CS 152 Computer Programming Fundamentals using Java

Brooke Chenoweth

Spring 2020

Instructor

Name: Brooke Chenoweth

Email: bchenoweth@cs.unm.edu (Include course number in a meaningful subject line, please)

Office: Room 2060 of Farris Engineering Center (FEC)

Office Hours: MF 1:00pm - 3:00pm (or email me to schedule a meeting at another time)

Textbook

Recommended Textbook: *Java, A Beginner's Guide*, Herbert Schildt
    The bookstore will have the most recent (9th) edition available. However, if you would prefer to use a slightly older edition (if, say, you bought a used copy off someone who took this course in a past semester), that will also work just fine. The concepts we will be learning in this course have not changed since then.

Course Description

CS-152 is an introduction to the art of computing. This course has several goals. Students who successfully complete the course should have a firm grasp on creating small programs in Java, should be able to solve problems with code, should have a more full idea of what Computer Science as a field is, and most importantly not be afraid to dive into code!
    The primary emphasis of this course is to develop fluency in working with conditional control flow, looping structures, and procedural programming techniques. The secondary emphasis is to apply those skills in solving computational problems.
    CS-152 is a project based course: students spend many hours writing programs that have a wide range of applications. In past semesters these have included business applications, multimedia manipulations, video games, simulations of complex systems, and scientific models.
    CS-152 is currently taught using the Java programming language.

While Java is an Object Oriented Programming (OOP) language and while students in CS-152 will certainly be working with Objects, CS-152 is not a course on OOP. Experienced Java programmers with solid skills in control flow, procedural programming and computational problem solving should skip CS-152 and take CS-251 (Intermediate Programming). CS-251 is also currently taught in Java and its primary emphasis is on understanding, developing and applying OOP skills.

Schedule of Topics[1]

Week	Topics
1	Introduction, variables
2-3	Expressions, Control flow, Branching, Loops
4-5	Methods
6-7	Arrays, Recursion
8	Review and Midterm
9	2D Arrays
10-12	Objects and classes
13	Enums
14-15	Advance topic preview, Review and Final

Lab Attendance

Lab class meets once per week in a computer lab. You are expected to attend. If for some reason you cannot attend your regularly scheduled lab class but are able to attend one of the other lab classes during the same week, then that other lab can count as your lab attendance.

NOTE: Before attending a different lab section, check with that section's lab instructor to make sure there is an open space for you.

NOTE: In order to receive credit for attending a different lab section, *it is your responsibility* to make sure the lab instructor of that section *counts you as present while you are in the lab* class (NOT after the fact). Your name will not be on that instructor's roster. You must make sure to speak to the lab instructor during the lab class, telling him or her first and last name, and in what section you are registered.

If you feel you need extra help or would simply like to attend another lab section in addition to your own, then you are encouraged to do so. First, however, please contact the lab instructor of the extra lab you want to attend to make sure that there is enough space. (Of course, attending two labs in one week will not count extra towards lab attendance in my gradebook. Do this for your educational benefit, not for points.)

Working Together

Working together and helping one another on all projects (but not on exams and quizzes) is highly encouraged. This includes discussion of *project specification*, *algorithms*, *data struc-*

---

[1]subject to change

tures, and *test cases*. It does not include code. Each person must author his or her own code.

When trying to track down a bug, it is sometimes helpful to have someone else have a look. It is acceptable to show someone else your code for this purpose. It is *not* acceptable to look at someone else's solution before submitting your own.

Cheating

Cheating will be dealt with very harshly, and includes, but is not limited to:

- Copying code from another person or having someone else write your code.

- Copying code from the Internet or another source. (If there's some code that you would really, really like to use, please check with us before you do it.)

- Attempting to disassemble, decompile, or otherwise reverse engineer compiled example programs.

- Allowing another person to copy your code.

- Leaving your code (paper or electronic copies) where others can find it. You are responsible for the security of your intellectual property.

- Use of external libraries other than those included with Java without documenting it. *Note: If you do document usages of external libraries, it will not be considered cheating. However, you still might not receive full marks if the library covers too much of the assignment. It is best to check with one of the instructors before using an external library.*

- Violation of copyright or license agreements on external libraries. If you use external library code, it is your responsibility to understand and comply with the appropriate copyright and license issues.

- Violation of the University policy on acceptable computer use.

> Not being able to explain how some significant part of your code works will result in a zero for the assignment. It does not matter if the reason you do not understand your code is because you did not do the work or because you got your code working by trial and error. If I suspect someone of cheating, the first thing I do is ask that person to explain the code. This is not a quiz you ever want to fail. Too much code in the real world is built and maintained by trial and error. It makes for a house of cards. It is not a good way to produce code nor is it a good way to learn.

Grading

- 50% Programming Assignments (labs and projects)

- 40% Exams (midterm and final)

- 10% Lecture, quizzes, and participation

Submitting Assignments

All assignments must be in UNM Learn in order to receive credit for them. If Learn is down, you may e-mail the assignment to the lab instructor in order to prove it was done on time. However, it must be inside Learn before you can receive credit for it.

It is your responsibility to make sure the correct file is submitted to Learn before the deadline. Always double-check your submissions. If you realize you accidentally attached the wrong file, immediately resubmit the correct file with a note explaining the error.

Assignments are due at midnight. (Technically, the deadline in Learn is 11:59PM. The graders will accept submissions up to 12:15 or so to account for variations in clocks, network hiccups, etc.) You are permitted to submit multiple times and the most recent on time submission will be the one graded, so feel free to submit partial solutions as you complete milestones.

Pay attention to deadlines! Assignments are not always due on the same day of the week. You will generally have at least a week for each one, but some larger assignments may give you more time.

Late Assignments

Ideally, all assignments will be completed and submitted well before the deadline. However, I am well aware that sometimes this will not be possible due to illness, technical problems, other classes, etc. For that reason, each student is given a pool of ten extension days they may use during the semester, limited to at most three days for any single assignment.

- Extension days may *not* be used for online quizzes or surveys, since they generally will be discussed in the next lecture.

- You may use a maximum of three extension days for a given assignment. I want to be able to discuss the solution to an assignment within a reasonable amount of time after the deadline.

- You have a total of ten extension days over the course of the semester. It is up to you if you want to turn in three assignments three days late, five assignments two days late, every assignment one day late, or some other variation. You do not have to use them at all.

- Weekends count as days, too, so if an assignment is due on Friday and you don't turn it in until Monday, that would use 3 extension days.

- Use your extension days wisely. If you use all of them on 20 point assignments early in the term, you won't have any left to spend on a difficult 100 point assignment later on.

Americans with Disabilities Act (ADA) Policy Statement

The Americans with Disabilities Act (ADA) is a federal antidiscrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Accessibility Resource Center (`http://arc.unm.edu/`)

> The ARC is there to help you. If you have a condition where you need extra time or a quiet place for exams, I strongly recommend that you take advantage of their services.

Title IX Sexual Harassment Policy Statement

No form of discrimination, sexual harassment, or sexual misconduct will be tolerated in this class or at UNM in general. I strongly encourage you to report any problems you have in this regard to the appropriate person at UNM. As described below, I must report any such incidents of which I become aware to the university. UNM also has confidential counselors available through UNM Student Health and Counseling (SHAC), UNM Counseling and Referral Services (CARS), and UNM LoboRespect.

In an effort to meet obligations under Title IX, UNM faculty, Teaching Assistants, and Graduate Assistants are considered "responsible employees" by the Department of Education (see pg 15 – `http://www2.ed.gov/about/offices/list/ocr/docs/qa-201404-title-ix.pdf`). This designation requires that any report of gender discrimination which includes sexual harassment, sexual misconduct and sexual violence made to a faculty member, TA, or GA must be reported to the Title IX Coordinator at the Office of Equal Opportunity (`http://oeo.unm.edu`). For more information on the campus policy regarding sexual misconduct, see: `https://policy.unm.edu/university-policies/2000/2740.html`

Academic Integrity Statement

Each student is expected to maintain the highest standards of honesty and integrity in academic and professional matters. The University reserves the right to take disciplinary action, up to and including dismissal, against any student who is found guilty of academic dishonesty or otherwise fails to meet the standards. Any student judged to have engaged in academic dishonesty in course work may receive a reduced or failing grade for the work in question and/or for the course. Academic dishonesty includes, but is not limited to, dishonesty in quizzes, tests, or assignments; claiming credit for work not done or done by others;

hindering the academic work of other students; misrepresenting academic or professional qualifications within or without the University; and nondisclosure or misrepresentation in filling out applications or other University records.

Credit Hour Statement

Federal Credit Hour Definition: A credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally-established equivalency that reasonably approximates not less than:

(1) one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately fifteen weeks for one semester or trimester hour of credit, or ten to twelve weeks for one quarter hour of credit, or the equivalent amount of work over a different amount of time; or (2) at least an equivalent amount of work as required in paragraph (1) of this definition for other activities as established by an institution, including laboratory work, internships, practica, studio work, and other academic work leading toward to the award of credit hours. 34CFR 600.2 (11/1/2010)

Computer Science Advisement

Whether or not you have been officially admitted to the CS program yet, please consult the Department of Computer Science Undergraduate Advisor with any questions you may have. This is especially important when navigating the prerequisites for certain courses and resolving scheduling issues. More general university advisors are not always familiar with the details of the computer science program.

Computer Science Department Website

I host some course files on the CS department servers. Sometimes I may make a typo in a link or set the access permissions on a file incorrectly so that it cannot be reached. In those cases, let me know and I'll fix it.

It is also possible that the entire CS department website (`http://cs.unm.edu`) is un-reachable for some reason. If that happens, I suggest you email the CS support team directly (email: `cssupport@cs.unm.edu`), since that will be faster than emailing me and waiting for me to see the message and email support myself. (Unfortunately, it is a bit hard to find the CS support email when the CS site is down, which is why I included here.)