CS& 141: Computer Science I (Java)

Fall Quarter 2019

Course Details

Instructor	Crystal Hess - chess@shoreline.edu I prefer messages to be sent through Canvas. Messages are checked daily and typical response time is within 24 hours, this excludes weekends and holidays.
Office Hours	Monday/Thursday 11-noon, 3-4pm in 2813, Tuesday 9-10am online, Wednesday 9-10pm online, or by appt. Science Building, Office 2813
Class Hours	M/W 12:30pm - 2:50pm (Section #0649) T/TH 12:30pm – 2:50pm (Section #0651) Computer Lab 1308

CS& 141 - Computer Science I (5 credits)

This course will explore common computational problem-solving techniques useful to computer scientists, but also to anyone who has large data sets, repetitive processes or other needs for computation. Topics include: fundamental programming-in-the-small abilities and concepts, including procedural programming (methods, parameters, return, values), basic control structures (sequence, if/else, for loop, while loop), file processing, arrays, and an introduction to defining objects.

Due to the amount of material and quick pace for consumption, prior programming experience is expected.

Prerequisites

ENGL& 101 (may be taken concurrently) and MATH& 141 or MATH 111 with grades of 2.0 or better. CS 121 or ENGR 202 with a grade of 2.0 or better.

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COURSE OUTCOMES

1. Develop solutions to small-scale problems, such as determining the best candidate for an admissions process, analyzing text for keywords, or playing a game of word guess.
2. Design and implement solutions to partially ambiguous problems, such as analyzing a set of data for patterns and information or building upon an existing code base.
3. Identify and use programming language constructs and coding patterns, such as iteration, methods, classes, arrays, fencepost problems, and token-based processing.
4. Break down problems into logical pieces using repetition, methods, and classes.
5. Test and debug solutions until they meet specifications.
6. Examine and compare reasoning, design, and effectiveness of alternative solutions.

REQUIRED MATERIALS

TEXTBOOK

- Building Java Programs: A Back to Basics Approach,
  4th Edition (preferred, but older versions should work)
  by Stuart Reges and Marty Stepp (same book is used for CS143)
  - Available @ the Bookstore or Amazon: Student Value Edition, Regular Edition

Approximate Topic Coverage

Week 1	Chapter 1: Introduction to Java
Week 2	Chapter 2: Primitive Data and Definite Loops
Week 3	Chapter 3: Parameters and Objects Chapter 4: Conditional Execution
Week 4	Chapter 5: Program Logic and Indefinite Loops
Week 5	(Review)
Week 6	(Midterm)
Week 7	Chapter 6: File Processing
Week 8	Chapter 7: Arrays
Week 9	Chapter 8: Classes
Week 10	Chapter 9: Inheritance and Interfaces
Week 11	Chapter 10: ArrayLists

SOFTWARE

- *Java Development Kit (JDK) (freely available online)*
- *JGrasp IDE (freely available online)*

COMPUTER & TECHNICAL REQUIREMENTS

- It is expected that when students enroll for this course they will be able to use a computer, be able to upload and download files, and successfully navigate browsers and websites.
- Students will receive homework throughout the course that must be completed on a computer with Internet access. The school library computers can be used for these purposes.
- **Need help?** Canvas questions can be directed to Shoreline e-Learning at elearning@shoreline.edu, (206) 546-6966, visit Building 1200, or 24hour Canvas Support via chat or telephone. Canvas and basic computing support is also available on campus at the Shoreline Business Technology & eLearning Center in Building 1300, Room 1304.
- More information on general technical requirements can be found here.

GRADING AND ASSESSMENT

In this course, you will be assessed through **Learning Practice** (daily practice assignments that are graded mostly for completion), **Individual Homework** (longer individual homework that is assigned approximately weekly), **Quizzes**, a **Midterm Exam** (approximately week 5), and a **Final Exam** (taken during the college-assigned Finals time slot).

I strive to grade daily and weekly assignments within 5 days of the due date. The larger assignments take longer to grade and are generally graded within 7-10 days.

Activity	Percentage
Learning Practice	30
Individual Homework (~8)	20
Midterm (1)	20
Final (1)	30

Purpose of Activities / Course Alignment

- **Learning Practice** gives you the opportunity to practice reading, writing, and reflecting on small segments of code. These assignments are mostly graded for completion. (Course Objectives 3, 4, and 6)
- **Individual Homework** builds in difficulty throughout the course, providing an opportunity to build software solutions to tackle varying problems. (Course Objectives 1, 2, 3, 4, and 5)
- **Quizzes** provide an optional opportunity for students to check their own understanding of the coming week's learning with fast feedback. (Course Objectives 3)
- **Midterm and Final Exams** provide an assessment of your understanding of programming vocabulary and ability to read and write code quickly. (Course Objectives 3 and 4)

Late Policy

- Students are expected to turn in all assignments by the due date and time.
- Assignments not submitted on-time may receive zero points.
- Alternate arrangements *may* be approved for flexible due dates in special circumstances when the instructor is contacted **prior** to the due date. *No day-of extensions will be given.*
- Under no circumstance will an assignment be accepted beyond one week past an assignment's due date.

More information available here: Shoreline's full Grades Policy (#6260)

ACADEMIC INTEGRITY

Academic honesty and integrity is expected. Shoreline Community College has a strict policy on cheating and plagiarism. You are cheating if you copy, steal, borrow, consult, or use any means to obtain answers from classmates or unauthorized sources for any assignment inside or outside class. Any student found guilty of cheating and/or plagiarism will receive a zero for the assignment. If it happens a second time, you may fail the course.

Long Homework Assignments are individual. All code you submit must be your own work. You may discuss general ideas of how to approach an assignment, but never specific details about the code to write. Any help you receive from or provide to classmates should be limited and should never involve details of how to code a solution.

- You **may not** work as a partner with another student on an assignment.
- You **may not** show another student your solution to an assignment for any reason.
- You **may not** look at another's solution for any reason.
- You **may not** have another person "walk you through" an assignment, describe in detail how to solve it, or sit with you as you write it. You also may not provide such help to another student. This includes tutors and current or former students.
- You **may not** post your homework solution code online to ask others for help. This includes public message boards, forums, file sharing sites and services, or any other online system.

Please note that **both parties involved in a cheating case are equally guilty**. That is, helping someone else cheat is just as bad as reading someone else's solution. There are many resources for students who are struggling, and the right thing to do in this situation is to point them to these resources.

MANDATORY DECIMAL GRADING

Final GPA decimal grading will be used in accordance with the following table. There is not an option for pass/fail grading in this course as it is transfer-equivalent.

%	Grade
>= 95	4.0
94	3.9
93	3.8
92	3.7
91	3.6
90	3.5
89	3.4
88	3.4
87	3.3
86	3.3
85	3.2
84	3.2
83	3.1
82	3.1
81	3.0
80	3.0

%	Grade
79	2.9
78	2.9
77	2.8
76	2.8
75	2.7
74	2.7
73	2.6
72	2.5
71	2.4
70	2.3
69	2.2
68	2.1
67	2.0
66	1.9
65	1.8
64	1.7

%	Grade
63	1.6
62	1.6
61	1.5
60	1.5
59	1.4
58	1.4
57	1.3
56	1.3
55	1.2
54	1.2
53	1.1
52	1.1
51	1.0
50	1.0
49	0.9
<=48	0.0

CLASSROOM CONTRACT

You are expected to uphold the classroom contract as follows:

- **Be Prepared**: You are expected to complete all pre-work and homework before class starts so that you are ready to be engaged in conversations and activities.
- **Be Present**: You are expected to be in class, on time, and actively present in the learning process.
- **Participate**: You are expected to be an active contributor in class. This means both asking questions and helping others.
- **Create space for learning:** You are expected to create and cultivate a space where learning is conducive for all learners. This means that you participate in the class without dominating the learning space.

DISCUSSION EXPECTATIONS

(Adapted from Dr. Susan Shaw, Oregon State University & Angela Velez-Solic, Indiana University Northwest)

- Commit to learning about, understanding, and supporting your peers.
- Assume the best of others in the class and expect the best from them.
- Recognize and value the experiences, abilities, and knowledge each person brings to class.
- Participate actively in the discussions.
- Think through and re-read your comments before you post them.
- Never make derogatory comments toward another person in the class. Do not demean or embarrass others.
- Do not make sexist, racist, homophobic, or victim-blaming comments at all.
- It is ok to disagree with ideas, but do not make personal attacks.
- Be open to being challenged or confronted on your ideas or prejudices.
- Challenge others with the intent of facilitating growth.
- Encourage others to develop and share their ideas.
- Be willing to change.
- Any form of hatred is considered serious and inappropriate.

HOW TO BE SUCCESSFUL

- **Come to class**: Participating in class lectures and practice problems will give you structured time to absorb new concepts, practice them, and ask questions to the Instructor and your peers.

- **Ask for help early**: In programming, everything stacks, meaning what you learn today, you WILL use tomorrow. Therefore, if you start to fall behind, it is imperative that you ask for help as soon as possible.

- **Practice**: It is not enough in programming to just read about or listen to lectures about concepts. It is important to solve problems both in-class and on your own. You should work through practice problems (like on PracticeIt) until you are able to solve them without the aid of another person.

- **Utilize the textbook, slides, and videos provided**: While lecture will cover most of the concepts, the textbook, slides, and videos provided will provide more detail and reference outside of class.

GETTING UNSTUCK

Getting stuck is part of the programming process. However, one of the most useful skills you may learn from this course is "how to get unstuck."

Here are some suggestions:

- **Make systematic changes.** Look carefully at the work you have just done. Try changing one thing and see what effect it has.
- **Talk to a rubber duck.** No really, this is actually a thing. Sometimes if you take a moment to tell someone (even someone non-techie) what you're trying to do, you'll end up having an Ah-Ha moment of clarity!
- **Ask a classmate.** Try to share ideas about how to figure out the problem rather than telling your classmate the answer. You'll learn as much by helping others find their mistakes as you will by finding your own.
- **Take a break.** Sometimes you just need to take a break! Looking at code with a fresh set of eyes solves problems quicker than beating your head against the computer :)
- **Ask the Instructor.** I'm here to help you. It's literally my job.

LETTER OF RECOMMENDATION REQUESTS

Letters of recommendation are often needed for applications to transfer universities, jobs, and internships. Instructors take pride in the letters that they write for students and can only craft strong letters for students whom them know well. Part of your job as a college student is to become the kind of student that a professor can speak highly of in a letter of recommendation — hardworking, capable, and intellectually inquisitive.

Before requesting a letter of recommendation, ask yourself:

- Have I discussed my academic or career goals with this instructor?
- Have I demonstrated an excellent work ethic or produced quality work in this course?
- Have I shown or communicated a passion for the subject or concepts that were taught?
- Will this instructor be able to incorporate personal and specific details about my academic growth or trajectory?

It is not necessary that the person writing your recommendation be able to speak to every bullet point above, but they should be able to speak to at least one of them.

Remember that requests may be declined for a variety of reasons, including, but not limited to: insufficient time to write the letter, not knowing the student well enough to provide specific character observations, or too much time has elapsed since working with the student.

Requests for recommendations should come well in advance of the deadline for submission (i.e., at least 14 days in advance of the deadline, but the more notice the better).

Student Services

Campus Closures / Cancelled Class

There are two types of suspended operations possible: campus is closed or classes are cancelled. In the event of campus closure or cancelled class, students will be notified via Canvas of their expectations in relation to school work.

You can read Shoreline's Suspended Operations Procedures.

Students with Disabilities

Shoreline Community College is committed to providing educational programs without regard to disabling conditions as defined by Section 504 of the Rehabilitation Act of 1973. Reasonable accommodations will be made and no otherwise qualified individual with disabling conditions shall, on the basis of disability, be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any program, activity or service administered by the college.

For more information: http://www.shoreline.edu/oss/students-with-disabilities/

Tutoring Services

Tutoring Services provides students with free one-on-one tutoring support for any Shoreline Community College classes. Students can receive 2 hours of free tutoring a week per class they are registered for in a quarter.

They also have drop-in learning centers, such as the Computer Science and Engineering Learning Center, Biology/Chemistry Learning Center, Business Technology & eLearning Center, Physics Learning Center, Conversation Groups, and more (schedules and availability vary).

For more information and to apply for tutoring assistance or to apply to become a tutor, please visit our office in 4228 (Library), email pttutors@shoreline.edu, call 206-546-4776, or check out the webpage: www.shoreline.edu/tutoring.

COUNSELING CENTER

The Counseling Center provides free, confidential and professional counseling services, resources, and referral to support the academic and personal success, health, and well-being of our students and campus community.

Students often visit the Counseling Center to discuss a wide variety of topics: depression, anxiety, relationship concerns, and stress management; indecision about major or career path; and academic concerns such as failing grades, struggling with a subject, or managing a learning disability. The Center also supports students who may be feeling suicidal or in crisis.

- FOSS – 5245, 206-546-4594, www.shoreline.edu/counseling-center

Need support when they are not available? For 24/7 emergency counseling, referral, or assistance please contact:

- King County: 24-Hour Crisis Line | 866-427-4747
- Snohomish County: 24-Hour Crisis Line | 800-584-3578
- Live Chat: crisischat.org
- Crisis Text Line: Text 741741
- 911 (for immediate health-related emergency)

SUCCESS COACHING

Shoreline Community College provides students with Success Coaching to help students develop and grow their academic skills. Coaching is an ongoing professional relationship where you work on study strategies, goal planning, time management, balancing life's priorities, focus, motivation, and organization. Coaches also help you identify and connect to other resources. Coaching is not counseling , advising, or tutoring.

For more information: shoreline.edu/advising/success-coaches.aspx .
To schedule an appointment: successcoaching@shoreline.edu or 206-546-4559.

ADDITIONAL CAMPUS RESOURCES

Check out the Current Students page for more information about Academic Support, Student Services, Campus Life, and much more.

Privacy Policies

To learn about the practices regarding personal information that may be collected from users in this course, check the privacy policies below:

- PracticeIt Privacy Policy
- Canvas
- Panopto
- Shoreline Privacy Policies
- Student Policies
- Microsoft 365
- Google Privacy Policy

Accessibility Policies

Below are links to accessibility policies for sites used within this course:

- Canvas
- Panopto Accessibility Features
- Shoreline Community College (Audio Version)
- Microsoft Office 365
- Google (covers YouTube)