CS24 - Problem Solving with Computers II

Instructor: Justin Kasowski
TAs: Bowen Zhang and Monsij Biswal

First things first...

- My title of preference is just my first name (Justin)
- Graduated from UCSB with a Cell and Developmental Biology degree, currently a PhD candidate in the Dynamical Neuroscience program
- Research focuses on computational modeling of the brain/retina and what it might be like to have a bionic eye
- C++ is not my main programming language, mistakes will be made

Teaching Assistants

Bowen Zhang - 1st year PhD student in the CS department

Office Hours: Mondays 2-4pm

Sections: Fridays 11-11:50 and 12:30-1:30

Monsij Biswal - 1st year PhD student in the ECE department

Office Hours: Thursdays 2-4pm

Sections: Fridays 2-2:50 and 3:30-4:20

Course Resources

https://ucsb-cs24.github.io/

Course Logistics

All of the information or links that you will need for this class will be posted in Gauchospace

Each week will have one live class, lecture videos, section, and an assignment due. Some weeks also have a quiz which must be completed within the 6 hour time window that it is open

***** ATTENDANCE IS NOT MANDATORY *****

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Final exam is the only exception - Thursday, August 26th: 9:30am - 11:30am

Grading

Grades will be entirely determined by the final exam or by the following breakdown (whichever is higher):

- 25% Lab Assignments (lowest lab grade will be dropped)
- 20% Quizzes (lowest quiz grade will be dropped)
- 5% Piazza participation
- 20% Programming Assignments
- 30% Final Exam (Thursday, August 26th: 9:30am - 11:30am)
- Extra credit for correcting/teaching the instructors

***** LATE ASSIGNMENTS LOSE 20% FOR EACH 24 HOURS AFTER THE DEADLINE *****

***** NO LATE QUIZZES OR EXAMS WITHOUT A DOCUMENTED EMERGENCY *****

Academic Integrity

Please read about actions that are categorized as Academic Dishonesty on the UC Santa Barbara Office of Student Conduct website: http://studentconduct.sa.ucsb.edu/academic-integrity

Most of the assignments will have the option to work with a partner. If you aren't sure, assume that it's an individual assignment until you find out otherwise. To avoid students from "freeloading", each partner will be expected to estimate what percentage of the work they did for the assignment. This number will be anonymously submitted and students with consistently low values might have points taken away and asked to work alone.

Disabled Students Program (DSP)

DSP provides reasonable accommodations to students with a variety of disabilities. This includes extra time on exams for things like dyslexia or ADHD. Any DSP request will be accommodated. For more information visit http://dsp.sa.ucsb.edu

Things you should know going into this course...

Basic data types (int, double, char, bool, string)

Basic operations (if/else, while, for loops, etc)

Arrays

Defining classes

Concept of recursion

Passing by reference and pointers(?)

Resources on Gauchospace!!!

Things you should know by the end of the course

Memory Allocation (stack vs heap, dynamic memory, “new” and “delete”)

Better abstraction and encapsulation programming

Advanced data structures (Linked lists, binary search trees, queues, etc)

Big-O runtime analysis

Better debugging and coding practices

Up next...

Review: The basics, classes, constructors, pointers