Course Syllabus

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POINT 1902 LOMA NAZARENE UNIVERSITY	**Department: Mathematical, Information and Computer Sciences** **CSC 1043: Introduction to Computer Programming** **Number of Units: 2 + 1 unit for lab**
Fall 2021	

Meeting days, times, locations: Lecture Section 1: T 3:00-4:45 LA 102 Lecture Section 2: M 12:15-2:00 LA 2 Lab section 1: R 3:00-4:45 LA 102 Lab section 2: W 12:15-2:00 LA 2	**Instructor title and name:** Dr. Lori Carter, Professor of Computer Science
Phone: (619) 849-2352	**Email:** loricarter@pointloma.edu
Final Exam: Monday lecture: Wed 12/15 10:30-1:00	**Office Location:** RS 210 **When I am available for Office Hours:**

Tuesday lecture: Thurs 12/16 4:30-7:00	M,W 8:30-9:30, 10:30-12:00 T,R 1:30-2:30 F 10:30-12:00 **Please email me to set up a zoom call or to meet outside.**

PLNU Mission

To Teach ~ To Shape ~ To Send

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.

COURSE 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, 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. The first hour or so of lecture on Monday or Tuesday is required, with the second hour optional question and answer times. You are encouraged to do reading, work on quizzes and ask questions during this time.

Lecture (Monday/Tuesday): 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. Written exams will also take place during these sessions.

Homework: Each week, after an introductory lecture, students will be responsible for reading a section of the text and taking online quizzes.. All quizzes must be completed by **noon on Wednesday**. 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.

Optionally, there will generally be a video on constructing a program and a practice program based on the concepts for the week. Again, these are optional, but students often ask where they can get extra practice. It is available!

Lab sessions: Many Wednesday and Thursday lab sessions will begin with a quiz, either written or programming. The written quizzes are to be completed without any resources besides a pen/pencil. The programming quizzes are open book/notes/previous programs, but must be completed without the help of another person. Following the quiz (if there is one) students will look over the upcoming lab assignment. They will then meet with their group to go over the lab, answer questions, and talk about how to approach it.

Lab quizzes cannot be made up, but the lowest one will be dropped. If you know in advance that you will be missing a quiz for a school function, arrangements can be made to take it in advance.

It is required that you remain in the lab until the end of the session, or you complete any classwork and get your lab signed off. Failure to remain in the lab session will likely result in points off from your lab for that week.

Labs (programming assignments) are started during the lab session and due by the following 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 or the professor and have them note their approval on Canvas**.** There is a grace period. Here are the details for credit on labs:

- Code checked and turned in by 8PM Tuesday – full credit possible
- Code checked by 8PM Tuesday, but code never turned in – 0% possible
- Code checked by 8PM Tuesday and code turned in between 8:01PM Tuesday and noon Wednesday. 70% possible
- Code not checked, but turned in by noon on Wednesday. 70% possible

Note that there is a good chance that there will not be anyone available to check code at the last minute. Code must be checked in person unless you have a pre-approved reason for not attending class in person.

Note that **no labs are accepted after the grace period**, but also that I will drop your lowest lab grade.

Opportunities for getting code checked:

- Virus lab hours (See first module on Canvas)
- Class lab hours
- During the second hour of class lecture

To receive full credit on a lab, your lab must:

- Be original work (a grade of 0 may be awarded if the code of two or more people is too similar)
- Be well-documented (comments in the code)
- 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

Virus lab (help hours to be held in RS 395 this year):

Lab assistants will be available in the Rohr Science lab (RS 395) to help with programs and to approve programs. The schedule will be posted on the door of the lab and announced in class. **If the lab is crowded with people needing help or getting labs checked off, the lab assistant may limit the help given to 5 minutes before moving on to another person**. This is most likely to happen if you are attending a virus lab session that is close to the time when a program is due. Please take this into account when making your plans. Lab assistants are not allowed to start checking the lab of another person after their scheduled time has ended.

For other opportunities to work together, the virus lab is available. That is located in RS 225.

REQUIRED TEXTS AND RECOMMENDED STUDY RESOURCES

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.

COURSE 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. For this course, students will

spend an estimated 113 total hours meeting the course learning outcomes. The time estimations are provided in the Canvas modules and below. 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**

ASSESSMENT AND GRADING

Course point distribution:

Online quizzes	10%
In class quizzes	20%
Labs	25%
Midterm Exams	20%
Final Exams	25%

Final grades will be based on the following:

A	**B**	**C**	**D**	**F**
A 93-100	B+ 87-89	C+ 77-79	D+ 67-69	F Less than 59
A- 90-92	B 83-86	C 73-76	D 63-66	
	B- 80-82	C- 70-72	D- 60-62	

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.

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%.**

STATE AUTHORIZATION

State authorization is a formal determination by a state that Point Loma Nazarene University is approved to conduct activities regulated by that state. In certain states outside California, Point Loma Nazarene University is not authorized to enroll online (distance education) students. If a student moves to another state after admission to the program and/or enrollment in an online course, continuation within the program and/or course will depend on whether Point Loma Nazarene University is authorized to offer distance education courses in that state. It is the student's responsibility to notify the institution of any change in his or her physical location. Refer to the map on **State Authorization (https://www.pointloma.edu/offices/office-institutional-effectiveness-research/disclosures)** to view which states allow online (distance education) outside of California.

INCOMPLETES AND LATE ASSIGNMENTS

As noted, lab assignments are due on Tuesday at 8PM with a grace period that includes a reduced score. Online quizzes are due by Wednesday at noon. Beyond that, late work is not accepted.

Incompletes will only be assigned in extremely unusual circumstances.

PLNU COPYRIGHT POLICY

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.

PLNU ACADEMIC HONESTY POLICY

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 **Academic Policies (https://catalog.pointloma.edu/content.php?catoid=52&navoid=2919#Academic_Honesty)** for definitions of kinds of academic dishonesty and for further policy information.

PLNU ACADEMIC ACCOMMODATIONS POLICY

PLNU is committed to providing equal opportunity for participation in all its programs, services, and activities. Students with disabilities may request course-related accommodations by contacting the Educational Access Center (EAC), located in the Bond Academic Center (**EAC@pointloma.edu (mailto:EAC@pointloma.edu)** or 619-849-2486). Once a student's eligibility for an accommodation has been determined, the EAC will issue an academic accommodation plan ("AP") to all faculty who teach courses in which the student is enrolled each semester.

PLNU highly recommends that students speak with their professors during the first two weeks of each semester/term about the implementation of their AP in that particular course and/or if they do not wish to utilize some or all of the elements of their AP in that course.

Students who need accommodations for a disability should contact the EAC as early as possible (i.e., ideally before the beginning of the semester) to assure appropriate accommodations can be provided. It is the student's responsibility to make the first contact with the EAC.

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.

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.

PLNU ATTENDANCE AND PARTICIPATION POLICY

Regular and punctual attendance at all class sessions is considered essential to optimum academic achievement. If the student is absent for more than 10 percent of class sessions, the faculty member will issue a written warning of 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.

In some courses, a portion of the credit hour content will be delivered **asynchronously** and attendance will be determined by submitting the assignments by the posted due dates. See **Academic Policies (https://catalog.pointloma.edu/content.php?catoid=52&navoid=2919#Academic_Honesty)** in the Undergraduate Academic Catalog. If absences exceed these limits but are due to university excused health issues, an exception will be granted.

Asynchronous Attendance/Participation Definition

A day of attendance in asynchronous content is determined as contributing a substantive note, assignment, discussion, or submission by the posted due date. Failure to meet these standards will result in an absence for that day. Instructors will determine how many asynchronous attendance days are required each week.

SPIRITUAL CARE

Please be aware PLNU strives to be a place where you grow as whole persons. To this end, we provide resources for our students to encounter God and grow in their Christian faith.

If students have questions, a desire to meet with the chaplain or have prayer requests you can contact the Office of Spiritual Development.

USE OF TECHNOLOGY

In order to be successful in the online or hybrid environment, you'll need to meet the minimum technology and system requirements; please refer to the ***Technology and System Requirements*** **(https://help.pointloma.edu/TDClient/1808/Portal/KB/ArticleDet?ID=108349)** information. Additionally, students are required to have headphone speakers, microphone, or webcams compatible with their computer available to use. Please note that any course with online proctored exams require a computer with a camera (tablets are not compatible) to complete exams online.

Problems with technology do not relieve you of the responsibility of participating, turning in your assignments, or completing your class work.

ASSIGNMENTS AT-A-GLANCE

Week	**Lecture** Mon/Tues	**Lab** Wed/Thurs	**Assignment**
Week 1 Aug 31-Sep 3	**Only Monday group** (meets Tuesday this week) Introductions, course org, and Why Ethics?	Introductory lecture, jGrasp lab, syllabus quiz	Read sections 1.1,1.3,1.5 Online quizzes 1A and 1B due Wednesday 3/8 at noon jGrasp lab due Tuesday 8PM
Week 2 Sept 6-10 Labor Day Sept 6	**Only Tuesday group** Introductions and Why Ethics	Chapter 2 lecture: Building a program and arithmetic operators, casting Metrics report lab	Read sections 2.1-2.3 Watch video, try practice program

			Quiz 2A due Wednesday 3/15 noon Metric Lab due Tuesday 8PM
Week 3 Sept 13-17	Chapter 3: String, Scanner	DNA stats lab	Read sections 3.1, 3.6, 3.7 & 3.10 Watch video, try practice program Quizzes 3a-3b due Wednesday 3/15 noon Lab due Tuesday 8PM
Week 4 Sept 20-24	Introduce the additional objects Random, DecimalFormat, Math. Wrapper classes	**Vocabulary quiz** BMI report lab	Read 3.8-3.9, 3.12, 3.13, 3.15 Watch video, try practice program Quizzes 4a-4b due Wednesday 3/22 noon Lab due Tuesday 8PM

Week 5 Sept 27-Oct. 1	Intro to Graphics	**Programming quiz** Business card lab	Read Chapter 4 Watch video, try practice program Quiz GraphicsFX due Wednesday noon Lab due Tuesday 8PM
Week 6 Oct 4-8	Intro to IF statements	IF statement lab	Read 5.1-5.4 Watch video, try practice program Quizzes 6ABC due Wednesday noon Lab due Tuesday 8PM
Week 7 Oct 11-15	More conditionals 5.5-5.11	**Tracing quiz** Password strength lab	Read 5.5-5.11 Watch video, try practice program

			Quizzes 7AB due Wednesday noon Lab due Tuesday 8PM
Week 8 Oct. 18-22 22nd 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 25-29	Intro to while loops 6.1-6.7	While loop lab	Read 6.1-6.7 Watch video, try practice program Quizzes 9A-9B due Wednesday noon Lab due Tuesday 8PM
Week 10 Nov. 1-5	Other loops	Loops lab	Read 6.8-6.10 Watch video, try practice program

			Quizzes 10A-B due Wednesday noon Lab due Tuesday 8PM
Week 11 Nov. 8-12	Chapter 8 – arrays 8.1-8.3	**Written quiz with loop tracing** Array lab	Read 8.1-8.3 Watch video, try practice program Quizzes 11A-B due Wednesday noon Lab due Tuesday 8PM
Week 12 Nov. 15-19	Chapter 8 – searching an sorting	**Programming quiz on arrays** Searching and sorting lab **due in 2 weeks**	Read section 8.6 Watch video, try practice program Quiz 12A Wednesday noon Ethics HW due Monday at noon Lab due Tuesday 8PM

Week 13 Nov. 22-26	**Ethics lab– virtue ethics** (based on ethics HW)	Thanksgiving	
Week 14 Nov. 29-Dec 3	Chapter 9 more on 2 D arrays and nested loops 6.11, 9.1-9.5	2D Array lab (2020 lab)	Read 9.1-9.5 Watch video, try practice program Quizzes 14A-B due Wednesday noon Lab due Thursday 8PM
Week 15 Dec 6-10	Written final exam Taken during lecture	Practice programming exam	
Week 16 Finals Dec 13-17	Section 1 Thursday, 4:30-7:00 Section 2 Wednesday, 10:30-1:00		

Course Summary:

Date	Details	Due
Thu Sep 2, 2021	Syllabus Quiz (https://canvas.pointloma.edu/courses/57876/assignments/676251)	due by 5pm
Tue Sep 7, 2021	Week 1: jGrasp Lab (https://canvas.pointloma.edu/courses/57876/assignments/676415)	due by 8pm
Wed Sep 8, 2021	Quiz 1A (https://canvas.pointloma.edu/courses/57876/assignments/676249)	due by 12pm
	Quiz 1B (https://canvas.pointloma.edu/courses/57876/assignments/676267)	due by 12pm
Tue Sep 14, 2021	Week 2: Metric Report Lab (https://canvas.pointloma.edu/courses/57876/assignments/676416)	due by 8pm
Wed Sep 15, 2021	Quiz 2A (https://canvas.pointloma.edu/courses/57876/assignments/676256)	due by 12pm
	quiz 3A (https://canvas.pointloma.edu/courses/57876/assignments/676266)	due by 12pm
	Quiz 3B (https://canvas.pointloma.edu/courses/57876/assignments/676269)	due by 12pm

Date	Details	Due
Tue Sep 21, 2021	**Week 3: DNA Stats lab** (https://canvas.pointloma.edu/courses/57876/assignments/676420)	due by 8pm
Wed Sep 22, 2021	**Quiz 4A** (https://canvas.pointloma.edu/courses/57876/assignments/676264)	due by 12pm
	Quiz 4B (https://canvas.pointloma.edu/courses/57876/assignments/676259)	due by 12pm
	Vocabulary Quiz for Wednesday (https://canvas.pointloma.edu/courses/57876/assignments/676240) (Section 2-CSC1043)	due by 12:30pm
	Vocabulary Quiz for Wednesday (https://canvas.pointloma.edu/courses/57876/assignments/676240) (Section 2-EGR1043)	due by 12:30pm
Thu Sep 23, 2021	**Vocabulary Quiz for Thursday** (https://canvas.pointloma.edu/courses/57876/assignments/712380) (Section 1-CSC1043)	due by 3:15pm
	Vocabulary Quiz for Thursday (https://canvas.pointloma.edu/courses/57876/assignments/712380) (Section 1-EGR1043)	due by 3:15pm
Tue Sep 28, 2021	**Week 4: BMI Lab** (https://canvas.pointloma.edu/courses/57876/assignments/676424)	due by 8pm
Wed Sep 29, 2021	**Quiz GraphicsFX** (https://canvas.pointloma.edu/courses/57876/assignments/676265)	due by 12pm

Date	Details	Due
	Alternate Programming Final (https://canvas.pointloma.edu/courses/57876/assignments/676271)	
	Programming Exam (https://canvas.pointloma.edu/courses/57876/assignments/676038)	
	Programming quiz for Monday (https://canvas.pointloma.edu/courses/57876/assignments/676253)	
	Programming quiz for Tuesday (https://canvas.pointloma.edu/courses/57876/assignments/676268)	
	Quiz 10A (https://canvas.pointloma.edu/courses/57876/assignments/676255)	
	Quiz 10B (https://canvas.pointloma.edu/courses/57876/assignments/676257)	
	Quiz 11A (https://canvas.pointloma.edu/courses/57876/assignments/676250)	
	Quiz 11B (https://canvas.pointloma.edu/courses/57876/assignments/676260)	
	Quiz 12A (https://canvas.pointloma.edu/courses/57876/assignments/676254)	
	Quiz 13A (https://canvas.pointloma.edu/courses/57876/assignments/676238)	

Date	Details	Due
	Quiz 13B (https://canvas.pointloma.edu/courses/57876/assignments/676263)	
	Quiz 5A (https://canvas.pointloma.edu/courses/57876/assignments/676273)	
	Quiz 5B (https://canvas.pointloma.edu/courses/57876/assignments/676247)	
	Quiz 6A (https://canvas.pointloma.edu/courses/57876/assignments/676245)	
	Quiz 6B (https://canvas.pointloma.edu/courses/57876/assignments/676258)	
	Quiz 6C (https://canvas.pointloma.edu/courses/57876/assignments/676274)	
	Quiz 7A (https://canvas.pointloma.edu/courses/57876/assignments/676239)	
	Quiz 7B (https://canvas.pointloma.edu/courses/57876/assignments/676243)	
	Quiz 9A (https://canvas.pointloma.edu/courses/57876/assignments/676272)	
	Quiz 9B (https://canvas.pointloma.edu/courses/57876/assignments/676244)	

Date	Details	Due
	Week 10: Lab: Sentence Analysis (https://canvas.pointloma.edu/courses/57876/assignments/676391)	
	Week 11: Array Lab (https://canvas.pointloma.edu/courses/57876/assignments/676395)	
	Week 12: Lab: Searching and Sorting (https://canvas.pointloma.edu/courses/57876/assignments/676399)	
	Week 13: Lab: Voyager Stats 2D Array (https://canvas.pointloma.edu/courses/57876/assignments/676403)	
	Week 14: Lab Copy (https://canvas.pointloma.edu/courses/57876/assignments/676407)	
	Week 5: Applet Business Card Design Lab (https://canvas.pointloma.edu/courses/57876/assignments/676428)	
	Week 6: Lab using IF statements (https://canvas.pointloma.edu/courses/57876/assignments/676432)	
	Week 7: Lab Copy 2 (https://canvas.pointloma.edu/courses/57876/assignments/676436)	
	Week 7: Lab: Password Strength (https://canvas.pointloma.edu/courses/57876/assignments/676437)	
	Week 9: While Loop Lab (https://canvas.pointloma.edu/courses/57876/assignments/676444)	

Date	Details	Due
	written exam (https://canvas.pointloma.edu/courses/57876/assignments/676049)	
	Written Final Exam (https://canvas.pointloma.edu/courses/57876/assignments/676241)	