

CSC3023-1 FA22 - Software Engineering

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Mathematical, Information and Computer Sciences

CSC3023 Software Engineering

3 units

Fall 2022

Instructor: Benjamin Mood

Phone: 619.849.2269

Email: bmood@pointloma.edu

Location: RS395

Times: Tuesday and Thursday 9:30 - 10:45

Office; RS216

Office hours

Monday: 11:15 - 12:15 @ caf (or PBC on request)

Tuesday: 11:00 - 12:00 @ office, 12:00 - 1:00 @ caf (or PBC on request), 1:00 - 3:00pm @ office

Wednesday: 11:15 - 12:15 @ caf (or PBC on request)

Thursday: 11:00 - 12:00 @ office, 12:00 - 1:00 @ caf (or PBC on request) , 1:00 - 3:00pm @ office

Friday: 11:15 - 12:15 @ caf (or PBC on request)

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.

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. Lecture two hours each week. Alternating Years. Offered 2016-17.

COURSE LEARNING OUTCOMES

1. Students will be able to write correct and robust software.
2. Students will be able to speak about their work with precision, clarity and organization.
3. Students will be able to write about their work with precision, clarity and organization.
4. Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand.
5. Students will collaborate effectively in teams.
6. Students will be able to gather relevant information, examine information and form a conclusion based on that information.

REQUIRED TEXTS AND RECOMMENDED STUDY RESOURCES

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

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 requirement can be provided upon request. (Based on 37.5 hours of student engagement per credit hour.)

ASSESSMENT AND GRADING

Graded Components

- **Projects.** Each student will be assigned to a group for each of the three projects. The grade for the projects are a combination of the grades on each project combined with the team evaluations and team meeting attendance. Team members who do extra will be marked higher, team members who do not work as much as other team members will be marked lower.
- **Examinations and the Final Examination.** Examinations and the Final Examination will include problems and questions over material assigned in the text, readings and handouts, as well as material presented in class. No examination shall be missed without prior consent or a well-documented emergency beyond your control. A score of zero will be assigned for an examination that is missed without prior consent or a well-documented emergency beyond your control.

- **Additional Assignment:** All other additional assignments will be a part of the "Intro Assignment & Final Assignment" graded category.
- **Late work will not be accepted** without prior consent or a well-documented emergency. Up to a maximum of one homework assignment will be accepted up to 3 days late provided that consent is received from the professor before it is due. Homework assignments that are submitted late without prior consent will be recorded with a score of zero. If more than half of the homework assignments are submitted on time, then the lowest homework score will be dropped from the calculations of the homework grade.
- The examination schedule is included in the daily schedule. This instructor does not intend to accept excuses such as poor communication with parents, benefactors, surf team sponsors and/or travel agents.

Grading Distribution	Percent
Intro Assignment & Final Assignment	10
Two Examinations	20
Final Exam	15
Projects	55
Total	100

Grading Scale

Approximate minimal percentages required to obtain a given grade are:

Standard Grade Scale Based on Percentages					
	A	B	C	D	F
+		87.5- 90	77.5-80	67.5-70	
	92.5 -100	82.5-87.5	72.5-77.5	62.5 -67.5	0-60
-	90-92.5	80-82.5	70-72.5	60-62.5	

PLNU Policies

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SPIRITUAL CARE

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

If you have questions, a desire to meet with the chaplain, or if you have prayer requests, you can contact the [Office of Student Life and Formation \(https://www.pointloma.edu/offices/student-life-formation\)](https://www.pointloma.edu/offices/student-life-formation).

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 \(https://www.pointloma.edu/offices/office-institutional-effectiveness-research/disclosures\)](https://www.pointloma.edu/offices/office-institutional-effectiveness-research/disclosures) 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.

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 \(https://catalog.pointloma.edu/content.php?catoid=52&navoid=2919#Academic_Honesty\)](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.

SEXUAL MISCONDUCT AND DISCRIMINATION

Point Loma Nazarene University faculty are committed to helping create a safe learning environment for all students. If you (or someone you know) have experienced any form of sexual discrimination or misconduct, including sexual assault, dating or domestic violence, or stalking, know that help and support are available through the Title IX Office at pointloma.edu/Title-IX (<http://pointloma.edu/Title-IX>). Please be aware that under Title IX of the Education Amendments of 1972, it is required to disclose information about such misconduct to the Title IX Office.

If you wish to speak to a confidential employee who does not have this reporting responsibility, you can contact Counseling Services at counselingservices@pointloma.edu (<mailto:counselingservices@pointloma.edu>) or find a list of campus pastors at pointloma.edu/title-ix (<http://pointloma.edu/title-ix>).

COURSE MODALITY DEFINITIONS

1. **In-Person:** Course meetings are face-to-face with no more than 25% online delivery.
2. **Online:** Coursework is completed 100% online and asynchronously.
3. **Online Synchronous:** Coursework is completed 100% online with required weekly online class meetings.
4. **Hybrid:** Courses that meet face-to-face with required online components.

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.

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.

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 4 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. For this course, students will spend an estimated 150 total hours meeting the course learning outcomes. The time estimations are provided in the Canvas modules.

Tentative Schedule

Monday	Tuesday	Wednesday	Thu	Friday
Aug 29 -No Class-	Aug 30 (Monday schedule)	31	Sept 1 Intro + recipes	2

5	6	7	8	9
No Class	Chap 1 + 2 + git Group selections 1 due		Recipe due Puzzle start Team evals due	
12	13 Chap 3 + 4	14	15 Team evals due	16
19	20 Chap 5 + 6	21	22 Team evals due	23
26	27 Chap 7 + 8 + 11	28	29 Team evals due	30
3	4 TBD	5	6 Exam 1	7
10	11 Puzzle turn in Group selections 2 due Team evals due Patterns Lecture	12	13 Pattern start	14
17	18 Last day of Quad I Patterns Lecture	19	20 Team evals due	21 (Fall Break) No Classes
24	25 Patterns Lecture	26	27 Team evals due	28

31	1 Patterns Lecture	2	3 Team evals due	4
7	8 Patterns Lecture	9	10 Exam 2	11
14	15 Pattern turn in Group selections 3 due Team evals due Graph Greedy	16	17 AI Start	18
21	22 Backtracking	23 Thanksgiving break (No Classes)	24 Thanksgiving break (No Classes)	25 Thanksgiving break (No Classes)
28	29 Dynamic	30	1 Team evals due	2
5	6 Parallel		Team evals due "final assignment" due	
12	13	14	15 Final!!!! (exam 3)	AI Turn in Team evals due

Course Summary:

Date	Details	Due
Tue Sep 6, 2022	 Team Preferences Project 1 https://canvas.pointloma.edu/courses/63349/assignments/838103	due by 8pm
Thu Sep 8, 2022	 Warm Up https://canvas.pointloma.edu/courses/63349/assignments/838032	due by 9:30am
	 Team Evaluation for warmup https://canvas.pointloma.edu/courses/63349/assignments/838104	due by 9:30pm
Thu Sep 15, 2022	 Puzzle Team Evaluation 1 https://canvas.pointloma.edu/courses/63349/assignments/838105	due by 9:30am
Thu Sep 22, 2022	 Puzzle Team Evaluation 2 https://canvas.pointloma.edu/courses/63349/assignments/838106	due by 9:30am
Thu Sep 29, 2022	 Puzzle Team Evaluation 3 https://canvas.pointloma.edu/courses/63349/assignments/838107	due by 9:30am
Thu Oct 6, 2022	 Exam 1 https://canvas.pointloma.edu/courses/63349/assignments/838120	due by 10:45am
	 Puzzle Project https://canvas.pointloma.edu/courses/63349/assignments/838184	due by 9:30am
Tue Oct 11, 2022	 Puzzle Team Evaluation 4 https://canvas.pointloma.edu/courses/63349/assignments/838108	due by 9:30am
	 Team Preferences Project 2 https://canvas.pointloma.edu/courses/63349/assignments/838117	due by 8pm
Thu Oct 20, 2022	 Patterns Team Evaluation 1 https://canvas.pointloma.edu/courses/63349/assignments/838110	due by 9:30am
Thu Oct 27, 2022	 Patterns Team Evaluation 2 https://canvas.pointloma.edu/courses/63349/assignments/838114	due by 9:30am
Thu Nov 3, 2022	 Patterns Team Evaluation 3 https://canvas.pointloma.edu/courses/63349/assignments/838111	due by 9:30am
Thu Nov 10, 2022	 Exam 2 https://canvas.pointloma.edu/courses/63349/assignments/838121	due by 10:45am

Date	Details	Due
Tue Nov 15, 2022	 Patterns Team Evaluation 4 (https://canvas.pointloma.edu/courses/63349/assignments/838112)	due by 9:30am
Thu Dec 1, 2022	 Team Preferences Project 3 (https://canvas.pointloma.edu/courses/63349/assignments/838118)	due by 8pm
Thu Dec 8, 2022	 AI Team Evaluation 1 (https://canvas.pointloma.edu/courses/63349/assignments/838113)	due by 9:30am
Thu Dec 15, 2022	 AI Team Evaluation 2 (https://canvas.pointloma.edu/courses/63349/assignments/838115)	due by 9:30am
Fri Dec 16, 2022	 Final (time is start of final) (https://canvas.pointloma.edu/courses/63349/assignments/838119)	due by 10:30am
	 AI Team Evaluation 3 (https://canvas.pointloma.edu/courses/63349/assignments/838116)	due by 11:59pm