we will grade assignments done by partners the same as those done alone. Assignment handouts will be explicitly marked if work done with a partner will be graded harder than assignments done without a partner.

You should not receive assistance on your assignments from anyone other than your assignment partner (if any) or a member of the CS105 teaching staff. While I certainly expect students to discuss the class amongst themselves, please be very careful about providing assistance with the assignments. For the purposes of this class, if someone looks at your HTML, CSS, or PHP code, or if you look at another student's HTML, CSS or PHP code, you have received too much assistance.

Programming can be a frustrating experience. If you absolutely get stuck and are unable to figure out what is wrong, you may ask someone to help. However, you must document that you have received assistance, and you may be penalized up to 50% for each part of the assignment for which you have received help.

At the University, receiving proper credit for creating academic work is extremely important—it determines, for example, which professors receive tenure vs. which ones lose their jobs. Please be very careful to give proper credit as necessary. For example, if you work on part of an assignment with another CS105 student, you must turn in your work together as partners.

If you are having trouble getting the assignments done, please talk to one of the TAs or to me. Any assistance provided by the class teaching staff is, of course, exempt from any penalties.

HTML Editors

A number of word processors and other editors (e.g., Microsoft Word, Adobe Dreamweaver) can store formatted text as HTML. While you are certainly free to experiment with them, you may *not* use them for any of the Web assignments in this class unless the assignment handout explicitly states otherwise.

Exams

The exams will be closed book. However, I will be providing you with an unlabelled list of HTML, CSS, or PHP terms, so you won't need to memorize them—you will need to recognize them and know how they work.

The midterm will be Wednesday October 30th, during class time (location to be determined). The final exam will be Monday December 9th at 9:30am. **Note that CS introductory classes now have a preset final exam slot, which is independent of their class meeting time. All students are expected to take the final during that final time slot, please plan your travel schedules accordingly.**

Use of Copyrighted Material

While copying of material is rampant on the Internet, copyright laws still apply and threats of lawsuits are fairly common. I recommend that you use caution in copying or presenting material on the Internet.

I realize that you all have very limited access to computerized pictures for use in class assignments. You may copy *graphics* off the Internet for the class assignments, as long as the source of your graphics is explicitly documented when you turn in the assignment. I believe that this use of graphics is covered under the educational fair use clause of copyright law as long as (1) you document your sources and (2) you use the graphics for class assignments only and do not publish your material on the Internet.

For more information on copyright the Stanford libraries have an excellent copyright law website at <http://fairuse.stanford.edu/>.

Software

Unfortunately different World Wide Web browsers treat both HTML and CSS differently. For this class, please use *Mozilla Firefox*. You may use Mozilla Firefox on either the Macintosh or on Microsoft Windows. The TAs will be grading your assignments using Mozilla Firefox exclusively, and I will do my best to make sure my examples run on Mozilla browsers. You can get a free copy of Firefox from:

<http://www.mozilla.com/>

Make sure you get the latest copy of Firefox. Older versions will not support some of the webpage elements we will be using.

Course Materials

Course Reader

The Course Reader is the same as the one from last year. Please feel free to use a Reader from last year, if you have a friend who has taken the class previously.

Handouts

Most of the material needed for the course is in the course reader. We will, however, be handing out assignments in class and may occasionally give out additional supplemental handouts. The assignments and handouts will be on the class website.

The Class Web Site

We will be using Canvas for our class website. You can access Canvas at:

<http://canvas.stanford.edu/>

Students with Documented Disabilities

Students who may 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 (phone: 650-723-1066)

Students on Financial Aid

The School of Engineering has asked that we pass the following information on to all students on Financial Aid:

All students should retain receipts for books and other course-related expenses, as these may be qualified educational expenses for tax purposes. If you are an undergraduate receiving financial aid, you may be eligible for additional financial aid for required books and course materials if these expenses exceed the aid amount in your award letter. For more information, review your award letter or visit the Student Budget website

(<https://financialaid.stanford.edu/undergrad/budget/index.html>).

CS105 Class Schedule

Homeworks will generally go out on Wednesday and will be due the following Wednesday. There will not be an assignment given out the first week of classes.

This is a tentative schedule of each lecture along with associated reading. The programming lectures will have associated handouts.

Lecture 1: Computer Architecture Overview (Week 1, September 23)

Reading: Chapter One pages 1-1 to 1-18

Lecture 2: Representation of Information (September 25)

Reading: Chapter One pages 1-19 to 1-32

Lecture 3: Digital Music (September 27)

Reading: Chapter 1 pages 1-32 to 1-37, and 1-46 to 1-48

Lecture 4: Digital Photos and Computer Graphics (Week 2, September 30)

Reading: Chapter 1 pages 1-37 to 1-46

Lecture 5: Computer Networks & the Internet (October 2)

Reading: Chapter 2 pages 2-1 to 2-16

Lecture 6: The Internet & the Web (October 4)

Reading: Chapter 2 pages 2-17 to 2-24, Chapter 3 pages 3-1 to 3-9

Lecture 7: Intro to HTML with CSS (Week 3, October 7)

Reading: Remainder of Chapter 3.

Lecture 8: Exploring CSS (October 9)

Chapter 4

Lecture 9: Exploring HTML and CSS (October 11)

Reading: Chapter 5

Lecture 10: HTML Layout (Week 4, October 14)

Reading: Chapter 6

Lecture 11: HTML Layout (cont) (October 16)

Reading: none

Lecture 12: HTML Forms (October 18)

Reading: Chapter 7

Lecture 13: Advanced HTML (Week 5, October 21)

Reading: Chapter 8

Lecture 14: Advanced HTML & CSS (October 23)

Reading: none

Lecture 15: Advanced HTML & CSS (October 25)

Reading: TBD

Lecture 16 Midterm Review (Week 6, October 28)

Reading: TBD

Lecture 16: Midterm (October 30)

During class time, location TBD

Lecture 17: Website Design (November 1)

Reading: Chapter 9

Lecture 18: Introduction to PHP (Week 7, November 4)

Reading: TBD

Lecture 19: Exploring PHP (November 6)

Reading: TBD

Lecture 20: Programming (November 8)

Reading: TBD

Lecture 21: Programming (Week 8, November 11)

Reading: TBD

Lecture 22: Programming (November 13)

Reading: TBD

Lecture 23: Programming (November 15)

Reading: TBD

Lecture 24: Security Part I (Week 9, November 18)

Reading: Chapter 10 pages 10-1 to 10-8

Lecture 25: Security Part II (November 20)

Reading: Remainder of Chapter 10

Lecture 26: Security Part III (November 22)

Reading: TBD

Thanksgiving Week (November 25-29)

No Lecture

Lecture 27: Privacy (Week 10, December 2)

Reading: TBD

Dead Day (Week 10, December 4)

No Lecture

Lecture 28: Review (Week 10, December 6)

No Lecture

Final (Monday, December 9)

9:30-11:30am Location TBD

The Stanford Honor Code

The standard of academic conduct for Stanford students is as follows:

- A. The Honor Code is an undertaking of the students, individually and collectively:
 - (1) that they will not give or receive aid in examinations; that they will not give or receive unpermitted aid in class work, in the preparation of reports, or in any other work that is to be used by the instructor as the basis of grading;
 - (2) that they will do their share and take an active part in seeing to it that others as well as themselves uphold the spirit and letter of the Honor Code.
- B. The faculty on its part manifests its confidence in the honor of its students by refraining from proctoring examinations and from taking unusual and unreasonable precautions to prevent the forms of dishonesty mentioned above. The faculty will also avoid, as far as practicable, academic procedures that create temptations to violate Honor Code.
- C. While the faculty alone has the right and obligation to set academic requirements, the students and faculty will work together to establish optimal conditions for honorable academic work.