

# Point Loma Nazarene University

## CSC 323: Software Engineering

### (3 units)

### Fall 2016

#### 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](mailto:bmood@pointloma.edu)  
619 849 2269  
RS 216

#### Meeting Times and Locations:

##### Lecture:

T/R: 9:30AM – 10:45AM Rhor Science 13

#### Office Hours:

Monday: 1:00 – 2:30  
Tuesday: 12:30 – 3:00  
Wednesday: 1:30 – 2:30  
Thursday: 12:30 – 3:00  
Friday: 1:30 – 4:00

#### Books:

*Head First Software Development* by Dan Pilone and Russ Miles  
*Head First Design Patterns* by Eric Freeman and Elisabeth Robson.

\*I will not be assigning HW from the books

#### Course Description:

This course offers an in-depth treatment of the software development process. Software analysis and design study emphasizes an object-oriented approach that is introduced and contrasted with traditional design methodologies. CASE tools are used during the design process. Lecture two hours each week. Alternating Years. Offered 2016-17.

## **Learning Outcomes:**

Students will be able to write correct and robust software.

Students will be able to speak about their work with precision, clarity and organization.

Students will be able to write about their work with precision, clarity and organization.

Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand.

Students will collaborate effectively in teams.

Students will be able to gather relevant information, examine information and form a conclusion based on that information.

## **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 Information:**

**In Class:** There will be lectures, in-class work, and team meetings in class. In-class work cannot be made up for non-PLNU sanctioned absences.

**Missed Classes:** Homework missed due to PLNU activities (i.e., sports teams, choirs, etc), can be turned in the day after the student is back. Missed Exams must be scheduled before the student leaves (the exception is dire circumstances). It is the student's responsibility to inform the professor of when they will be gone.

**Homework:** There will be homework assigned and collected most Thursdays. I am not planning on accepting late homework. All homework turned in by GIT should be turned in by the start of class the day it is due.

**Project:** Each person in the class will be assigned to a team and will work with that team on a larger project for the last part of the class. Part of the grade for the project is based on the project's completion and part on you doing your part on the project. GIT, our version control system, keeps track of who has worked on which files in the project.

**Final:** Thursday 12/15 at 10:30am. All teams will give a demo of their project. It may also include something fun.

**Cheating:** If you use resources online, you must site the direct URLs in the assignments you turn in. You should not copy another student's work. Unless otherwise noted, talking and working with fellow students to understand concepts is OK.

Rule of thumb: everything you turn in you should be able to completely explain.

Meaning, if I call you into my office to explain your work, you should be able to. *This cheating rule does not apply to the project.*

**Cell Phones & Laptops:** Please don't use them in class during the lecture. The exception is for the day(s) on Unity.

**Be Courteous and Respectful.**

**Grading:**

In-classwork	10%
Homework	20%
Project	60%
Midterm	10%

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**

**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](http://catalog.pointloma.edu/content.php?catoid=24&navoid=1581#Class_Attendance) in the Undergraduate Academic Catalog.

**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:**

If you have a diagnosed disability, please contact PLNU's Disability Resource Center (DRC) within the first two weeks of class to demonstrate need and to register for accommodation by phone at 619-849-2486 or by e-mail at [DRC@pointloma.edu](mailto:DRC@pointloma.edu). See [Disability Resource Center](#) for additional information. For more details see the PLNU catalog: [http://catalog.pointloma.edu/content.php?catoid=24&navoid=1581#Academic\\_Accommodations](http://catalog.pointloma.edu/content.php?catoid=24&navoid=1581#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:**

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](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: 12/15 at 10:30am**

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.

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

## Schedule

Monday	Tuesday	Thu	Assignment
Aug: 29	30 (no class)	1 Intro & Why we need good software engineering	
5 Labor Day	6 Sept: 1 Software Development Chapter 1, development cycle; <i>Agile</i>	8 Chapter 2: Requirements & Chapter 3, Planning,	Assign: Software Design Homework
12	13 Chapter 4: stories and tasks (+ design documents), Appendix i:1 and 2	15 Unity	Assign: Unity Tutorial 1 Due: Software Design Homework
19	20 Chapter 5: Good design & Chapter 6: version control systems	22 Projects	Assign: Tutorial Unity 2 Due: Tutorial Unity 1
26	27 Chapter 7: testing & Chapter 8: test driven development & Chapter 11 bugs	29 TBD - Chapter 9: Release & Chapter 10: Post Release; all the other things you were supposed to do.	Assign: Tutorial Unity 3 Due: Tutorial Unity 2
Oct: 3	4 Design Patterns Intro & Observer pattern, Chapter 1 and 2	6 Decorator & Factory Patterns, Chapter 3 and 4	Assign patterns 1 Due Tutorial Unity3
10	11 Singleton and Command Pattern, Chapter 5 & 6	13 Adapter and Façade patterns	Assign: patterns 2 Due: Patterns 1
17	18 Template and State patterns	20 Iterator and composite patterns	Assign: patterns 3 Due: Patterns 2
24	25 Proxy and	27	Due: Patterns 3

	compound patterns		Review	
31	Nov: 1 <b>Midterm</b>		3 Project Start	
7	8		10 Design docs due	
14	15		17	
21	22 End iteration 1		24 (No Class) Thanksgiving	
28	29		Dec: 1	
5	6		8	
12	13		15 <b>End iteration 2 / FINAL</b>	