

**Point Loma Nazarene University**  
**CSC 394: Programming Languages (4 units)**  
**Spring 2016**

**Instructor:**

Dr. Lori Carter  
RS 214

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**Office hours:**

MWF 8:15-9:45, 1:00-1:30

TTh 10:30-12:00

**Course Time and Location:**

MWF 1:30-2:35, RS 13

**Text:**

Concepts of Programming Languages 11<sup>th</sup> Edition, Sebesta, Pearson 2016. We will cover chapters 1-9, 11-13, 15-16.

**Course Catalog Description:**

This course in programming languages covers language design issues and language translators. Laboratories give students a practical understanding of programming language concepts as well as give experience in programming using several programming languages.

**Additional specific content:** At the conclusion of the course the student should understand the following:

Overview of programming languages	Object-oriented programming
Virtual machines	Functional programming
Language translation	Logic programming
Declarations and Types	Programming language semantics
Abstraction mechanisms	Programming language design

**Course Learning Outcomes:**

- Students will be able to write correct and robust software.
- Students will use the theory of algorithms and computation to solve problems.
- Students will analyze the interaction between hardware and software.

**Course Organization:**

**Lectures:** Cover the highlights of chapters assigned – **not** a substitute for reading. The lecture slides can be obtained from the class page in Canvas.

**Homework and HW quizzes:** Homework will consist mainly of problems from the book. You will be assigned problems from the review questions as well as exercises from the problem set. Only the problem set should be turned in. All problems assigned will be reflected on quizzes and exams. **Late homework is not accepted.** The homework quizzes will be on Fridays, and will reflect material only since the last exam or quiz (whichever was last). If you choose to make a language presentation, and do an excellent job on it, I will drop your lowest quiz or homework assignment. Quiz dates are as follows: January 22, March 4, April 14.

**Exams:** There will be 2 exams during the semester. These are currently scheduled for **February 12 and April 1**. Students missing the either exam for a school function must arrange to take the exam in advance. Missing an exam for other reasons, short of an officially documented emergency, will likely result in a grade of 0.

**Labs:** Lab assignments will be spread throughout the semester to provide opportunities to experience the languages that we are talking about. Labs may be completed individually or in pairs. If you choose to complete a lab as a team, both team members must be present while working on the lab, and both students must sign that this was the case. Only one copy of the lab should be turned in.

**Final Exam:** The final exam will be cumulative and is scheduled for **April 29** with a take-home portion due the Wednesday of finals week.

**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. 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 change the exam date and time for that particular student.

### **Grading:**

Exams: 30%	Labs: 30%
Homework and homework quizzes: 20%	Final: 20%

Final grades will be determined as follows:

100-93%	A	73-76.9%	C
90-92.9%	A-	70-72.9%	C-
87-89.9%	B+	67-69.9%	D+
83-86.9%	B	63-66.9%	D
80-82.9%	B-	60-62.9%	D-
77-79.9%	C+	0-59.9%	F

### **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 becomes an expression of faith. Being of Wesleyan heritage, we aspire to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.

### **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 in which a student is registered is considered essential to optimum academic achievement. Therefore, regular attendance and participation in each course are minimal requirements to be met. There are no allowed or excused absences except as approved in writing by the Provost for specific students participating in certain university-sanctioned activities. Excused absences still count toward the 10%-20% limits, but allow students to make up work, quizzes, or tests missed as a result of a university-sanctioned activity. Activities of a unique nature, such as labs or other activities identified clearly on the syllabus, cannot be made up except in rare instances when instructors have given advanced, written approval for doing so.

Whenever the number of accumulated absences in a class, for any cause, exceeds ten (10) percent of the total number of class meetings, the faculty member should send an e-mail to the student and the Vice Provost for Academic Administration (VPAA) warning of attendance jeopardy. If more than twenty (20) percent of the total number of class meetings is reported as missed, the faculty member or VPAA may initiate the student's de-enrollment from the course without further advanced notice to the student. If the date of de-enrollment is past the last date to withdraw from a class, the student will be assigned a grade of W or WF consistent with university policy in the Grading section of the catalog. There are no refunds for courses where a de-enrollment was processed. For more details see the PLNU catalog:

[http://catalog.pointloma.edu/content.php?catoid=18&navoid=1278#Class Attendance](http://catalog.pointloma.edu/content.php?catoid=18&navoid=1278#Class_Attendance)

### **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 academic standards for completion of their courses as established by the instructors, students with special needs may require academic accommodations. At Point Loma Nazarene University, students requesting academic accommodations must file documentation with the Disability Resource Center (DRC), located in the Bond Academic Center. Students can also reach the Disability Resource Center by phone at 619-849-2486 or by e-mail at [DRC@pointloma.edu](mailto:DRC@pointloma.edu). Once the student files documentation, the Disability Resource Center contacts the student's instructors and provides written recommendations for reasonable and appropriate accommodations to meet the individual needs of the student. This policy assists the university in its commitment to full compliance with Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities (ADA) Act of 1990, and ADA Amendments Act of 2008, all of which prohibit discrimination against students with special needs and guarantees all qualified students equal access to the benefits of PLNU programs and activities. For more details see the PLNU catalog:

[http://catalog.pointloma.edu/content.php?catoid=18&navoid=1278#Academic Accommodations](http://catalog.pointloma.edu/content.php?catoid=18&navoid=1278#Academic_Accommodations)

Students with learning disabilities who may need accommodations should discuss options with the instructor during the first two weeks of class.

### **Academic Honesty**

The Point Loma Nazarene University community holds the highest standards of honesty and integrity in all aspects of university life. Any violation of the university's commitment is a serious affront to the very nature of Point Loma's mission and purpose. Violations of academic honesty include cheating, plagiarism, falsification, aiding academic dishonesty, and malicious interference. The details of PLNU's meaning of each of these words can be found in the PLNU catalog at:

[http://catalog.pointloma.edu/content.php?catoid=18&navoid=1278#Academic Honesty](http://catalog.pointloma.edu/content.php?catoid=18&navoid=1278#Academic_Honesty)

A student remains responsible for the academic honesty of work submitted in PLNU courses and the consequences of academic dishonesty beyond receipt of the final grade in the class and beyond the awarding of the diploma. Ignorance of these catalog policies will not be considered a valid excuse or defense. Students may not withdraw from a course as a response to a consequence. A student who is caught cheating on any item of work will receive a zero on that item and may receive an "F" for the semester. See the PLNU Catalog for a further explanation of the PLNU procedures for academic dishonesty ([http://catalog.pointloma.edu/content.php?catoid=18&navoid=1278#Academic Honesty](http://catalog.pointloma.edu/content.php?catoid=18&navoid=1278#Academic_Honesty)).

### **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.

### **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 a 4 unit class delivered over 15 weeks. Specific details about how the class meets the credit hour requirements can be provided upon request.

## Tentative Schedule

Mon	Tues	Wed	Thurs	Fri
Ch 1	Jan 12 Mon sched	13 Ch 1: Language overview Ch 2: fortran thru fortran 77	14	15 Fortran 90 + fortran lab
18 MLK	19	20 Introduce Lisp Lisp exercise	21	22 <b>quiz</b> More lisp, scheme lab
25 2.5-2.12 cobol, basic ,pascal, algols, snobol, PL/1	26	27 C C lab	28	29 2.13-2.17 prolog, smalltalk, C++, Java
Feb 1 Scripting: Javascript, perl, php, python, ruby <b>Student presentations</b>	2	3 2.19-2.20 C#, HTML, XSLT, JSP <b>Student presentations</b>	4	5 Perl lab
8 Ch3(1-4)	9	10 3.5 + review	11	12 <b>Exam 1</b>
15 Chapter 4 lexical analysis	16	17 Lexical analysis lab	18	19 Ch 4 parsing
22 More on parsing, present parsing lab	23	24 Parsing lab	25 Panam a	26 Parsing lab
Feb 29 Code creation lecture	Mar 1	2 Parsing due 5.1-5.4 variables, binding	3	4 <b>Quiz</b> 5.5-5.7 Scope, environments
7 Spring Brk	8 Spring Brk	9 Spring Brk	10 Spring Brk	11 Spring Brk
14 6.1-6.6 Primitives, objects, arrays	15	16 6.7-6.13 Records, pointers, typing	17	18 7.1-7.3 expressions, overloading Code creation due
21 7.4-7.8 Expressions, evaluations assignments	22	23 Chapter 8: Conditionals	24 Easter	25 Easter
28 Easter	29	30 finish 8 and review	31	Apr 1 <b>Exam 2</b>
4 Ch 9.1-9.4 subprograms	5	6 Ch 9.5-9.9 parameters	7	8 Ch 11 Data abstraction Ruby lab
11 Ch 11: Encapsulation	12	13 Ch 12: OO	14	15 <b>quiz</b> Ch 12: OO examples
18 Ch 13 concurrency	19	20 13.3-13.5	21	22 13.6-13.9, Concurrency lab
25 chapter 16 Prolog lab	26	27 review	28	29 <b>Final</b>
		Take-home portion due		