

# Syllabus for CS161 – Introduction to Computer Science

## Fall 2019

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### Course Description

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Welcome to CS 161, “Introduction to Computer Science”. This course has four primary learning goals:

1. To develop students’ problem-solving and logical-thinking skills.
2. To provide students with an introduction to the basics of computer programming.
3. To introduce students to good programming practices.
4. To familiarize students with the wide scope of problems studied in computer science.

The Java programming language will serve as a vehicle for us to achieve these goals. At the end of this course, students should be able to:

1. Articulate a sequence of precise and irreducible steps for solving a given problem.
2. Define each of the (approximately) 70 programming concepts covered in class.
3. When programming, be able to identify when a particular concept is needed, know the syntax for using the concept, and be able to use print statements to systematically track down any errors.
4. Write appropriate comments and use visibility modifiers to enforce good encapsulation.
5. Exit with an appreciation of the growing network of computing devices and software that sustains and impacts every aspect of our modern life.

This course is intended for students with no previous programming experience.

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### Administrative Details

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**Instructor:** Professor Chambers (alchambers@pugetsound.edu, Thompson 405)

**Office Hours:** Monday 10:00-11:30, Wednesday 12:00-1:30, Friday 10:00-11:00

**Other Availability:** If my door is open, feel free to pop in. I’m unavailable Tuesdays and don’t respond to emails at night or on Saturdays.

**Course Time and Place:** MWF 9 – 9:50am in Thompson 409

**Lab Time and Place:** Thursday 9 – 10:50am in Thompson 409

**Course webpage:** <http://mathcs.pugetsound.edu/~alchambers/cs161>

**Required Textbooks:**

Lewis and Loftus. *Java Software Solutions*. 8th Edition.

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## Course Breakdown

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**Grading:** Grades in the course are based on four components:

40%	Weekly Homework Assignments
10%	Weekly Lab Assignments
30%	Midterm Exams (2)
20%	Final exam

**Readings:** Each class period will have a corresponding reading assignment taken from the textbook. *It is imperative that you do the reading for this course.* Many confusions and difficulties can be resolved by simply doing the reading. I recommend that you at least skim the reading before coming to class so you can make effective use of class time. The readings for each class are posted on the course webpage under “Lectures”.

**Weekly Lab and Homework Assignments:** Each week there will be a lab assignment and a homework assignment. Lab assignments provide you with hands-on programming practice and serves as preparation for the weekly homework assignment. As such, labs are graded based upon progress made rather than completeness or correctness. This is in contrast to the weekly homework assignment which is intended for you to demonstrate your mastery of the week’s topic. In total, there will be 11 lab assignments and 11 homework assignments.

All lab and homework assignments (except the first few) are pair programming assignments. I will assign everyone a partner at the beginning of the semester. Lab assignments will be turned in at the end of lab. Homework assignments are typically due on Wednesdays and you have 1 week to complete them.

**Tests:** There will be two in-class midterm exams. The first exam is tentatively scheduled for the 6th week of the semester and the second exam is tentatively scheduled for the 11th week of the semester (these dates are subject to change). Note that exams cannot be made up except in cases of emergency. The final exam day and time can be found on myPugetSound. Details will be given closer to the exam dates.

**How can I compute my grade?** At any point during the semester, you can estimate your grade as follows. First, compute your average grade for each component of the course. For the homework component of your grade, you would average all of your homework scores together. For the lab component of your grade, you would average all of your lab scores together. Your exam grades do not need to be averaged together.

Once you have the average grade for each component, you can then weight them using the breakdown provided above. For example, suppose that:

- You have completed 5 out of 11 homework assignments so far with an average homework grade of 86%
- You have completed 5 out of 11 lab assignments so far with an average lab grade of 100%
- You earned a 90% on the first midterm exam

Then your grade is:

$$\frac{(40 \cdot \frac{5}{11}) 86 + (10 \cdot \frac{5}{11}) 100 + (15) 90}{(40 \cdot \frac{5}{11}) 100 + (10 \cdot \frac{5}{11}) 100 + (15) 100} = 89.28\%$$

where the numerator represents your points and the denominator represents the total points possible.

Of the 40% of your grade that comes from the homeworks, only  $\frac{5}{11}$  has been completed so far. And of that amount, you earned 86%. Similarly, of the 10% of the grade that comes from labs, only  $\frac{5}{11}$  have been

completed so far. And of that amount, you earned 100%. Of the 15% of the grade that comes from the first midterm exam, you earned 90%.

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## Course Policies and Conduct

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### Homework Policy

Homework assignments are due every Wednesday by 11:59pm. You and your partner are expected to complete all assignments together. If there is an insurmountable scheduling conflict or an exceptional circumstance during a particular week – and thus you and your partner cannot find time to meet and do the assignment – *you must email me at least 48 hours in advance of the due date to let me know that you will be doing the assignment individually.*

Late homework assignments are penalized by  $3^n\%$  for  $n \leq 4$  where  $n$  is the number of days the assignment is submitted late. The only extensions<sup>1</sup> given are for unexpected medical or family emergencies. In the case of an emergency, I will ask you to talk with the Dean of Student's Office. This preserves your privacy and allows you to coordinate not just with me, but with all your professors.

### Office Hours

Office hours are your chance to ask me questions related to the course, computer science, or other academic matters (letters of recommendation, advising questions, etc). Unless I send an email or make an announcement in class, you can assume I will always be available during the office hours listed above – no need to ask. Please prepare before coming to office hours. This means you should come with a specific question or idea that you want to ask about.

I don't allow students to sit and do work in my office. I've found that students who do this immediately ask a question whenever they are confused rather than trying to solve the problem on their own. Since I won't always be with you in the future, one of my goals is to make sure you become independent and capable programmers.

### In-Class Policies

Laptops and cell phones are not allowed in class. I've found that students with open laptops and cell phones are a distraction to themselves and others. Please leave your cell phone in your backpack (or don't bring it). If you have an accommodation in which you require a laptop, please let me know.

For most class periods, I will use the white board. There are no posted powerpoint slides or lecture notes. If you miss class, please ask a fellow student if you can copy their class notes. Although I will not take attendance, attendance is often correlated with a student's grade in the course.

Prepare yourself to be in class and attentive for the full 50 minutes. Students getting up and leaving in the middle of class are a distraction both to the other students who are trying to learn and to me as I endeavor to use those 50 minutes effectively. In particular, this means you should fill your water bottles and use the restroom before coming to class. If you have to leave class, you do not need to ask permission – quietly get up and go.

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<sup>1</sup>An extension is when a student is allowed to turn in an assignment after the due date with no penalty

## Academic Accommodations

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If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Peggy Perno, Director of the Office of Accessibility and Accommodations, 105 Howarth, 253.879.3395. She will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential.

## Classroom Emergency Response Guidance

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Please review university emergency preparedness, response procedures and a training video posted at [www.pugetsound.edu/emergency/](http://www.pugetsound.edu/emergency/). There is a link on the university home page. Familiarize yourself with hall exit doors and the designated gathering area for your class and laboratory buildings.

If building evacuation becomes necessary (e.g. earthquake), meet your instructor at the designated gathering area so she/he can account for your presence. Then wait for further instructions. Do not return to the building or classroom until advised by a university emergency response representative.

If confronted by an act of violence, be prepared to make quick decisions to protect your safety. Flee the area by running away from the source of danger if you can safely do so. If this is not possible, shelter in place by securing classroom or lab doors and windows, closing blinds, and turning off room lights. Lie on the floor out of sight and away from windows and doors. Place cell phones or pagers on vibrate so that you can receive messages quietly. Wait for further instructions.