CS 161: INTRO TO COMPUTER SCIENCE I

Dr. Kiri Wagstaff | LINC 228 | MWF 2:00-2:50 p.m.

Instructor

Dr. Kiri Wagstaff
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Teaching Assistants

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[ ] Megan Black
[ ] Erick Branner
[ ] Jesse Chick
[ ] Louis Duvoisin
[ ] Jessica Garcia
[ ] Miguel Gaspar
[ ] Laura Jiang
[ ] Thang Kim
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[ ] Lucas Pichette
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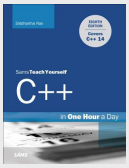
[ ] Austin Wilmoth
[ ] Cheng Xie
[ ] Arthur York
[ ] Junze Zhang

Email: cs161-020-ta@engr.orst.edu
Office hours: See course website

Logistics



Required textbook:
Teach Yourself C++
by Siddhartha Rao

Required laptop: running MacOS or Windows

Course website:
http://classes.engr.oregonstate.edu/eecs/winter2020/cs161-020/
Canvas:
https://oregonstate.instructure.com/courses/1771939
Piazza:
https://piazza.com/oregonstate/winter2020/cs161/home

Why take this class?

Computers are everywhere in our lives and our careers. Programming is a skill that allows you to express your desires to control computers, enabling you to tap into their superhuman abilities. You don't have to be a CS major to benefit from knowing how to program computers!

Ask yourself: How do you think programmers can improve the world?

P.S. Computer science is about more than just programming!

In this class:

We will design, develop, implement, and test C++ programs to perform tasks and solve problems. Specifically, we will:

1. Apply good design to break a problem into manageable parts and plan a solution, before writing code.
2. Write tests (before writing code) and use the tests to check correctness (while writing code).
3. Write C++ programs to implement our solutions.
4. Structure programs to be readable, modular, and efficient.
5. Choose appropriate data types to store information.
6. Choose appropriate control structures to manipulate information (conditionals, loops).
7. Manage memory usage (static and dynamic).
8. Employ tools to check logic & memory usage and to pinpoint errors.
9. Develop good user interfaces.

Prerequisites

MTH 112 [C] or Placement Test MPT [33] or Placement Test MPAL [061]

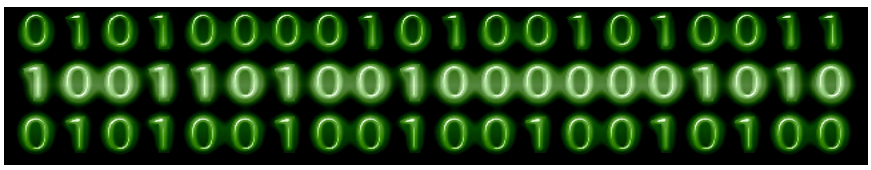
Expectations

Of students:

- Take charge of your success (use resources, ask for help)
- Arrive prepared and maintain focus during lecture (no devices)
- Arrive prepared for lab (with laptop, fully charged)
- Complete assignments on time
- Contribute to a positive learning environment (https://bit.ly/39Fl7k2)
- Follow OSU Code of Conduct (https://bit.ly/2SQgj5z)

Of the instructor and teaching assistants:

- Provide timely feedback on assignments and exams
- Respect student time & workload (Note: 1 credit = 3 hours outside class)
- Answer questions, provide guidance, and communicate clearly



Grading

40%: 5 assignments
10%: 10 labs
10%: 5 designs + peer reviews
30%: 2 midterm exams (in class)
10%: Final exam (cumulative)
+ Proficiency demo (week 10)
+ Opportunities for extra credit

A- 90-92; A 93 or greater
B- 80-82; B 83-86; B+ 87-89
C- 70-72; C 73-76*; C+ 77-79
D- 60-62; D 63-66; D+ 67-69
F less than 60
(Grades are truncated, not rounded)
* (C or better required for majors)

"A Bug's Life" by Luke Surl, CC BY-NC-SA

Buddy Contact Info

1)

2)

3)

Academic Integrity

All work that you submit (assignments, quizzes, exams) should be **yours alone**, except when pair programming is part of a lab exercise (in which case you will list the name of your partner to give them credit). You are welcome to discuss assignments with other students, but you may not look at or share code. You may not submit a modified version of someone else's code (including code found on the Web, in the textbook, in an assignment, etc.) as your own. Assignments will be checked for similarity against other submissions, prior submissions, and online content. Ensure you are familiar with what is and is not allowed and the OSU Academic Integrity Process (see https://studentlife.oregonstate.edu/studentconduct/academicmisconduct).

If you are stuck, ask Dr. Wagstaff or a TA for help. We want you to succeed!

Late Work Policy

Unexcused late work is not accepted.
If you will miss a lab, you must email your TA **in advance**, with the reason, to get approval and then get checked off in the next lab.
If you will miss an assignment submission deadline, exam, or proficiency demo, you must email Dr. Wagstaff **in advance**, with the reason, to get approval and alternate arrangements. If you demo an assignment more than 2 weeks after submission, you will incur a 50% penalty. If you do not demo your assignment at all, you will receive a 0.

Grading

Assignments are graded by in-person demonstration, within 2 weeks of the deadline, on the basis of correctness, code style, and answers to written questions. You can earn extra credit towards your assignment (programming) grade by submitting a Revision Plan within 2 days of your demo. A Revision Plan is a written description of the feedback on your program and how you would change or correct any issues for which you lost points.

Lab work is graded during the lab.

Designs are graded on completeness and clarity. Peer reviews are graded based on how accurate and helpful your reviews are.

Proficiency Demo

You will take a **pass/no-pass** live proficiency coding demo during the last lab session (week 10). There will be a practice demo given in week 5 with material from the first half of the class. In the practice demo, you will receive a pass/almost/no-pass score to give you feedback on where you stand in the class. The practice demo does not affect your course grade.

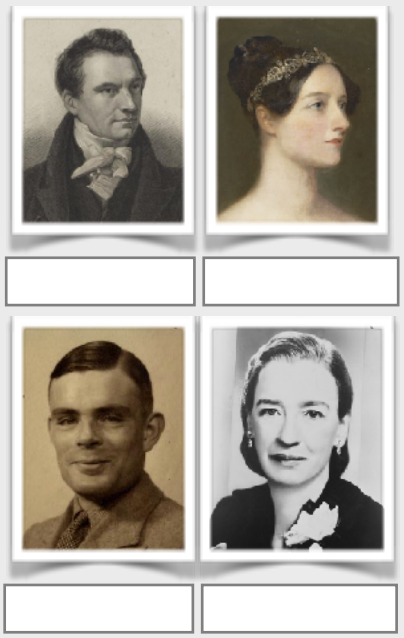
You are expected to pass the final proficiency demo to maintain a passing grade in the class, i.e., you cannot receive higher than a C- without passing the proficiency demo.

No need to worry: If you have a passing grade for your assignments and you have been the one to do the work, then you should be able to pass the proficiency demo easily.

House Points

Help your house win the House Cup by earning points in lecture! House points are for fun and have no effect on your course grade. (More info in lecture)

Who are these people?



Examples of how to earn points:

- 10: Ask or answer a question in lecture
- 50: Research your house patron and share in lecture for 1 min
- 50: Research and share other historical figures from CS (1 min)
- 100: Dress up as your house patron for lecture
- Get creative and suggest your own ideas!

Extra Credit

There will be several opportunities for you to earn extra credit, including the Extra Credit portion of each assignment, attending tutoring hours, submitting a Revision Plan, and more.

Email Etiquette

- For the fastest response, submit course-related questions of general interest on Piazza. The answers will benefit all students!
- Email may take up to 24 hours for a response. Sending multiple emails on the same topic will not encourage a faster response (in fact it will slow us down trying to read through more email).
- Send email from your oregonstate.edu address to your lab TA(s). To reach all TAs and the instructor, use cs161-020-ta@engr.orst.edu. For confidential matters, email kiri.wagstaff@oregonstate.edu, come to office hours, or make an appointment.
- Use a meaningful subject line that starts with "[CS161]". For anticipated absences, include "Absence from Lab 3" or "Absence from Midterm 2," etc. For re-grade requests (must be received within 1 week of lab/exam/demo period), include "Lab 7 Re-Grade Request" or "Assignment 3 Re-Grade Request", etc.

Accommodations

Accommodations for students with disabilities are determined and approved by Disability Access Services (DAS). If you, as a student, believe you are eligible for accommodations but have not obtained approval please contact DAS immediately at 541-737-4098 or at http://ds.oregonstate.edu/. DAS notifies students and faculty members of approved academic accommodations and coordinates implementation of those accommodations. While not required, students and faculty members are encouraged to discuss details of the implementation of individual accommodations.

OSU culture strives toward deepening respect for and understanding of religious differences within our community.

Reach Out for Success

Setbacks can happen. If you encounter difficulties and need assistance, it's important to reach out. Consider discussing the situation with an instructor or academic advisor. Learn about resources for wellness and academic success at http://oregonstate.edu/ReachOut. If you are in immediate crisis, please contact the Crisis Text Line by texting OREGON to 741-741 or call the National Suicide Prevention Lifeline at 1-800-273-TALK (8255).

Final Words

We are dedicated to the creation and maintenance of a positive learning environment. Be sure you read and understand these guidelines (https://bit.ly/39Fl7k2) . Most of all - let's have fun as we journey into the world of C++!

You can earn 1 extra credit point right now by going to https://forms.gle/xRDCq2wZ9FUQVrq59 before midnight on Jan. 12, 2020, to certify that you read through the entire syllabus! Congrats!