

	<p>Introduction to Programming</p> <p>BIT 115, Section 2</p>	<p>Spring 2017</p> <p>Tues, Thurs. 11:00am-1:05pm CC3-235</p>
	<p>Megan Hazen mhazen@cascadia.edu</p>	

Course Description:

This introductory programming class emphasizes problem solving through exploration of computer programming, variable typing and assignment, basic control structures loops, branches, functions, subprograms and arrays using a language such as Java. Students also explore how human culture affects the use of computer programs.

Prerequisites:

Completion of MATH 085 with a grade of 2.0 or higher or placement by testing into MATH 095 or above.

Office Hours & Contact Information:

Office hours are directly before and after class time. Additional office hours are available upon request. There is time during every lecture for students to work on their BIT115 assignments, and students are encouraged to take advantage of this time with an expert present.

Email is a good way to reach me – mhazen@cascadia.edu. Questions and discussions on Canvas are also encouraged. (Questions in a public space should be based on general concepts. Pseudo code is alright, but direct copies of Java code are discouraged.)

The course website is: <http://faculty.cascadia.edu/mhazen/BIT115/>

The website contains announcements, assignments, and some materials from the class. There are a number of links to helpful resources, plus the master schedule. Please refer to the website frequently.

You will also be using the course interface on Canvas:

<http://www.cascadia.edu/programs/elearning/canvasinstructions.aspx>

The URL for Cascadia Community College is: <http://www.cascadia.edu>

Required Materials:

Java: Learning to Program with Robots, Publisher: Course Technology; 1 edition (February 16, 2006), ISBN: 0619217243

Note: This book is now out of print, and the author has generously decided to put the entire book online, for free, at: <http://www.learningwithrobots.com/textbook/PDFs.html>

Students will also need access to a computer (either a school computer, or their personal laptop), and know how to use Canvas. Email may be a useful tool for group projects.

Assessments and Attendance:

Attendance:

Students are responsible for what goes on in class whether they are present or not. Students are responsible for making up any lecture material, quizzes or homework assignments. Please note that class time will be used not just for lecture time, but also for various in-class activities that you will be expected to participate in. A portion of your grade will be assessed for attendance and completion of mini-assignments.

Attendance is taken during each class period. A student earns three points for being present, or zero points for being absent, for a maximum score of 63 points. This is the equivalent of two mini-assignments. Students are expected to work on course material during the class periods; exercises will be provided to enhance understanding of material.

Mini-assignments are designed to be completed during class or with minimal outside effort, and are used to cement understanding of current topics. Students will be encouraged to ask questions about the mini-assignments during class period to ensure complete understanding. Each mini-assignment is due on Thursday, and is worth twenty-five points. Students who must miss a lecture should still submit the mini-assignment for the week on time.

If you notify the instructor at least one week prior to a test or exam, it may be possible to take the exam at a different time than the scheduled date – this different time will be on the same day if possible, or typically on a day prior to the exam otherwise. No make-ups will be given for exams that are missed without prior notification to the instructor.

School closure plan (this includes inclement weather, pandemics, earthquakes, etc): If the college closes during our class time, detailed instructions on how you will make up the work will be provided online.

Electronic Submission:

Homework assignments and many mini assignments will be submitted electronically. You should type all assignments & homework answers into the computer (including essay questions), make sure any code runs correctly, and submit the files for any given assignment. You should always test your code before submission. This class will use Canvas for assignment submission and grade reporting. It is recommended that you look for a rubric on Canvas to ensure that you have completed important aspects of the assignments.

The final exam, the three tests, and some mini-assignments will require pencil and paper for offline completion.

Today's technology is inherently unstable: Your ISP might be down, the public library might not be open, you might be unable to get Microsoft Word to do exactly what you want. While you might have this happen to you, it's not an excuse for handing in an assignment late. Knowing this, you should include time in your schedule to compensate for possible technological snafus. This will allow you to hand in work on time, even in the face of unexpected techno-faults. For assignments that have a hard deadline, no leeway will be given to students who fail to hand in an assignment because of technological problems.

Assessments:

You will be graded as follows:

Attendance (21) @ 3 pts each ~7%

Mini-assignments (10) @ 25 pts each ~27%

Homework Projects (3) @ 100 pts each ~33%

Tests (3) @ 50 pts each ~16%

Final, cumulative exam (1) @ 150 pts each ~16%

Note that the class will use an absolute grading scheme: If you get 100% of the points possible, you'll get a 4.0. If everyone gets 100% of the points possible, everyone will get a 4.0. The table below shows you how to convert the points you've earned in this class to your final GPA.

Mini-assignments will be graded as quickly as possible, and students should review them in preparation for the coming week. While grades on mini-assignments are designed to reward effort, understanding of the material is essential for progress in the course.

Once a homework project has been graded, I'll return comments via Canvas. You may then have the opportunity to revise your work (in whole or in part), and re-submit your work for a re-grade. This approach to re-grades is sometimes referred to the "mastery approach". The higher grade of the two will be your final grade for that homework assignment. You have 1 week from the time the class gets the graded assignment returned to hand in your revision. You may only hand in one revision per assignment. If you don't have handed in the initial version of the homework assignment by the time that the instructor goes to grade it, then you can still hand it in on or before the deadline for the revision, and it will be graded without penalty but you will NOT BE ALLOWED TO REVISE that assignment

If you haven't submitted a revision to a homework assignment by the time that the instructor goes to grade it then you will keep the initial grade for the homework (if you didn't submit the initial version either, this means that you will be get a zero for that assignment).

The final exam will be cumulative: any topic covered from the beginning of class till the time of the exam is fair game for questions. The three mid-term tests will focus on the most recent material, but may also refer to previous course material. The tests and exam will include and will emphasize problem solving, and utilization of what you've learned in class.

Any disagreements about your grade should be brought to the instructor's attention immediately.

Late Policy:

Any work that is not submitted to the instructor for grading will be assigned a grade of "0".

The general policy for work that is submitted electronically is that work is not late until the instructor goes to grade the work and finds it to be missing. In practical terms this means that if the instructor hasn't graded something yet you can (typically) still upload the work and have it be graded as if the work had been handed in on-time (i.e., penalty-free). The instructor will wait until the work is due to grade it (of course), but makes no guarantees about waiting any longer than that.

In other words: for work that the instructor has not yet graded you can take your chances that the instructor will be late enough for you to get the work done and submitted but if the instructor grades it before you can finish (or submit) the work then you will get the zero for not having it in on time.

Independent work:

Unless stated otherwise, all work should represent your own original, independent thinking. This includes mini-assignments. It is okay to talk with classmates to clarify conceptual understanding necessary to complete assignments. However, copying another person's work in whole or in part, either manually or electronically, is not acceptable; nor is copying and slightly modifying another person's work acceptable. In the event copying should occur: all participants in the plagiarism (both the person plagiarizing, and the person whose work was taken) will receive:

a 20% penalty on the first offense

a grade of zero for the second offense, and

for a third (and final) offense, all parties will be given the option of either withdrawing (if the drop deadline hasn't been passed) or taking a "0.0" for the term.

The three homework projects will be group projects. Group projects are learning exercises like individual projects: every individual in the group is expected to understand all the material as if each person had done the entire assignment individually. Therefore, it is fair game to ask any person in a group to explain any aspect of the assignment that the group has done. Each member of the group will receive the same grade.

GPA	Min. Percent Needed	GPA	Min. %	GPA	Min. %
4.0	95	2.9	84	1.8	73
3.9	94	2.8	83	1.7	72
3.8	93	2.7	82	1.6	71
3.7	92	2.6	81	1.5	70
3.6	91	2.5	80	1.4	69
3.5	90	2.4	79	1.3	68
3.4	89	2.3	78	1.2	67
3.3	88	2.2	77	1.1	66
3.2	87	2.1	76	1.0	65

3.1	86	2.0	75	0.0	<65
3.0	85	1.9	74		

College Course Outcomes:

Learn Actively - Learning is a personal, interactive process that results in greater expertise and a more comprehensive understanding of the world

- Develop expertise, broaden perspectives and deepen understanding of the world by seeking information and engaging in meaningful practice
- Construct meaning from expanding and conflicting information
- Engage in learning, both individually and with others, through reading, listening, observing and doing.
- Take responsibility for learning

Think Critically, Creatively and Reflectively - Reason and imagination are fundamental to problem solving and critical examination of ideas

- Create, integrate and evaluate ideas across a range of contexts, cultures and areas of knowledge
- Recognize and solve problems using creativity, analysis and intuition
- Examine one's attitudes, values and assumptions and consider their consequences

Communicate with Clarity and Originality – The ability to exchange ideas and information is essential to personal growth, productive work, and societal vitality

- Organize and articulate ideas for a range of audiences and purposes
- Use written, spoken and symbolic forms to convey concepts creatively
- Use technology to gather, process and communicate information

Interact in Diverse and Complex Environments - Successful negotiation through our increasingly complex, interdependent and global society requires knowledge and awareness of self and others, as well as enhanced interaction skills

- Build interpersonal skills through knowledge of diverse ideas, values and perspectives
- Collaborate with others in complicated, dynamic and ambiguous situations
- Practice civility, empathy, honesty and responsibility

BIT115 Course Outcomes:

1. Conceptualize the logical steps needed to accomplish a task (*Think*)
Figure out what you need to do, before you do it.
 - a. Accurately describes the task accomplished by a given program
Given a program, explain what it does, how it does it, and why the whole thing works.

- b. Reasonably explains the impact of a change in the steps on the output of a program
Given a program, explain what it would do if you changed it slightly.
 - c. Correctly articulates the conceptual steps needed to accomplish a task
Clearly explain what must be done, and in what order, to do something correctly
2. Apply structured programming techniques to accomplish a task using sequential processing, variables/data types, conditional branching, expressions, iteration, functions and arrays
Write programs using the techniques that this class teaches. (*Think, Learn Actively*)
- a. Selects a reasonable structure for a given task
When you're programming, know which technique best solves the problem.
 - b. Writes programming code that demonstrates the ability to appropriately use each programming concept
In addition to knowing which technique best solves the problem, you should be able to actually use that technique. This means know what to type in order to get the program to compile and run.
 - c. Creates a program that correctly fulfills all of the specifications of a given task.
Write programs that you will always work correctly.
 - d. Accurately articulates the relationships among the different structures
Compare and contrast the different techniques that you know. What is the difference between a while loop and an if statement? Why use one rather than the other?
3. Test and debug a program (*Think, Learn Actively, Interact In Complex Environments*)
- a. Correctly characterize different types of errors (syntactical and logical)
 - b. Demonstrates the ability to effectively recognize and correct common errors
As the quarter progresses, fixing errors should take less and less time, especially for those errors that people tend to make repeatedly..
 - c. Uses appropriate, systematic strategies to debug a program (strategies such as localizing errors, evaluating error messages, and the process of elimination.)
If there's something wrong with the program, instead of randomly changing things in the hopes that the problem will simply go away, you should use an organized approach. Examine the error message that the compiler gives you, examine how the program behaves, try to figure out exactly why the program isn't working, make your best guess at what should fix the problem, then try your fix out.
4. Document program designs (e.g., by using IPO, Flowchart, pseudocode, and comments. (*Think, Communicate, Interact*)
- a. Effectively represents the important aspects of the program (purpose, tasks, program flow)
Given a program, explain how it works by explaining the most important parts of it.
 - b. Creates well organized, professional quality documentation
Instead of just speaking your explanations, write them down; write them down in a way that's clear, concise, easy to read, and effectively helps people to understand what's going on.
 - c. Communicates ideas in a manner suitable for peer review
You should be able to organize your ideas specifically so that they are easy to understand by your classmates/co-workers.

Cascadia College Syllabus Learning Agreement

Pluralism and Diversity:

Cascadia believes in pluralism, an intentional culture where everyone's history contributes to the collective success of our community. Cascadia is committed to creating a supportive environment for a diverse student, faculty, and staff population. Individual differences are celebrated in a pluralistic community of learners.

Cascadia does not discriminate on the basis of race, color, religion, gender and/or sex, sexual orientation, national origin, citizenship status, age, marital or veteran status, or the presence of any sensory, mental or physical disability, or genetic information, and is prohibited from discrimination in such a manner by college policy and state and federal law. The following office has been designated to handle inquiries regarding non-discrimination policies and can direct inquiries to the appropriate office for ADA-related requests: Director of Human Resources, Office CC2-280, 425-352-8880.

Title IX:

Title IX of the Education Amendments of 1972 prohibits discrimination on the basis of sex in education programs or activities that receive Federal financial assistance. In compliance with Title IX, Cascadia is committed to providing an educational environment free from sexual harassment, including acts of sexual violence or sexual assault. The College is equally committed to ensuring that those who raise complaints or participate in the investigation and resolution of complaints are free from retaliation. To raise a complaint or voice a concern with Cascadia's compliance with Title IX, contact Dr. Patricia Hutcherson, Interim Executive Director of Human Resources, at phutcherson@cascadia.edu or 425-352-8262.

Academic Honesty:

The College regards acts of academic dishonesty, including such activities as plagiarism, cheating and/or violations of integrity in information technology, as very serious offenses. In the event that cheating, plagiarism or other forms of academic dishonesty are discovered, each incident will be handled as deemed appropriate. Care will be taken that students' rights are not violated and that disciplinary procedures are instituted only in cases where documentation or other evidence of the offense(s) exists. A description of all such incidents shall be forwarded to the Student Conduct Officer, where a file of such occurrences is maintained. The Student Conduct Officer may institute action against a student according to the college's disciplinary policies and procedures.

Collaboration is an expect part of this course. Student should be aware that working with their peers is encouraged, but direct copying of portions of text or code is prohibited. Students should be able to recreate their code upon request. Large portions of copied text or code is considered plagiarism and maybe documents as academic dishonesty. In general, class work and homework may include collaboration, but written exams may not. Students who are discovered to be sharing information during written exams will have the incident documented as academic dishonesty.

Student Rights and Responsibilities:

Cascadia is a student-centered college, operated to provide knowledge and skills for the achievement of learners' academic, professional and personal goals. Inherent in the college's mission are certain rights

and freedoms needed for learning and personal development. Admission to Cascadia provides these rights to students, and also assumes that students accept the responsibility to conduct themselves in ways that do not interfere with the purposes of the college in providing education for all of its learners. For the complete policy, see the Student Code of Conduct in the Student Handbook.

Learning Assistance Options:

To support student success, Cascadia offers a variety of support services. The Open Learning Center, CC2-060, provides a computer lab where students can receive assistance with technology to support class assignments. Students are encouraged to utilize the Math and Writing Center, located in CC2-080. Tutors will work with students focusing on math concepts and writing assignments.

Online Tutoring and Writing Assistance:

Cascadia provides online access to live tutors in a variety of subjects, provided by the Western e-Tutoring Consortium. Tutoring is offered through live, interactive sessions and through an Essay Center. Many subjects have convenient tutoring hours late into the evening and seven days a week, depending on tutor availability; schedules are available online. To get started, visit the eTutoring Consortium.

Disability Support Services:

Cascadia provides services to help students with disabilities successfully adapt to college life. Students who meet specific criteria may qualify for reasonable academic accommodations. If you have or suspect you have a disability and need an accommodation please contact the DSS Office at 425-352-8128 to make an appointment, or email us at disabilities@cascadia.edu. Services and Accommodations through DSS are not retroactive. It is the student's responsibility to approach the faculty member with the accommodation letter as soon as it is issued from DSS.

Counseling services:

If you have a personal problem or stress that is affecting you and would like to talk with someone, please contact UWB's Mental Health Counseling Center. Counseling at Cascadia (provided through UWB) is confidential, professional and free (six sessions). Visit the Counseling Center front desk Monday through Friday, 8:30 a.m. to 5 p.m. or call 425-352-3183 for an appointment. The number for a 24-hour Crisis Line is 206-461-3222.

Advising:

Students should schedule an appointment to meet with an advisor to consult about classes and degrees, and to create a tentative education plan. They can call 425-352-8860 or come to the Kodiak Corner to make an appointment. Appointments are not made via email. At the time of the appointment, they need to indicate which degree they are pursuing. See the Cascadia website for information about Drop-In Advising hours.

Online Advising:

Email advising is available at advising@cascadia.edu. Our distance advisor can answer most questions via email, but we don't schedule advising appointments via email.

Campus Closures and Inclement Weather:

Information about FlashAlert, Cascadia's emergency notification system, is available at <http://www.cascadia.edu/services/emergency/alert.aspx>. The site includes instructions for subscribing to alerts. In the event of a campus closure, instruction for this class will continue in the following way:

In the event of inclement weather affecting morning classes, there will be notification on the local media by 5:30 a.m. You may also call the main campus number: 425-352-8000 to hear a message that will be updated with the latest Cascadia closure information. Should the weather deteriorate during the day, you may check online, listen to the main campus message, check email or the media to hear news about closures or class schedule changes.

CANVAS – In the event of a campus closure, please log into CANVAS for announcements and instructions. You may also refer to the course website for information on the current lecture, and contact your professor via email.

Emergency Procedures:

Emergency procedures are posted in each classroom. To reach campus security personnel, dial 425-352-5222. City of Bothell fire and police may be reached by dialing either 9-9-1-1 or 9-1-1 from any campus phone. Campus emergency phones are located on campus walkways and parking lots.

Acceptable Use Policy on Information Technology:

In general, the same ethical conduct that applies to the use of all college resources and facilities applies to the use of Cascadia's systems and technology. These systems may only be used for authorized purposes, using only legal versions of copyrighted software, and with consideration and respect for the conservations of resources and the rights of other users. For additional information, see the online version of the Student Handbook or go to the Open Learning Center for assistance with any questions.

Family Education Rights and Privacy Act (FERPA):

Cascadia College complies with the Family Education Rights and Privacy Act (FERPA) of 1974 concerning the information that becomes a part of a student's permanent educational record and governing the condition of its disclosure. Under FERPA, students are protected against improper disclosure of their records. See the student handbook for details.