Service Learning
CSC/ISS/MTH 4133
(3 units)
Fall 2021

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

Meeting Times and Locations:
MW: 2:45 – 3:55pm in RS365

Office Hours:
MWF 1:30pm – 2:30pm in Caf
TR 12:15pm – 1:15pm in Caf
W: 11:00am – 12:00pm in Virus lab
TRF: 2:45 – 4:00pm in Virus lab

Books:
No books!

Course Description:
Students working in teams design and implement a project using a broad spectrum of computer science, mathematics, and/or natural science knowledge to meet the needs of a community organization or the university.

Learning Outcomes:
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.
Students will be able to write about their work with precision, clarity and organization.
Students will collaborate effectively in teams.
Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand.
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.

Course Information:
This class will be broken down into formal in-class time, and more flexible group time. Both are essential, and required.

Class time will be used for:
• Technical, soft skill, and ethics presentations
• Team meetings
• Giving and listening to progress reports
• Reflections and peer evaluations

Time outside of class will be spent:
• Meeting with client/ mentor
• Researching and Planning the project
• Learning technical tools
• Implementing project
• Planning briefs and presentations

Anticipated technical/ soft skill presentations:
• Writing **technical papers** in computer science and stats
  o Presenters should provide examples of technical papers from the different disciplines and talk about organization (comparing and contrasting discipline papers), voice, and characteristics of the different sections of the paper (abstract, introduction or background, methods, results/conclusion, bibliography (including how references are handled throughout the paper))
• **Creating academic posters**
  o Presenters talk about what makes a good poster, presenting examples of good and bad posters. Presenters should discuss how to get a poster made, including cost, time constraints, cost, and methodology.

- **Excel skills** including Sum, Avg, Standard Deviation, Count, and CountIf functions, V-Lookup, views with functions and with data only, simple graphs (at least bar, scatterplot, histogram)
  - Presenters should talk about theory (what information these tools provide and when they should be used) along with live demonstrations of their use.
- Demonstrate the capabilities of the **R programming language** including a simple script and creating different types of graphs from a dataset. Also show R-Shiny basics
- Demonstrate **Data visualization**: how to effectively represent data so that someone can easily understand the data. Presenters should at least include heatmaps, different types of charts/graphs, and the classic Charles Minard *Napoleon's Russian Campaign of 1812.*
- Demonstrate and explain using **External APIs** in Java applications. Include an example of sending an email from a java program. Include information from at least one other API other than gmail (e.g., twitter or something else).

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. For this course, students will spend an estimated 112.5 total hours meeting the course learning outcomes. The time estimations are provided in the Canvas modules.

Grading:

Skills Presentations	5%
Ethics Presentations	5%
Group Presentations	10%
Progress Reports	10%
Paper & Paper related Assignments	20%
Poster	5%
Project & Evaluations	35%
Elevator Pitch	5%
Group Assignments	5%

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

Graded Components

- **Skills presentation:** This is expected to be a group grade as presentations will be made in groups of 2-3. However, if 1 person is missing, or does not speak, that individual will likely receive the maximum deduction. Presentation should cover material requested by professor. Presentation is expected to be 15-20 minutes, and should include a 5 minute exercise for the class to complete.
- **Ethics presentation:** Our work is not just about what we do, but how we do it, keeping in mind how it will affect society. Each student will be required to lead a discussion based on an ethics-based paper. The student should have thoroughly read and contemplated the paper and prepared a brief synopsis along with 3-4 discussion questions for class consideration based on that paper. Please feel free to include any insights that the Bible presents on the general topic. Presentations typically made on Mondays.
- **Group presentations:** This is a group grade. However, if 1 person is missing, or does not speak, that individual will receive the maximum deduction and this will not affect the rest of the group. Progress on project will be judged by your presentation, and failure to show adequate progress on your project can result in huge deductions especially on the final presentation during the final exam time. Your final exam will be a group presentation.
- **Weekly progress reports:** A recounting of what you, as an individual, completed towards the project. Points can be re-gained in this category if dramatic contribution was made the week after points were missed.
- **Poster:** Your poster will be presented to a wide audience. The poster as a whole is a group grade. Unless prior approval is given, you may loose points individually for not being present.
- **Elevator speech:** The elevator speech shows that in individual is familiar enough with the project to present an interesting summary in 30-60 seconds. This is an individual grade and will be developed in anticipation of the poster presentation.
- **Project Paper:** The project paper is an individual grade. It will be based on the individual sections being turned in and revised as requested. Credit is not given if the sections are not turned in on time. Points may also be deducted if you are absent on a day when peer reviews take place or if the final quality of the paper is poor.
- **Group assignments:** Group assignments may include, but are not limited to, development of the problem statement and management plans, client meetings, client approvals, poster draft, and reflections.
- **Project Completion:** Your projected is expected to be completed on time by the end of the semester. This grade will be reduced depending on evaluations & percent of the project that was completed.

- **Final Examination**. 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.
- **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.

Note on attendance: Poor attendance can influence your grade in several ways:
- Missing points on group assignments
- Poor peer evaluations
- Maximum points deducted for missing presentations
- Potential de-enrollment based on PLNU attendance policy

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.

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

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 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.

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.](#)

The following schedule is approximate:

Monday	Tuesday	Wednesday	Thu	Fri
Aug 30 **No Classes**	31 Introduction Selection of Skill Presentations Groups	Problem Statement Discuss first client meeting Email Client	2	3 Weekly Report on Project Due
6 **No Classes**	7	8 Discuss Ethics Presentation & pick days Discuss Scheduling Project Report on first client meeting	9	10 Weekly Report on Project Due
13 Skill Presentations 1-3	14	15 Gantt Chart Discussion	16	17 Weekly Report on Project Due
20 Skill Presentations 4-6	21	22 Technical Papers, Good Sources and 6 Points of an	23	24 Weekly Report on Project Due

		Abstract Gantt Chart Due		
27 **No Class**	28	29 Abstract draft due for peer review (in class) Report on second client meeting.	30	October 1 Weekly Report on Project Due
4 Abstract Due Introduction Discussion	5	6 Introduction for peer review (in class) Ethics Presentations 1-2	7	8 Weekly Report on Project Due
11 Introduction due Methods Discussion	12	13 Methods section due for peer review (in class) Ethics Presentations 3-4	14	15 Weekly Report on Project Due
18 Methods section due Results Discussion Ethics Presentations 5-6	19 **Last quad I day**	20 Mid-semester presentation on project Mid semester evals due	21	22 **No Classes**
25 Ethics Presentations 7-8	26	27 Report on third client meeting Poster discussion	28	29 Weekly Report on Project Due
November 1	2	3	4	5

Ethics Presentations 9-10		**No Class**		Weekly Report on Project Due
8 Ethics Presentations 11-13	9	10 Results Discussion Poster Discussion	11	12 Weekly Report on Project Due
15 Results section due for peer review (in class)	16	17 Results due Elevator Pitch Discussion	18	19 Weekly Report on Project Due
22 Elevator pitch due (spoken in class with feedback) Conclusion Discussion	23	24 **No Classes** Thanksgiving	25 **No Classes** Thanksgiving	26 **No Classes** Thanksgiving
29 Poster draft due **No Class**	30	1 **No Class**	2	3 Weekly Report on Project Due
6 Conclusion Draft Due (peer review) [there is no other due date for the conclusion before the final paper] Final client meeting	7	8 **Poster day!!!**	9	10 Weekly Report on Project Due
13 **Final @ 1:30pm** Team Presentations Team member evals due	14	15	16	17 Final Paper Due