**USACO Bronze Course: Fall Session**

**9/19-11/21, Saturdays from 4:00pm-6:30pm (10 weeks long)**

**Instructor: Patrick Yu**

**Tentative Schedule:**

The first ~5 weeks will be dedicated towards **learning key USACO bronze (and a few silver!) concepts** and practicing them through various USACO problems (including bronze and possibly silver!).

The next 5 weeks will be **practice time**, where you will be expected to come to class each week *prepared to ask questions* after completing a timed, 4-hour USACO Bronze practice exam each week for *homework*.

I’ll target the curriculum based on **your needs. (**Ex:If you think string ops are too easy, I can go over binary search/graph theory/recursion if you want!) But be sure to let me know what page (in CS) you are on so I can make the course as personalized as I can. :-)

**Key Links:**

<http://www.usaco.org> (Contest Website)

<http://www.usaco.org/index.php?page=contests> (Links to past contests)

<https://drive.google.com/drive/u/0/folders/1rzuXj23D8WTeKq4FYBOGMoR2Hi61Kgv6> (Folder to Past Slides)

<https://repl.it/languages/cpp> (C++ Web IDE)

<https://repl.it/languages/java> (Java Web IDE)

<http://www.pythonchallenge.com/> (Some Interesting Coding Puzzles)

**Links to other practice contests:**

Codeforces.com (Russian algorithmic problemset website)

Hackerrank.com

Google CodeJam

SPOJ

TopCoder, CodeChef

**Must Have:**

A laptop with internet connection capabilities! You can’t program without a computer….

(And due to the situation now, a webcam with a functioning microphone and a stable internet connection for Zoom to work...) **Make sure you download the Zoom desktop app, Enable Microphone, and click on Join Computer Audio in order for you to hear AND speak!! :-)**

**For the purposes of this class,** I will use <https://repl.it/languages/cpp> or <https://repl.it/languages/java>to demonstrate/write/test USACO code. If you don’t have an IDE or compiler ready on your machine, I recommend you simply use Repl.it. **In an actual contest, however, please use an IDE or some type of text editor!** You don’t want your browser to crash and lose all your repl.it work!

**Recommended:**

1. To compile code: GNU Compilers for C++ or Java (see below)

Installing your Java/C++ Compiler (if you are not using an IDE):

**Before** you start, please check if you already have javac or g++ installed by running either

javac -version (for Java users) or

g++ -v(for C++ users)

If you get a “command not found” or similar error, please look below on how to install your respective compilers.

*If you prefer to code in C++***:** Installing GCC/G++ on Windows/Mac/Linux: <https://www.guru99.com/c-gcc-install.html>

*If you prefer to code in Java***:** Install JDK on Windows/Mac/Linux: <https://www3.ntu.edu.sg/home/ehchua/programming/howto/JDK_Howto.html>

**I recommend installing both pieces of software in case you decide that you prefer to use one language over the other.**

1. Some sort of code editor/environment (A plain text editor is fine. Personally, I will be using the ATOM Editor \*<https://atom.io/>\* sometimes in conjunction with Repl.it if you want to follow along)

**Optional (if you DO NOT have GNU/desktop development tools installed):**

If you don’t have that yet, you may use the Java/C++ web IDE at <https://repl.it/languages/cpp11> or <https://repl.it/languages/java> to run code online :-)