FUN IN PROGRAMMING

CUNY Queens College
CS111 Lab Instructor: Chi Tse (Ricky)
AGENDA:

- Enjoy the fun in programming
- Online Practices
- Coding Competitions
- Hackathons/Programming Challenges
Learn an Hour of Code

Star Wars: Building a Galaxy with Code
Learn to program droids, and create your own Star Wars game in a galaxy far, far away. (Ages 6+)

Minecraft Hour of Code
Use blocks of code to take Steve or Alex on an adventure through this Minecraft world. (Ages 6+)

Code with Anna and Elsa
Let's use code to join Anna and Elsa as they explore the magic and beauty of ice. (Ages 8+)

Teacher's Notes
https://hourofcode.com/sw

Teacher's Notes
https://hourofcode.com/mc

Teacher's Notes
https://hourofcode.com/frzn
ONLINE PRACTICES

coderbyte

Solve programming challenges
Ask and answer questions
Study algorithms for coding interviews

A New Coding Interview Question Every Week

Subscribe Now ➔ Interview Cake
ONLINE PRACTICES
Welcome to the Timus Online Judge, problem archive with online judge system

The online contest finishes in: 3 h 30 min

Timus Online Judge is the largest Russian archive of programming problems with automatic judging system. Problems are mostly collected from contests held at the Ural Federal University, Ural Championships, Ural ACM ICPC Subregional Contests, and Petrozavodsk Training Camps. To start solving problems, visit the guide.

Timus Online Judge provides you an opportunity to participate in online versions of many contests held at the Ural Federal University on a regular basis. See the rules of online contests.

This site is created and administrated by the students and graduates of the Ural Federal University.
Online Practices

Project Euler.net

About Project Euler

What is Project Euler?

Project Euler is a series of challenging mathematical/computer programming problems that will require more than just mathematical insights to solve. Although mathematics will help you arrive at elegant and efficient methods, the use of a computer and programming skills will be required to solve most problems.

The motivation for starting Project Euler, and its continuation, is to provide a platform for the inquiring mind to delve into unfamiliar areas and learn new concepts in a fun and recreational context.

Who are the problems aimed at?

The intended audience include students for whom the basic curriculum is not feeding their hunger to learn, adults whose background was not primarily mathematics but had an interest in things mathematical, and professionals who want to keep their problem solving and mathematics on the cutting edge.

Can anyone solve the problems?

The problems range in difficulty and for many the experience is inductive chain learning. That is, by solving one problem it will expose you to a new concept that allows you to undertake a previously inaccessible problem. So the determined participant will slowly but surely work his/her way through every problem.
ONLINE PRACTICES

Master any CS Domain

With more than five domains to choose from, you can decide if you want to improve your coding skills on Artificial Intelligence or Machine Learning. Whether you are a beginner or an industry veteran, you will find several contests that challenge you and help you boost your coding chops. Think you’ve mastered a domain? Great. Go ahead and practice to excel in another domain.

Artificial Intelligence
Algorithms
Functional Programming
Code Golf
Machine Learning

What is CodeProject?

CodeProject is a community of Software development and Design developers joined together with certain common goals: to learn, to teach and to have fun programming. Developers from all over the world come together to share source code, tutorials and knowledge for free to help their fellow programmers.
CODING COMPETITIONS

Compete

This is the place to show off your skills

Try your hand at one of the competitions; solve a problem and write great code. Put yourself up for recognition and win great prizes.

Contests begin on the first of every month.

Future Contests

<table>
<thead>
<tr>
<th>CODE</th>
<th>NAME</th>
<th>START</th>
<th>END</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPC15P1A</td>
<td>ICPC Preparatory Series by Team SkullCrackers</td>
<td>2015-11-25 21:30:00</td>
<td>2015-11-26 02:00:00</td>
</tr>
</tbody>
</table>
CODING COMPETITIONS

Competitive Programming

Test your **algorithm skills**.
Compete head-to-head in the Topcoder Arena!

SIGN UP

PROBLEM ARCHIVE  PAST SRMS
LAUNCH WEB ARENA (BETA)  LAUNCH APPLET ARENA

Member Tutorials
- The Importance of Algorithms
- How to Dissect a Topcoder Problem Statement
- Mathematics for Topcoders
- How to Find a Solution
- Dynamic Programming: From Novice to Advanced

See all tutorials >>

Competitive Programming at Topcoder
Test your skills on algorithm problems involving machine learning, graph theory, optimizations, recursion, dynamic programming and much more.
Coding Competitions

ACM Regional Collegiate Programming Contest
Sponsored by IBM

Greater New York Region

Sunday, November 8, 2015
Queens College (Flushing, Queens)

Contest announcement mailing list

2015 General Contest Information

- Contest rules
- Final standings
- Problems
- Hosted by: Queens College Department of Computer Science located in Flushing, Queens
- Date: Sunday, November 8, 2015
Coding Competitions

Facebook Hacker Cup

Timeline | About | Photos | Likes | More

861,999 likes

The Facebook Hacker Cup is an annual worldwide programming competition where hackers compete against each other for fame, fortune, glory and a shot at the...

READ MORE

http://www.facebook.com/hackercup/

Update on Facebook Hacker Cup 2018

January 10

We want to give a quick update on what’s going on with Hacker Cup this year. We’re taking a short break to make some improvements to contest quality and logistics, and as such, we won’t be holding Hacker Cup in the first half of this year. Depending on how quickly we’re able to make these improvements, we hope to have a contest towards the end of this year. We want to thank you all for your patience, and we look forward to seeing your submissions when we’re back. Please stay tuned for news later in 2018.

Happy Hacking,
The Hacker Cup Team
About

What is Code Jam?

Code Jam calls on programmers around the world to put their skills to the test by solving multiple rounds of algorithmic puzzles. The online rounds conclude in the World Finals, which rotates globally. In addition to being challenging and fun, Code Jam problems can help you develop your coding and programming skills. If you’ve never tried Code Jam, what are you waiting for? If you’re a returning participant, welcome back, and thanks for stopping by.

To learn more about other Google coding competitions, visit:

- Kickstart for university students or industry professionals looking to develop their coding skills and potentially pursue a Google career.
- Hash Code for students in Africa, Europe, and the Middle East looking to work as a team on real Google problems.
Participate in online and in-person hackathons.

Browse hackathon projects

- **Azure IoT on Serverless Hackathon**
  - Type: Online
  - Description: Build IoT business applications using a Serverless architecture.
  - Prizes: $20,000
  - Time: 3 months

- **Smackathon**
  - Type: Online
  - Description: Decentralize the music industry - build smart contract applications that disrupt the world of music.
  - Prizes: $15,000
  - Time: 19 days

- **Hack Productivity 4**
  - Type: Online
  - Description: Hack the workday with Office 365 - submission period opens May 7th
  - Prizes: $35,500
  - Time: 19 days
HACKATHONS/CODING CHALLENGES

**Xamine Challenge: Machine Inspection of Uncertain Information**

- **Prizes:** $25,000
- **Description:** Uncover machine-based capabilities to review intelligence products against existing tradecraft standards.
- **Open Until:** Jul 02, 2018
- **Posted by:** Office of Director of National Intelligence

**The Unlinkable Data Challenge: Advancing Methods in Differential Privacy**

- **Prizes:** $50,000
- **Description:** Propose a mechanism to protect personally identifiable information while maintaining a dataset’s utility.
- **Open Until:** Jul 26, 2018
- **Posted by:** National Institute of Standards and Technology

**Preventing Childhood Obesity**

- **Prizes:** $375,000
- **Description:** Create an innovation to promote healthy weight for children & families.
- **Open Until:** Oct 15, 2019
- **Posted by:** Health Resources and Services Administration
HACKATHONS/CODING CHALLENGES
What is Microsoft Imagine?

Microsoft Imagine connects students with the tools, resources and experiences they need to elevate their skills for today’s working world. Whether it’s building a game, designing an app or launching a project, Microsoft Imagine helps students develop their ideas and boldly bring them to life.

Competitions

Technology competitions for all levels and interests ranging from short skill building challenges to in-depth competitions where students create games, apps and integrative solutions.

Developer Tools

Professional level developer tools and software for students at no cost - everything needed to create games, apps and websites.

Online Learning

Free online training and courses to help students learn the latest technology and take their coding skills to the next level.
REFERENCES:

- http://web.engr.oregonstate.edu/~huanlian/
- http://nifty.stanford.edu/