Computer Programming Fundamentals in Java
CS 152L - Fall 2017

Instructor:

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Course Description

CS-152 offers a solid foundation in the art of computing. For most students, CS-152 should not be a first course in computer programming, but should only be taken after being familiar with writing computer programs in Java or some other computer language such as Python, MATLAB, C/C++, JavaScript, or BASIC.

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 for 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 in the Eclipse Integrated Development Environment.

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 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 developing and applying OPP skills.

Required Textbooks and Supplies

1. *Introduction to Java Programming, Brief Version (11th Edition)* by Y. Daniel Liang
2. USB 2 or 3 Flash Drive
3. i>clicker® (needed for lectures only, not labs). Available UNM bookstore.
4. Java JDK (Java SE Development Kit version 8u144): http://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html
5. IntelliJ IDEA Integrated Development Environment (IDE) Community edition: https://www.jetbrains.com/idea/download/

Communications:

Lecture Class Communications: CS-152 is a lecture/lab class. The lecture class is large, but is remains a good forum in which to ask questions. The class becomes far more interesting for everyone when it is interactive. Please raise your hand and ask questions.

Lab Class Communications: The lab sections are smaller. The lab instructors are undergraduate students who have taken the course, done well in it, and who want to practice their skill by teaching it. The lab instructors may occasionally speak or show something to the section as a whole, but in general, it is not their roll to lecture. Lab class is a time for you to work ***individually*** on your programming assignments. It is a time to ask code specific questions that require an instructor to look directly at your code. It is a time for you to receive one-on-one coaching on how to go about debugging your code. The lab instructors are the people who grade most of your assignments. Thus, lab class is a time for you to get direct feedback on what was wrong with a graded assignment or on how a past assignment could have been cleaner, clearer, shorter or more efficient. However, the only way you are going to get this one-on-one instruction is if you raise your hand and ask for it. The lab instructor is there to answer your questions. If you do not ask any, then you will not get any answers.

Blackboard Learn Communications: CS-152 is a web enabled class meaning that Blackboard (https://learn.unm.edu/) is used to post assignment due dates, submit assignments, check grades and for out-of-class discussions. The Blackboard Larn discussions are a great place to go for questions and answers, to see what other students are stuck on, to interact intellectually with your classmates, and to arrange meeting and/or study sessions.

E-mail Communications (Subject: always include CS-152): TO COMMUNICATE WITH SOMEONE VIA E-mail, YOU MUST GET THE RECIPIENT TO READ THE E-mail. Lots of e-mail that arrives in people's inbox is never read. In an e-mail message, the ***sender field*** and the ***subject field*** are usually the only two pieces of information used to determine whether an e-mail is read. If you want the subject field to get the recipient's attention, then it must be something that is ***meaningful to the recipient***. The subject "!!!!IMPORTANT!!!!", for example, is meaningless since it is oft used by mass marketers. The subject "computer science class" might be meaningful to you because you might have only one computer science class. However, is meaningless to the recipient who receives hundreds of e-mails a month advertising computer science classes. If you want to get my attention (that is, if you want me to read your email), then begin the subject field with "**CS-152**" and follow it with something that is meaningful to me. For example: "**CS-152: Lab 1 grading error**". I (and you lab instructors) want to read your e-mails. We do not want to read advertisements, scams, solicitations or other junk. When I do not recognize a person's name, I, like many people, use the e-mail subject to help me choose between what to trash, what to ignore and what to read.

Lecture Attendance

Lecture class meets three times per week: Monday/Wednesday/Friday 10:00 to 10:50. Lecture Attendance is a required component of the course. Quizzes, via i-clickers, will be given during almost every lecture. There are no make-up quizzes. Each quiz counts as less than 0.3% of your final grade. Thus, missing one quiz will have no effect on your final grade. Missing many quizzes will affect your final grade (by as much as 10%). This is one reason that students with extended illnesses or travel requirements should seek an incomplete so that the work can be made up next semester.

Lab Attendance

Lab class meets once per week in a computer lab. Lab attendance is taken both at the beginning and end of class. If you are absent, leave early or arrive more than ten minutes late, then you will be marked as absent. Each student may miss up to three lab classes during the semester without there being any direct effect on the grade. Each additional missed lab class will result in -2% to the student's final lab grade average. There are six lab sections at different times during the week. 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: Associated with each lab class there is usually a 20 point lab assignment or a larger point project assignment. If you attend the lab class associated with a particular assignment, then the minimum grade you will receive on that assignment will be 10 points - regardless of its quality or lateness (up to the 7-day late cutoff).

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.

NOTE: The three lab classes that every student may miss without having final grade points deducted are designed to cover sports travel that prevents attending a different lab during the same week, short-term illnesses and other such events. A student that needs to miss many classes due to an extended or reoccurring illness or hospitalization will need to request a grade of *Incomplete* for the semester. With this, arrangements can be made for missed lab attendance and work to be completed during the following semester.

If you feel you need extra help or would simply like to attend 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.

Lab and Project Assignments

This is a computer programming course and the primary part of your grade is based upon authoring programs. Labs are mini programming projects usually due in less than one week from when assigned. Projects are larger longer term and worth more points.

Late Policy

Lab assignments and projects can be turned in late with a penalty of FIVE PERCENT PER DAY. Assignments more than 7 days late will not be accepted. ***This includes medically excused lateness!!!*** The primary reason for no negotiation in this is that solutions are generally released and discussed in class one week from the due date. There are, however, opportunities to make up some missed work through extra credit assignments. A student that needs to miss many classes due to an extended or reoccurring illness or hospitalization will need to request a grade of *Incomplete* for the semester. With this, arrangements can be made for missed work to be completed during the following semester.

The lateness of an assignment is determined solely by the due date and the *Blackbord Learn timestamp of the final version* you submit.

When you submit an assignment in Blackboard, it is ★YOUR RESPONSIBILITY★ to:

1. Exit Blackboard,
2. Log back into Blackboard,
3. Check that all required files are attached,
4. Check that the files uploaded correctly, and
5. Check that the contents of the submission are what you expect them to be. Do this by opening and examining your files from Blackboard. Be sure to examine them carefully to make sure you submitted the correct version.

Up until the assignment due date, you can take back your submission, and resubmit. Doing this correctly is your responsibility and part of learning how to use computer systems.

Academic Honesty

Students are encouraged to help each other on labs through personal interaction and through the Blackboard discussions. There is, however, a difference between helping and cheating. Cheating includes:

1. Copying another person's work,
2. E-mailing or giving an electronic version of your work to anyone other than a course instructor.
3. Leaving a paper or an electronic version of your work where others can get it: you are responsible for your own computer security. If you save a local copy of your work on a lab computer, delete it and empty the trash before logging off!
4. Having another person complete any portion of your work.

The first time a student is caught cheating; the student will receive a negative grade for the assignment (i.e. if the assignment is worth 100 points, then a score of -100 is assigned).

Grading

Each student's final course grade is a weighted average of three component grades:

1) Programming Assignments: Labs and Projects (45%).
2) Quizzes: one each lecture period (10%).
3) Exams: Midterm and Final (45%).

Course Letter Grade: Each student's numerical course grade is:

$$G = 45\%\left(\frac{labPointsEarned}{totalLabPoints}\right) + 10\%\left(\frac{quizPointsEarned}{totalQuizPoints}\right) + 45\%\left(\frac{examPointsEarned}{200}\right)$$

The course letter grade is calculated form the numerical course grade by using the table below.

Letter Grade Score Ranges					
>101%	A+	93 - 101%	A	90 - 92%	A-
87 - 89%	B+	83 - 86%	B	80 - 82%	B-
77 - 79%	C+	70 - 76%	C		
67 - 69%	D+	60 - 66%	D		
		< 60%	F		

Title IX:

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 (oeo.unm.edu). For more information on the campus policy regarding sexual misconduct, see: https://policy.unm.edu/university-policies/2000/2740.html

ADA:

In accordance with University Policy 2310 and the Americans with Disabilities Act (ADA), academic accommodations may be made for any student who notifies the instructor of the need for an accommodation. If you have a disability, either permanent or temporary, contact Accessibility Resource Center at 277-3506 for additional information.

Syllabus	
	Topics
Week 1	Chapter 1 Introduction to Computers, Programs, and Java Chapter 2 Elementary Programming The Intellij IDE
Week 2	Chapter 3 - Selections
Week 3	Chapter 4 - Mathematical Functions, Characters, and Strings
Week 4	Chapter 5 - Loops
Week 5	Chapter 6 - Methods
Week 6	Chapter 7 - Single-Dimensional Arrays
Week 7	Chapter 7 - Single-Dimensional Arrays
Week 8	Review and Midterm Exam
Week 9	Chapter 8 - Multidimensional Arrays
Week 10	Chapter 9 - Objects and Classes
Week 11	Chapter 9 - Objects and Classes
Week 12	Chapter 14 - JavaFX Basics
Week 13	Computational Problem Solving
Week 14	Computational Problem Solving
Week 15	Computational Problem Solving
Week 16	Final Exam: Friday, December 15, 7:30 AM to 9:30 AM CENT-1041 (our usual lecture room)