Point Loma Nazarene University
CSC/EGR 1043: Introduction to Computer Programming (3 units)
Fall 2019

Instructor:
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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 Section 1:	TR 10:00-10:55	RS 365
Lecture Section 2:	MW 7:25-8:20	RS 395
Lab section 1:	R 3:00-4:45	RS 395
Lab section 2:	TR 11:00-11:55	RS 395
Lab section 3:	MW 1:30-2:25	RS 395

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 1054. 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, one and multi-dimensional arrays, simple graphical animation, the use of objects, and I/O. Programming assignments get progressively more complex and designed to demonstrate the use of computing in a variety of disciplines including the natural sciences. 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. 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 Monday or Tuesday only (according to section), and each section will meet for their labs as scheduled. Wednesday and

Thursday lecture periods will be optional question and answer times. Because of this format, students are expected to complete quite a bit of online work after the introductory lecture.

Homework: Each week, after an introductory lecture, students will be responsible for reading a section of the text and taking online quizzes over the Canvas 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 3PM on Thursday. Note that they will not even be available after that. While there is no make-up for quizzes not taken by the deadline, your 3 lowest on-line quizzes will be dropped.

Monday/Tuesday: Attendance is mandatory. There will be a formal presentation introducing you to the material that you will read about and on which you will have your next lab. Student versions of the lecture slides can be obtained from: canvas.pointloma.edu. Written quizzes and exams will also take place during these sessions.

Wednesday/Thursday: While there will be no formal presentations on these days, those who come do better in the class. I will be available in the classroom to answer questions on reading, online quizzes, sample and practice programs, programming assignments, or anything else. **Please take advantage of this time for personal help!**

In-class exams and quizzes: During the course of the semester, you will have a vocabulary quiz, 1 programming quiz, several lab quizzes, 1 programming exam and 1 written exam in addition to written and programming final exams. Please check the class schedule for exact dates of the quizzes and exams. See lab section for more information on lab quizzes.

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.

Lab sessions:
All Wednesday and Thursday lab sessions will begin with either a quiz or an activity. Lab quizzes will give you the opportunity to show what you know about the lab that you just turned in. There will also be a programming quiz before the first midterm. The lab quizzes are to be completed without any resources besides a pen/pencil. The programming quiz is open book/notes/previous programs. Activities will be awarded full points if completed during the allotted time.

For all labs you may use books, notes, powerpoints, or help with pieces of code (not complete programs) 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). Late labs are not accepted, but your lowest lab score will be dropped. Lab attendance is **mandatory** unless you have already turned in the lab for that week.

Labs are due by Tuesday night at 8 PM. You will turn in the code on Canvas. To receive full credit on your lab, you must also get it checked by a lab assistant and have them note their approval on Canvas**.** You can get partial credit for an uncompleted lab that is turned in on time. You may get your lab approved during a lab session, or in the virus lab with a lab assistant. You can find links to all lab assignments at the bottom of the online syllabus.

Virus lab rules:
Lab assistants will be available in the virus lab (RS 225) most days to help with programs and to approve programs. The schedule will be posted on the door of the lab. You can work in there any time, but there may not always be help available. You can ask as many questions as you want from the lab assistants any day except **Tuesday** (when the lab is due). On Tuesday, you may ask very specific questions. For example, "what does this error message mean?" or "my answer is always off by one – why?" Please don't say "I'm lost" or "I don't know how to get started." Those are OK questions on other days, just not on Tuesday. **Please don't procrastinate!!!** Lab assistants must be available to help everyone and to approve everyone's labs. **If a student is expecting too much help from a lab assistant, the lab assistant has the right to decline help.**

You may work on a lab with a partner, but with only one partner. If you do that, **make a note in the comments on Canvas** indicating with whom you worked. If you work together, please make sure that both students know the material so that each will do well on the lab quiz. You can expect questions from the labs on exams. If you do not

indicate that you worked together and your lab looks too similar to that of another person, I will at least split the points between you. You could also get a grade of 0 on that lab. Recurring offenses could result in a 0 in the class.

To receive full credit on a lab your lab must:

- Be original work (or work with 1 partner on 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 or quizzes: 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 or quizzes: Using anything that connects to another person – from the class or otherwise – while taking the exam (no email, no social media). The only thing that can be open on your computer during a programming exam or quiz is your IDE (probably jGrasp) and potentially your book if you are using an online version. That means that you can look at code that you have written previously, but not code that you find in help websites. You can also have a written book available along with hard copies of class notes.

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.
- In general, **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 are as follows:**
Monday lecture: Friday, 12/20 from 7:30-10:00
Tuesday lecture: Tuesday, 12/17 from 10:30-1:00

Grading:

Online quizzes	10%	Main Labs	25%
In class quizzes	15%	Midterm Exams	20%
In lab activities	5%	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

Please note that although the lab and the lecture are listed as separate courses in your schedule, they will not be graded separately. Components of each will be applied to your final grade which will be the same for both lecture and lab.

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.

As per the catalog a passing grade is not sufficient for moving on to the next computer science course. **Those who wish to take the next course must pass with at least 70%.**

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 a 3 unit class delivered over 15 weeks. Specific details about how the class meets the credit hour requirements can be provided upon request.

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). If you complete a lab early, however, 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:

Point Loma Nazarene University, as a non-profit educational institution, is entitled by law to use materials protected by the US Copyright Act for classroom education. Any use of those materials outside the class may violate the law.

Anticipated schedule:

Week	**Lecture** Mon/Tues	**Lab** Wed/Thurs	**Assignment**
Week 1 Sept 4-6	**Exception: lecture Wed/Thurs this week only** Introduction: chapter 1	**Syllabus quiz**, Intro to jGrasp tutorial	Read sections 1.1,1.3,1.5 Online quiz 1 due Thurs at 3:30
Week 2 Sept 9-13	Chapter 2: Building a program and arithmetic operators, casting	Building your first program, Metrics report lab	Read sections 2.1-2.3 Watch video, try practice program Quizzes 2a-2c due 9/12 3PM Lab due Tuesday 8PM
Week 3 Sept 16-20	Chapter 3: SimpleDate, String, Scanner	**Quiz on metrics report lab** DNA stats lab	Read sections 3.1-3.7 & 3.10 Watch video, try practice program Quizzes 3a-3b due Thursday 3PM Lab due Tuesday 8PM
Week 4 Sept 23-27	**Vocab quiz** Introduce the additional objects 3.8, 3.9 – Random and DecimalFormat	Ethics (values module) BMI report lab	Read 3.8-3.9 Watch video, try practice program Quizzes 4a-4c due Thursday 3PM Lab due Tuesday 8PM
Week 5 Sept 30-Oct. 4	Introduce static classes 3.11-3.15	**Quiz on BMI lab** Mortgage lab	Read 3.11-3.15 Watch video, try practice program Quizzes 5A due Thursday 3PM Lab due Tuesday 8PM
Week 6 Oct 7-11	Intro to chapter 4 (graphics)	**Programming quiz** Business card lab	Read chapter 4 Watch video, try practice program Quizzes 6A due Thursday 3PM Lab due Tuesday 8PM
Week 7 Oct 14-18	Intro to conditionals, chapter 5 5.1-5.9	Tracing exercise with ifs Password strength lab	Read 5.1-5.9 Watch video, try practice program Quizzes 7A-D due Thursday 3PM Lab due Tuesday 8PM
Week 8 Oct. 21-25 25th is fall break	**Written Midterm** Monday (sec 2)/ Tuesday(sec 1)	**Programming midterm** Wednesday/Thursday (depending on lab day)	Study for midterms Do practice program
Week 9 Oct 28-Nov. 1	Intro switch (5.11), while loops 6.1-6.5	Ethics module (virtue) While loop lab	Read 5.11, 6.1-6.5 Watch video, try practice program Quizzes 9A-9B due Thursday 3PM Lab due Tuesday 8PM
Week 10 Nov. 4-8	Other loops and nested loops (6.5-6.11)	**Quiz on while lab** Nested loop lab	Read 6.5-6.11 Watch video, try practice program Quizzes 10A-B due Thursday 3PM Lab due Tuesday 8PM
Week 11 Nov. 11-15	Chapter 8 – arrays 8.1-8.3	Tracing exercise Array lab	Read 8.1-8.3 Watch video, try practice program Quizzes 11A-B due Thursday 3PM Lab due Tuesday 8PM
Week 12 Nov. 18-22	Chapter 8 – searching an sorting	**Quiz on arrays lab** Searching and sorting lab	Read Canvas intro and section 8.6 Watch video, try practice program Quizzes 12A due Thursday 3PM Lab due Tuesday 8PM
Week 13 Nov. 25-29	**Ethics module – plagiarism with analogies** Chapter 9 – introduce 2D arrays Optional labs	Thanksgiving	Read 9.1-9.3.1 Quiz 14A available
Week 14 Dec. 2-6	Chapter 9 more on 2 D arrays 9.3-9.5	2D Array lab	Read 9.3-9.5 Watch video, try practice program Quizzes 14A-B due Thursday 3PM Lab due Thursday 8PM
Week 15 Dec 9-13	Written final exam Taken during lecture	Practice programming exam	
Week 16 finals	Section 1 Tuesday, 10:30-1:00 Section 2 Friday, 7:30-10:00		