POINT 1902 LOMA
NAZARENE UNIVERSITY

Mathematics Information and Computer Sciences (MICS)/STEM

CSC3023 - Software Engineering

3 Units
Fall 2026
Meeting days/times: MWF 8:30 am – 9:25 am
Meeting location: Rohr Science 295
Final Exam: Wednesday December 16, 7:30-10:00 a.m

Course Information	Specifics for the Course
Instructor title and name:	Professor Noah Spahn
Phone:	x2401
Email:	nspahn@pointloma.edu
Office location and hours:	Rohr Science 210: signup form

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

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.

Program and Course Learning Outcomes

Graduates of the program will be able to:

- write correct and robust software.
- use well-known algorithms and computational techniques to solve problems.
- analyze the interaction between hardware and software.
- apply their technical knowledge and critical thinking to solve problems.
- speak about their work with precision, clarity and organization.
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- identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand.
- collaborate effectively in teams.
- understand and create arguments supported by quantitative evidence.
- understand the professional, ethical, and social issues and responsibilities with the implementation and use of technology.

Course Learning Outcomes (CLOs):

Upon successful completion of this course, students will be able to:

1. **Describe** the software development processes and roles, including the stages and practices within agile practices
2. **Distinguish** between engineering practices for software projects and software products
3. **Navigate** and reason about large codebases
4. **Recognize** software design patterns and apply them appropriately
5. **Use** git for revision control
6. **Write** desktop applications in Python
7. **Collaborate** effectively within a software development team

Required Texts and Recommended Study Resources

All supplemental materials posted on this course site (including articles, book excerpts, or other documents) are provided for your personal academic use. These materials may be protected by copyright law and should not be duplicated or distributed without permission of the copyright owner.

- ***Engineering Software Products: An Introduction to Modern Software Engineering*** by Ian Sommerville
- ***Python Programming with Design Patterns*** by James W. Cooper

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. It is anticipated that students will spend a minimum of 37.5 participation hours per credit hour on their coursework.

Assessment and Grading

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	

Final Examination Policy

Successful completion of this class requires taking the final examination on its scheduled day. The final examination schedule is posted on the Traditional Undergraduate Records: Final Exam Schedules site. If you find yourself scheduled for three (3) or more final examinations on the same day, you are authorized to contact each professor to arrange a different time for *one* of those exams. However, unless you have three (3) or more exams on the same day, no requests for alternative final examinations will be granted.

PLNU Artificial Intelligence (AI) Policy

You are allowed to use Artificial Intelligence (AI) tools (e.g., ChatGPT, Gemini Pro, GrammarlyGo, Perplexity, etc.) to generate ideas, as a learning tool, or in some cases generate portions of work you will submit. I will specify in individual assignments what constitutes appropriate use of AI for that assignment. Please use this Purdue resource to guide your citations when using AI.

Incompletes and Late Assignments

All assignments are to be submitted/turned in by the beginning of the class session when they are due—including assignments posted in Canvas. Incompletes will only be assigned in extremely unusual circumstances.

PLNU Academic Accommodations Policy

PLNU is committed to providing equal opportunity for participation in all its programs, services, and activities in accordance with the Americans with Disabilities Act (ADA). Students with disabilities may request course-related accommodations by contacting the Educational Access Center (EAC), located in the Bond Academic Center, by email or phone at 619-849-2533. Once a student's eligibility for an accommodation has been determined, the EAC will work with the student to create an Accommodation Plan (AP) that outlines approved accommodations. Professors are able to view a student's approved accommodations through Accommodate. PLNU highly recommends that students speak with their professors during the first two weeks of each semester/term about the implementation of their approved accommodations in that particular course. Accommodations are not retroactive; as such, clarifying with the professor at the outset is one of the best ways to promote positive academic outcomes.
Students who need accommodations for a disability-related need should contact the EAC as early as possible (i.e., ideally before the beginning of the semester) to assure appropriate accommodations can be provided. In accordance with ADA, accommodations cannot constitute a fundamental alteration to course outcomes; therefore, planning ahead is vital in establishing appropriate accommodations for equal access to this course. It is the student's responsibility to make the first contact with the EAC. Students cannot assume that because they had accommodations in the past, their eligibility at PLNU is automatic. All determinations at PLNU must go through the EAC eligibility process. This is to protect the privacy of students with disabilities who may not want to disclose this information and are not asking for any accommodations.

LomaBooks Instructions for Students

This course is part of our course material delivery program, LomaBooks. The bookstore will provide each student with a convenient package containing all required physical materials; all digitally delivered materials will be integrated into Canvas.
You should have received an email from the bookstore confirming the list of materials that will be provided for each of your courses and asking you to select how you would like to receive any printed components (in-store pick up or home delivery). If you have not done so already, please confirm your fulfillment preference so the bookstore can prepare your LomaBooks materials.

Additional Course Information

Additional PLNU policies and practices that apply to this course can be found at the TUG Syllabus policy portion doc.

Course Summary:

Date	Details	Due
Mon Aug 31, 2026	Page Week 1 overview	to do: 8pm
Wed Sep 2, 2026	Assignment Wk 1 | SE ch 1 - 1	due by 8:37am
Fri Sep 4, 2026	Assignment Wk 1 | SE ch 1 - 2	due by 8:37am
	Page Software Engineering Group Project	to do: 5pm
Mon Sep 7, 2026	Calendar Event Labor day (no class)	12am
	Page Week 2 overview	to do: 8pm
Wed Sep 9, 2026	Assignment wk 2 | DP ch1 1	due by 8:37am

Fri Sep 11, 2026	Assignment wk 2 | DP ch2 1	due by 8:37am
Mon Sep 14, 2026	Assignment wk 3 | DP ch3 1	due by 8:37am
Wed Sep 16, 2026	Assignment wk 3 | DP ch3 2	due by 8:37am
Fri Sep 18, 2026	Assignment wk 3 | DP ch3 3	due by 8:37am
Mon Sep 21, 2026	Assignment wk 4 | antipatterns 1	due by 8:37am
Wed Sep 23, 2026	Assignment wk 4 | antipatterns 2	due by 8:37am
Fri Sep 25, 2026	Assignment wk 4 | antipatterns 3	due by 8:37am
	Assignment Milestone 1	due by 11:59pm

Fri Oct 23, 2026	Calendar Event Fall Break (no class)	12am
Fri Nov 6, 2026	Assignment Milestone 2	due by 11:59pm
Wed Nov 25, 2026	Calendar Event Thanksgiving Break (no classes)	12am
Fri Nov 27, 2026	Calendar Event Thanksgiving Break (no classes)	12am
Fri Dec 11, 2026	Assignment Milestone 3	due by 11:59pm
Wed Dec 16, 2026	Calendar Event Software Engineering Final	7:30am to 10am