CSC1054 / EGR1054
Objects and Elementary Data Structures
Spring 2022
4 units

Point Loma Nazarene University
College of Natural and Social Sciences

PLNU 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.

Instructor:

Dr. Benjamin Mood
bmood@pointloma.edu
619 849 2269
Rohr Science 216

Meeting Times and Locations:

Lecture:
MWF **-** LA 102 – 1:30 to 2:25
Labs:
R – RS 395 - 10:00am to 11:45am and 3:00 to 4:45pm

Tentative Office Hours:

M: 10:30 - 11:15 (virus lab), 11:15 – 12:00 (caf), 2:30 – 4:00 (virus lab)
W: 2:30 – 4:00 (virus lab)
R: 12:00 – 1:00 (caf), 1:00 – 3:00 (virus lab)
F: 10:30 - 11:15 (virus lab), 11:15 – 12:00 (caf), 2:30 – 4:00 (virus lab)

Books:
Java Illuminated 5th edition. By Julie Anderson and Herve Franceschi

Course Description:

As a continuation of CSC 1043, this course deals with more advanced computing constructs and ideas, reinforced in weekly labs. Topics include object-oriented design, inheritance, polymorphism, exception handling, and recursion, along with more intentional development and debugging strategies. Linked

lists are introduced as a viable option for implementing basic ADT's. Students gain experience in the design of graphical user interfaces, event driven programming, and larger programming projects. Lecture three hours and laboratory two hours each week. Prerequisite(s): CSC 1043 with a grade of C- or higher.

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 be able to speak about their work with precision, clarity and organization.
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Students will collaborate effectively in teams.
Students will be able to gather relevant information, examine information and form a conclusion based on that information.
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.

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.

Additional Course Information:

Labs: Labs are used to give students a way to practice the concepts studied in lecture. They will be composed of practical and question sections. The practical part of the lab must be demonstrated to Dr. Mood or a lab assistant to show that it works successfully. A completed lab includes the signed off practical sections and answers to the theoretical questions; all code and necessary data files and question answers will be turned in on online on canvas. It should be well commented. Code missing comments will not be given full credit.

Labs, for all sections, are due Thursday at 10am the day the new lab is assigned.

My expectations is that students will use the JGRASP IDE in this class. The purpose of this class is for you to learn everything required for programming. This means it is to your benefit not to have code filled in by a fancy IDE. Code that requires edits to be run by myself or the TAs due to IDE choices will result in point deductions.

Unless you have finished the lab and it is already checked off and submitted on canvas or you have previously received permission, the general expectation is that you will be in the lab during lab time.

A-Advice: The way to excel in this class and all other computer science classes is to read the

book if you don't understand something, learn the concepts at an 'A' level, learn to debug well, learn to solve your own code problems, go to office hours, and go to virus lab hours if you have questions. In the future, you will hit a 'wall' if you do not understand the concepts yourself and rely too heavily on lab assistants, classmates, or Dr. Mood.

Helping each other: It is typical for people to help each other in this class. However, depending on how you help each other, it is entirely possible that you will end up hurting each other's grades on the exams because on the exams I expect you to solve problems on your own. If your help prevents a person from developing their own skills, this is not good. It is normal to see scores of 100% on the labs and then F's programming exams due to this reason. If your friend is dependent on you to solve the labs, that is not good.

Cheating: Unless otherwise noted, talking and working with fellow students to understand concepts is OK. However, copying code from another student (or giving your code to another student) is not acceptable and can result in a staggering penalty of -100% on whatever assignment/exam it was. Although sharing code seems a "nice" to help a friend, the penalty applies to all involved. **Do not share your code with anymore. Do not let someone look at your code.** If you use online resources, you must site the direct URLs in the labs you turn in.

Missed Classes: Homework/Quizzes/Exams missed due to PLNU excused absences (i.e., sports teams, choirs, etc), can be made up. Missed Quizzes/Exams/etc. due to emergencies can be made up once the dean of students informs Dr. Mood that PLNU has approved the reason. Non-emergency missed exams will result in a zero. It is the student's responsibility to inform the professor of when they will be gone. Missed class activities, which are due to a non-dean of students approved-emergency situation, will result in a zero.

Grading:

Students must pass a written and a programming exam in order to pass this class. Students who fail both programming exams or fail both written exams will receive an 'F' in the class regardless of all other grades.

Labs	30%
Project	5%
Programming Quiz	10%
Written Exam I	12.5%
Programming Exam I	12.5%
Written Exam II	15%
Programming Exam II	15%

Grading scale

93 – 100%	A
90 – 92%	A-
87 – 89%	B+
83 – 86%	B
80 – 82%	B-
77 – 79%	C+
73 – 76%	C

70 – 72%	**C-**
67 – 69%	D+
63 – 67%	D
60 – 62%	D-
0 – 59%	F

PLNU Policies

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 to view which states allow online (distance education) outside of California.

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.

CREDIT HOUR

In the interest of providing sufficient time to accomplish the stated course learning outcomes, this class meets the PLNU credit hour policy for an 4 unit class delivered over 15 weeks. Specific details about how the class meets the credit hour requirements can be provided upon request.

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 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 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.

PLNU ATTENDANCE AND PARTICIPATION POLICY

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

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.

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.

FINAL EXAM

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 the 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.

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.

Tentative Schedule

Monday	Tuesday	Wednesday	Thu	Friday
Jan: 10	11: 9.7	12: 9.7 (including 2d)	13: ArrayList Lab	14 Chapter 7.1-7.6
17 (no classes)	18	19 Chapter 7.7-7.9	20 Class lab	21 Chapter 7.10 – 7.11
24 Chapter 7.10 – 7.11	25	26 Chapter 7	27 Class lab 2	28 Chapter 10.1-10.6
31 Chapter 10.1-10.6	1	2 Chapter 10.1-10.6	3 **Programming quiz** Lab: (inheritance) after turn in quiz	4 Chapter 11.1-11.6
7 Chapter 11.1-11.6	8	9 Chapter 11.1-11.6 More structured files	10 lab: files exceptions	11 Chapter 12
14 Chapter 12	15	16 Chapter 12	17 GUI lab 1 (layouts + painting)	18 Chapter 12
21 Chapter 12	22	23 Chapter 12	24 GUI lab 2 (components)	25 Review
28 NDSS	1	2 **Written Exam I**	3 **Programming Exam I**	4 Chapter 12
7 (spring break)	**10**	**11**	**12**	**13 (spring break)**
14 Chapter 12	15	16 Chapter 12	17 GUI lab 3 (mouse and timer)	18 Chapter 12
21 Chapter 12	22	23 GIT	24 Project start (GIT)	25 Chapter 13
28	29	30	31	1

Chapter 13		Chapter 13 / 8.6 / 15	Lab Recursion	Chapter 13 / 8.6 / 15
4 Chapter 14.1	5	6 Chapter 14.2	7 Lab Linked Lists	8 Chapter 14
11 Chapter 14	12	13 Chapter 14 or 8.6 Project due at 11:59pm on GIT	14 **EASTER**	15 **EASTER**
18 **EASTER**	19	20 Chapter 14	21 Lab Queue	22 TBD
25 TBD	26	27 Review	28 TBD	29 **Written Exam II**
2	3	4 **Programming Exam II**	5	6