CS60 Syllabus, Fall 2018

Course: CS 60: Principles of Computer Science
Lectures: Tues/Thurs 1:15-2:30, Galileo McAllister
Prerequisite: CS 5. (Pomona's CS 51 doesn't count toward this prerequisite)
Instructor: Colleen Lewis (Send messages on Piazza) lewis@cs.hmc.edu Olin 1280
Course Info: piazza.com/hmc/fall2018/cs60/resources
Submissions: gradescope.com
Questions: piazza.com/hmc/fall2018/cs60/
Grutoring hours: tinyurl.com/grutoringFall18
Extension requests: tinyurl.com/requestExtensionFall18

Colleen's Office Hours:

- Mondays 11:30-12:55pm - Hoch center table
- Tuesdays 2:30-3:45pm - Galileo McAllister
- Fridays 3:00-4:00pm - HMC Cafe (we might have to move these if this is an inconvenient spot!)

Tests

- Take home "Back Pocket" Quiz due Friday September 14th at 2pm
- Exams:
  - Thursday October 11th (in class)
  - Thursday November 8th (in class)
  - Wednesday, December 19th 2-5pm (in regular room)

Overview of CS60

CS60 is designed to be fun and educational! The choice of material in CS60 is based on a combination of utility and accessibility. We want to serve non-majors with a deeper and broader course that builds from CS5. In addition, this course is a launching point for more study in the CS major itself. More info later in the doc!

Getting Help

We expect that you'll want and need help - that's just an important part of learning CS - getting help :) There are lots of ways to get support and help in CS 60, including:

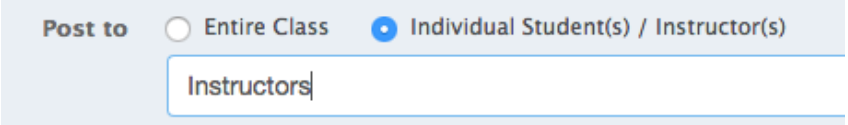
- On the Piazza forum www.piazza.com/hmc/fall2018/cs60/home
- From each other - in person :-)
- During grutoring hours (with Colleen or the Grutors) tinyurl.com/grutoringFall18
- Colleen's office hours - or by scheduling an appointment - message Colleen on Piazza.

If you need help with:

- Getting Dr Racket or Eclipse running on your computer
  - Go to the HMC CIS Help Desk - Sprague 1st floor 8am-5pm
- Accessing Piazza or Gradescope
  - Email Colleen lewis@cs.hmc.edu
- Questions about gradescope
  - Email Melinda Lim mhlim@g.hmc.edu

Piazza

All class-related communication will happen on Piazza (not email). The system has ways of asking anonymous questions and specifying who you want to be able to see your question:



- Specify your question as for "Instructors" if you need to post solution code.
- Specify your question as for "Colleen Lewis" if you need to discuss a personal question (illness, accommodation, etc.) For extension requests use tinyurl.com/requestExtensionFall18

Grutors

Grutoring hours are held in the LAC lab (tinyurl.com/grutoringFall18), which requires swipe access. CMC students will need a temporary swipe card from Facilities and Maintenance. Everyone can log onto the LAC computers with: username: **`./hmcguest`** (w/ no password)

Swipe Access Cards: Facilities & Maintenance (F&M) - basement from external stairs on West (Red circle)

Grutoring: Linde Activities Center (LAC) Computer Lab - 2nd floor from external stairs on West (Red X)

Grades

There is no scaling or weighting. Course components will contribute to your final grade as follows:

- Homework 63% (1200 points - this may change, which changes the percentages)
- Back Pocket Code Quiz 2.5% (50 points)
- Quizzes 16% (150 points + 150 points)
- Final exam 16% (300 points)
- Participation 2.5% (50 points - max of 50 points, 2 points per class)

We use the following Racket/Scheme code as a rough guideline to convert your point average to letter grades:

```
(define (score p)
   (cond
       ((>= p 0.95) "A")
       ((>= p 0.90) "A-")
       ((>= p 0.87) "B+")
       ((>= p 0.83) "B")
       ((>= p 0.80) "B-")
       ((>= p 0.70) "C range")
       ((>= p 0.60) "D range")
      (else "we hope not to have to use this condition")))
```

Homework (includes info about grading and late work)

There will be weekly assignments, typically due at 11:59pm on Tuesdays. The submission system for homeworks is at gradescope.com.

You have three late days or "CS 60 Euros". You may use at your discretion -- you don't need to tell us in advance. A late day allows you to turn in an assignment 24 hours late (one day) with no penalty. If any part of an assignment is late, it counts as using a Euro for that assignment. You may not use two late days on the same assignment, and late homeworks will not be accepted once these late days have been used. **Note** that CS 60 does **not** drop any of its assignment scores: assignments are by far the most important vehicle for learning the skills and concepts in the course!
If you get sick and need an extension - use tinyurl.com/requestExtensionFall18

Honor Code

Whether you are programming individually or as a pair, there are a few important rules regarding cooperation.

- **You are always welcome and encouraged to *discuss* approaches** to solving homework problems with any classmate, the grutors, or instructors.
- **You may not share any written/typed materials of any kind.** In particular, you may not send or receive code that is related to this course by email, on the web, from another person's file or print out, or in any other form. (If you are pair programming as described below, you may share code only with your partner, but not outside the pair.)

In short: you should conduct yourself in accordance with the Harvey Mudd Honor Code and with the Computer Science Department's academic honesty policy.

You may wonder if it is permitted to help a classmate (other than your partner if you are pair programming) debug a program and, in the process, look at their code. This is permitted (and encouraged!), assuming that it is done with the intent of aiding your classmate and not with intent of gleaning code that might be used in your own program. Use your good judgment here. If you're not sure about what's appropriate, please ask.

Accommodations

My goal is to make my course accessible to all of you! To request academic accommodations you'll contact the relevant disabilities resources person from your institution. Please send me any questions! I'm happy to help!

- CMC: Kari Rood <kari.rood@ClaremontMcKenna.edu>
- CGU: Quamina Carter <Quamina.Carter@cgu.edu>
- HMC: Brandon Ice <bice@hmc.edu>
- KGI: Andrea Mozqueda <Andrea_Mozqueda@kgi.edu>
- Pitzer: Gabriella Tempestoso <Gabriella_Tempestoso@pitzer.edu>
- Pomona: Jan Collins Eaglin <jan.collins-eaglin@pomona.edu>
- Scripps: Bianca Vinci <bvinci@scrippscollege.edu>

Classroom Climate

The goals of this course can only be accomplished in a setting of mutual respect. As your instructor, I am committed to creating a classroom environment that welcomes all students, regardless of their identities (e.g. race, class, gender, sexual orientation, religious beliefs). We all have unconscious biases, and I will try to

continually examine my judgments, words and actions to keep my biases in check and treat everyone fairly. I hope that you will do the same. If you feel comfortable, please let me know if there is anything I can do to make sure everyone is encouraged to succeed in this class.

My goal is to welcome everyone to CS. I firmly believe that everyone in the class is fully capable of engaging and grasping the material. My goal is to meet everyone at least halfway in the learning process. Our classroom should be an inclusive space, where ideas, questions, and misconceptions can be discussed with respect. There is usually more than one way to see and solve a problem and we will all be richer if we can be open to multiple paths to knowledge. I look forward to getting to know you all, as individuals and as a learning community!

Course Overview

CS 60 provides students with a broad overview of computer science, and at the same time providing sufficient depth in a number of key conceptual areas:

- Creating computational solutions to problems in a variety of disciplines;
- Analyzing, evaluating, and comparing computational solutions;
- Thinking abstractly about data and using appropriate data structures;
- Using layers of abstraction to make programs intellectually manageable;
- Writing more sophisticated programs than you have before;
- Specifying program behavior and establishing correctness of code;
- Choosing suitable programming languages to solve specific problems;
- Writing clear, readable, and maintainable code (and other professional practices)

All of these concepts are important not just for CS majors, but for anyone who wants to apply computation to produce creative solutions for problems in other fields.

Note that we did **not** list “programming in Racket” and “learning Java”! You will get a lot of experience with these languages, but only because these are the tools we happen to be using this semester. Next semester we could replace Racket and Java by Haskell and JavaScript; the class would still hit all its goals and would still be CS 60.

(That being said, Java is currently the most popular language)

Buddy and Pair Programming

We encourage you on all problems to “buddy program” where you work with a buddy, but each use your own computer. You can help each other brainstorm, debug, and celebrate (often in that order)! If you haven't tried buddy programming - we recommend it! However, remember you’ll never have a copy of anyone’s code.

For most of the programming assignments you will be permitted to "pair program" - share a computer and alternate who is typing at least every 30 minutes. Pair programming can be great for providing a learning partner, but can be a little tricky because all of the time you work on the assignment must be together, which means that you could only get help during grutoring (or piazza) if you are both there.

Schedule Overview (subject to change)

- Hw00 - Tuesday 9/11
- Back Pocket Code Quiz - Friday 9/14 (at 1pm)
- Hw01 - Tuesday 9/18
- Hw02 - Tuesday 9/25
- Hw03 - Tuesday 10/2
- Hw04 - Tuesday 10/9 (smaller than normal)
- Exam 1 - Thursday 10/11 (in class -- Hw00 through Hw03, Lectures 01 through 08)
- Hw05 - Friday 10/19 (at 1pm)
- Fall Break - Monday & Tuesday 10/22 & 10/23
- Hw06 - Tuesday 10/30
- Hw07 - Tuesday 11/6 (smaller than normal)
- Exam 2 - Thursday 11/8 (in class -- Hw00 through Hw06, Lectures 01 through 15)
- Hw08 - Tuesday 11/13
- Hw09 - Tuesday 11/20
- Thanksgiving Wednesday - Friday 11/21 through 11/23
- Hw10 - Tuesday 12/4
- Hw11 - Friday 12/14 (at 1pm)
- Final - Wednesday 12/19 2-5pm

Holiday Grutoring

- Fall Break:
    - Friday 10/19 - Regular grutoring hours
    - Saturday 10/20 - No regular grutoring hours (check piazza)
    - Sunday 10/21 - No regular grutoring hours (check piazza)
    - Monday 10/22 - No regular grutoring hours (check piazza)
    - Tuesday 10/23 - No regular grutoring hours (check piazza)
    - Wednesday 10/24 - Regular grutoring hours
- Thanksgiving:
    - Tuesday 11/20 - Regular grutoring hours
    - Wednesday 11/21 - No grutoring hours
    - Thursday 11/22 - No grutoring hours
    - Friday 11/23 - No grutoring hours
    - Saturday 11/24 - No grutoring hours
    - Sunday 11/25 - No grutoring hours
    - Monday 11/26 - Regular grutoring hours
- Last grutoring session
    - Friday 12/14