Point Loma Nazarene University
CSC/EGR 143: Introduction to Computer Programming (3 units)
Fall 2018

Instructor:
Dr. Lori Carter, Professor of Computer Science (619) 849-2352
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Office hours:
M,W,F 10:30-12:00 TR 8:00-9:30, 1:30-2:00

Course times and location:
Lecture TR 10:00-10:55 (sections 1,2) or MW 7:25-8:20 (section 3,4) LA 101

Lab section 1: TR 11:00-11:55	LW 220	Lab section 3:MW 1:30-2:25	LW 220
Lab section 2: R 3:00-4:45	LW 220	Lab section 4:R 3:00-4:45	LW 220

Text and other supplies:
Anderson and Franceschi. *Java Illuminated:An Active Learning Approach 5th Edition.* Jones and Bartlett 2019. We will cover most of chapters 1-9 in this class. The same text is used for CSC 154. A USB (flash) drive is recommended for saving programs created in lab.

Catalog Description:
Introduces the syntax of a high level programming language with emphasis on the programming environment and the use of the constructs of the language to write simple application programs. Topics include data types, sequential, conditional, and iterative statements, arrays, applets, simple graphical animation, the use and design of objects, and I/O. Lecture two hours and laboratory two hours each week.

More specifically, this course is designed:
- To introduce students to general computer programming concepts and environments. Specifically, we will be using the Java language, with the jGrasp integrated design environment. Students will develop programs from algorithm design to testing.
- To present the syntax of the object-oriented computer programming language Java, and to prepare the student to write simple programs in preparation for more advanced computer science courses and for the Computational Science minor. This course covers basic data types and associated operations, use and theory of objects, graphics, animations, conditional statements, arrays, and loops. Students will gain experience writing programs for many contexts including science, business, engineering, and mathematics.

Course Learning Outcomes:
Students will be able to write correct and robust software.
Students will analyze the interaction between hardware and software.
Students will be able to apply their technical knowledge to solve problems.
Students will collaborate effectively in teams.
Students will be able to understand and create arguments supported by quantitative evidence, and they can clearly communicate those arguments in a variety of formats.

Course Organization:
This course will be taught in a hybrid format. We will meet together formally during lecture time on Wednesay or Thursday only (according to section), and each section will meet for their labs as scheduled. Monday and Tuesday

will be optional question and answer times. Because of this format, students are expected to complete quite a bit of online work in order to be prepared for the lecture.

Homework: Each week, students will get an online introduction to the material, be responsible for reading a section of the text, and taking online quizzes over the introduction and the text sections. In addition, there will generally be a video on constructing a program and a practice program based on the concepts for the week. All quizzes must be completed by 1 minute before midnight on the Tuesday prior to the Wednesday/Thursday class meetings. Note that they will not even be available after midnight. While there is no make-up for quizzes not taken by the deadline, your 3 lowest on-line quizzes will be dropped.

Monday/Tuesday: While there will be no formal presentations on these days, I will be available in the classroom to answer questions on reading, online quizzes, sample programs, programming assignments, or anything else. **Please take advantage of this time for personal help!**

Wednesday/Thursday meeting: Attendance is mandatory. There will be a formal presentation of some of the more complex material and/or exercises to work on in class to improve understanding. Student versions of the lecture slides can be obtained from: canvas.pointloma.edu. All written quizzes and exams will also take place during these sessions.

In class exams and quizzes: During the course of the semester, you will have 2 in-class written quizzes, 1 programming quiz, 1 programming exam and 1 written exam in addition to written and programming final exams. The programming exam and quiz will take place during your lab session. The schedule is as follows:

Date	Type	Time	Covers	% of grade
Sept 18/19 & Nov 14/15	Written quiz	20 minutes each	Online quiz material, terminology	4 each (8% total)
October 10/11	Programming quiz	45 minutes	Labs to this point	4
October 17/18	Written Exam	Entire lecture period	Chapters 1-6.4	9
October 17/18	Programming Exam	55 minutes	Labs to this point	9

If you know that you will be missing an exam or quiz for a school event, you must make arrangements to take the test **prior** to it being administered to your class. If you miss a test for any unexcused reason, you can expect to receive a 0 on that exam/quiz.

Labs: For all labs you may use books, notes, powerpoints, or help (not complete programs) with pieces of code that you find on the internet. If you are using code found on the internet you MUST document that in your program (provide the URL). Labs are divided into prep and main labs, and the main lab and prep lab with the lowest grade for each student will be dropped. Lab attendance is **mandatory** unless you have already turned in the lab for that week.

Prep Labs: designed to be a straightforward use of the concept just covered. These labs are due either by the end of the 55 minute lab session, or after 55 minutes of the 1 hr 45 minute lab session at which they are assigned. You must turn in the prep lab in Canvas by the time it is due to receive full credit. If it is up to 5 minutes late there is a 20% penalty. **It will not be accepted later that that**. **Prep labs are to be done without help from peers.** You are not to get assistance from another person **except the professor or a lab assistant**. The practice program found in each module will help you to prepare for the prep lab.

Main Labs are due on Wednesdays (section 3)/Thursdays (sections 1,2,&3). They must be turned in during the **first 10 minutes of the lab to be accepted.** You can get partial credit for an uncompleted lab that is turned in on time. You may get your lab signed off early in the virus lab with a lab assistant or during those first 10 minutes. On the day that a lab is due, the lab assistant will check it **only once** and then make notes of what doesn't work. If you are getting it checked in the virus lab, you may fix any errors and then get it re-checked. You may work on a main lab with a partner. If you do that, **please turn in only 1 lab with both names on it.** To turn in main labs, staple your signed lab sheet to a hard copy of your labs. If you work together, please make sure that both students understand the material as you can expect questions from the labs on exams.

To receive full credit on a lab your lab must:

- Be original work (or work with 1 partner on Main labs)
- Be well-documented (comments)
- Be well-formatted (indentation and white space)
- Use meaningful identifiers
- Follow requested style where indicated (certain type of loop, data structure, etc.)
- Work correctly for all test cases run by Dr. Carter or the Lab Assistant

For the purposes of this class, here is a clarification of what I consider to be "dishonest."

Written exams: Using anything besides your brain, writing implement, and anything else I have specifically noted prior to the start of the exam. Usually it will just be your brain and writing implement.

Programming exams: Using anything that connects to another person – from the class or otherwise – while taking the exam. To be very clear, email, social media, help websites (you asking a question), phones, any messaging, any conversation, is off limits.

Online quizzes: Accepting answers, written or verbal, from another person without reading the assigned material yourself and having significant discussion with the other person about the answer. In other words, you may work collaboratively, but you may not just get the answers and write them as your own.

Labs:

- Putting anything into a program that someone else supplied without you understanding how it works. If you use a piece of code found on the internet, you must cite that code (give URL).
- Accepting a program file from, or sending a program file to another person where that file is used as the basis for the recipient's program.
- Regardless, **the majority of the code must be original work** (from your brain and hands) or the original work of your partner in the case of main labs. When working with a partner, both people must be present.

Final Exam: The final exam will be comprehensive, and contain both written and programming portions. The written final will be during the last lecture period. **The programming final exams (int the Main lab) are as follows:**
Thursday lecture: Thursday, 12/13 from 10:30am-1:00pm
Wednesday lecture: Wednesday, 12/12 from 7:30am-10:00am

Grading:

Online quizzes	10%	Main Labs	22%
In class quizzes	12%	Midterm Exams	18%
Prep Labs	13%	Final Exams	25%

Final grades will be determined as follows:

100-93%	A		80-82.99%	B-		67-69.99%	D+
90-92.99%	A-		77-79.99%	C+		63-66.99%	D
87-89.99%	B+		73-76.99%	C	C	60-62.99%	D-
83-86.99%	B	B	70-72.99%	C-		0-59.99%	F

Additional requirement for passing course:

In order to receive a passing grade in this class ("credit" or D- or above) you must have both an overall average of 60% or above, **AND** have passed the final exams (written and programming average) or midterm exams with a grade of 60% or above. If you pass at least one of the sets of exams, you will get the grade as calculated above. If not, you will receive a no-credit or an F in the class.

Credit Hour Information:

In the interest of providing sufficient time to accomplish the stated course learning outcomes, this class meets the PLNU credit hour policy for an 3 unit class delivered over 15 weeks. Specific details about how the class meets the credit hour requirements can be provided upon request.

Distribution of Student Learning Hours
It is anticipated that you will spend a minimum of 37.5 participation hours per credit hour in your course.The estimated time expectations for this 3 credit course are shown below:

Assignments	Total Course Hours
Reading: Text and Notes	14
Written Assignments	7
Lectures	14
Labs	65
Online Quizzes	5.5
Written and Programming Exams	7.5
TOTAL	113

University Mission:

Point Loma Nazarene University exists to provide higher education in a vital Christian community where minds are engaged and challenged, character is modeled and formed, and service is an expression of faith. Being of Wesleyan heritage, we strive to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.

MICS Department Mission:

The Mathematical, Information, and Computer Sciences department at Point Loma Nazarene University is committed to maintaining a curriculum that provides its students with the tools to be productive, the passion to continue learning, and Christian perspectives to provide a basis for making sound value judgments.

Attendance:

Attendance is expected at each class session. In the event of an absence you are responsible for the material covered in class and the assignments given that day.

Regular and punctual attendance at all classes is considered essential to optimum academic achievement. If the student is absent from more than 10 percent of class meetings, the faculty member can file a written report which may result in de-enrollment. If the absences exceed 20 percent, the student may be de-enrolled without notice until the university drop date or, after that date, receive the appropriate grade for their work and participation. See http://catalog.pointloma.edu/content.php?catoid=24&navoid=1581#Class_Attendance in the Undergraduate Academic Catalog.

Because this course is a hybrid course, this is how attendance will be calculated:

Face to face portion of the class: You must be present on time for the full class for you to be considered present in the face to face meeting (lecture or lab). Exception is that if you complete a lab early, you may leave.

Online portion of the class: You are expected to work on material online every week. In order to get credit for being "present" in the online portion of the class each week you must complete at least one online quiz before the due date/time for that week.

If you miss 20% of the class, you can be automatically de-enrolled.

Class Enrollment:

It is the student's responsibility to maintain his/her class schedule. Should the need arise to drop this course (personal emergencies, poor performance, etc.), the student has the responsibility to follow through (provided the drop date meets the stated calendar deadline established by the university), not the instructor. Simply ceasing to attend this course or failing to follow through to arrange for a change of registration (drop/add) may easily result in a grade of F on the official transcript.

Academic Accommodations:

While all students are expected to meet the minimum standards for completion of this course as established by the instructor, students with disabilities may require academic adjustments, modifications or auxiliary aids/services. At Point Loma Nazarene University (PLNU), these students are requested to register with the Disability Resource Center (DRC), located in the Bond Academic Center. (DRC@pointloma.edu or 619-849-2486). The DRC's policies and procedures for assisting such students in the development of an appropriate academic adjustment plan (AP) allows PLNU to comply with Section 504 of the Rehabilitation Act and the Americans with Disabilities Act. Section 504 (a) prohibits discrimination against students with special needs and guarantees all qualified students equal access to and benefits of PLNU programs and activities. After the student files the required documentation, the DRC, in conjunction with the student, will develop an AP to meet that student's specific learning needs. The DRC will thereafter email the student's AP to all faculty who teach courses in which the student is enrolled each semester. The AP must be implemented in all such courses.

If students do not wish to avail themselves of some or all of the elements of their AP in a particular course, it is the responsibility of those students to notify their professor in that course. PLNU highly recommends that DRC students speak with their professors during the first two weeks of each semester about the applicability of their AP in that particular course and/or if they do not desire to take advantage of some or all of the elements of their AP in that course.

Academic Honesty:

Students should demonstrate academic honesty by doing original work and by giving appropriate credit to the ideas of others. Academic dishonesty is the act of presenting information, ideas, and/or concepts as one's own when in reality they are the results of another person's creativity and effort. A faculty member who believes a situation involving academic dishonesty has been detected may assign a failing grade for that assignment or examination, or, depending on the seriousness of the offense, for the course. Faculty should follow and students may appeal using the procedure in the university Catalog. See http://catalog.pointloma.edu/content.php?catoid=24&navoid=1581#Academic_Honesty for definitions of kinds of academic dishonesty and for further policy information.

Final Exam: Date and Time:

The final exam date and time is set by the university at the beginning of the semester and may not be changed by the instructor. This schedule can be found on the university website and in th course calendar. No requests for early examinations will be approved. Only in the case that a student is required to take three exams during the same day of finals week, is an instructor authorized to consider changing the exam date and time for that particular student.

Copyright Protected Materials:

Anticipated schedule:

Week	Topic and At-home reading	Lecture	Lab
1 8/28-8/31	Chapter 1: Programming, Data Representation	Syllabus, Intro to Programming	Syllabus quiz Intro to jGrasp tutorial Building a program tutorial
2 9/3-9/7	Chapters 1.3-2.2: Data types, arithmetic operations	2.3 Arithmetic operations with mixed data types	Arithmetic operations
3 9/10-9/14	Chapters 3.1-3.4 Objects	Scanner and String basics, Objects vs Primitives (3.6, 3.7, 3.10)	DNA stats lab
4 9/17-9/21	Chapter 3.7-3.10: More objects (formatting, random numbers)	**Written quiz (Tuesday for sections 1 & 2** Lecture: more on Strings	DNA report lab
5 9/24-9/28	Chapter 3.11-3.13: Static classes	Static classes, introduction to graphics	Mortgage Payment Lab
6 10/1-10/5	Chapter 4: Graphics basics	Intro to conditional statements –	Business Card Lab
7 10/8-10/12	Chapter 5.1-5.6 Conditionals	Tracing, 5.8-5.9 Nested if statements, comparing Strings	**Programming quiz** Password checker lab – due Monday/Tuesday
8 10/15-10/19	Exam week: get help on Monday/Tuesday!	Written exam	Programming Exam
9 10/22-10/26	Chapter 5.11, 6.1-6.4: Switch, While loops	Switch, While loops, files	Petroleum Tank Lab
10 10/29/-11/2	Chapter 6.3-6.8: more loops, file reading	Nested loops (loop exercise for class) 6.11	Nested Loop Lab
11 11/5-11/9	Chapter 8: Arrays 8.1-8.3.4	Arrays 8.3.5-8.3.7	Array lab
12 11/12-11/16	Chapter 8: searching, sorting	**Written quiz** Sorting 8.6.2-8.6.3	Searching and Sorting lab (due Nov. 29)
13 11/19-11/23	Chapter 9.1-9.3.1: 2D arrays	Thanksgiving	Thanksgiving
14 11/26-11/30	Chapter 9.3-5: 2D arrays	2D arrays, review for final	Voyager Lab
15	Exams	Written Final Exam	Practice Programming Exam
Finals week			Wednesday 7:30 (3,4) or Thursday (1,2) 10:30 Programming Exam