

Syllabus

To-Do Date: Sep 8 at 11:59pm

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|---|---|
|  | Mathematics, Information, and Computer Sciences College of Natural and Social Sciences MTH1021-1 Calculus and Modeling 1 Units Pre – requisites: A score of 3 or more on AP 114 or AP 115 or credit for a Calculus course from another institution. |
| | Fall 2020 August 17 - December 4 |

Instructor: Jesús Jiménez

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Office hours:

TH 10:45 am - 11:45 am, 1:30 pm - 2:50 pm

MW 1:30 pm - 4:30 pm

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

An introduction to mathematical modeling using mathematical concepts from Calculus I. Graded Credit/No Credit.

FOUNDATIONAL EXPLORATIONS MISSION

PLNU provides a foundational course of study in the liberal arts informed by the life, death, and resurrection of Jesus Christ. In keeping with the Wesleyan tradition, the curriculum equips students with a broad range of knowledge and skills within and across disciplines to enrich major study, lifelong learning, and vocational service as Christ-like participants in the world's diverse societies and culture.

FOUNDATIONAL EXPLORATIONS LEARNING OUTCOMES

- Students will be able to solve problems that are quantitative in nature.
- Students will be able to formulate a mathematical model from a verbal description of a problem.
- Students will be able to solve non-routine problems using logic and quantitative techniques.
- Students will be able to construct solutions to problems using computational techniques

COURSE LEARNING OUTCOMES

- Students will be able to develop mathematical models for simple problems.
- Students will be able to solve these problems using calculus.

REQUIRED TEXTS AND RECOMMENDED STUDY RESOURCES

No Text is required for the course.

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 1–unit class delivered over 16 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 15 total hours meeting the course learning outcomes. The time estimations are provided in the CANVAS modules.

| | |
|------------------------|-------|
| Zoom Meetings | 10.00 |
| Watching Videos | 6.00 |
| Collaborative Activity | 10.00 |
| Discussion Reviews | 10.00 |
| Midterm | 1.00 |
| Final Exam | 1.00 |
| TOTAL | 38.00 |

ASSESSMENT AND GRADING

Graded Components

- Labs: the labs are due at the scheduled dates and time. The labs must be submitted through CANVAS in Word, Excel or PDF.
- Notes and Videos/Readings: each section will have a video you must watch and take notes. Every week there will be CANVAS discussions where you will need to answer questions that may be related to the videos and readings.
- 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.

- 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.

| Grade Distribution | |
|----------------------------|------------|
| One Partial Exam | 150 points |
| Final Exam (Comprehensive) | 150 points |
| Collaborative Activities | 100 points |
| Attendance | 50 points |
| TOTAL | 450 points |

Grades will be based on the following:

| Grading Scale in Percentages | | | | |
|------------------------------|-------------|--------------|--------------|--------------|
| | A | B | C | D |
| | | (87.5, 90] | (77.5, 80] | (67.5, 70] |
| | (92.5, 100] | (82.5, 87.5] | (72.5, 77.5] | (62.5, 67.5] |
| | (90, 92.5] | (80, 82.5] | (70, 72.5] | [60, 62.5] |

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.

INCOMPLETE AND LATE ASSIGNMENTS

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

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=41&navoid=2435#Academic_Honesty) (https://catalog.pointloma.edu/content.php?catoid=41&navoid=2435#Academic_Honesty) for definitions of kinds of academic dishonesty and for further policy information.

PLNU ACADEMIC ACCOMMODATIONS POLICY

While all students are expected to meet the minimum standards for completion of this course as established by the instructor, students with disabilities may require academic adjustments, modifications or auxiliary aids/services. At Point Loma Nazarene University (PLNU), these students are requested to register with the Disability Resource Center (DRC), located in the Bond Academic Center (DRC@pointloma.edu (<mailto:DRC@pointloma.edu>) or 619-849-2486). The DRC's policies and procedures for assisting such students in the development of an appropriate academic adjustment plan (AP) allows PLNU to comply with Section 504 of the Rehabilitation Act and the Americans with Disabilities Act. Section 504 prohibits discrimination against students with special needs and guarantees all qualified students equal access to and benefits of PLNU programs and activities. After the student files the required documentation, the DRC, in conjunction with the student, will develop an AP to meet that student's specific learning needs. The DRC will thereafter email the student's AP to all faculty who teach courses in which the student is enrolled each semester. The AP must be implemented in all such courses.

If students do not wish to avail themselves of some or all of the elements of their AP in a particular course, it is the responsibility of those students to notify their professor in that course. PLNU highly recommends that DRC students speak with their professors during the first two weeks of each semester about the applicability of their AP in that particular course and/or if they do not desire to take advantage of some or all of the elements of their AP in that course.

PLNU ATTENDANCE AND PARTICIPATION POLICY

Students taking online courses are expected to attend each week of the course. Attendance is defined as participating in an academic activity within the online classroom which includes posting in a graded activity in the course. (Note: Logging into the course does not qualify as participation and will not be counted as meeting the attendance requirement.)

Students who do not attend at least once in any 3 consecutive days will be issued an attendance warning. Students who do not attend at least once in any 7 consecutive days will be dropped from the course retroactive to the last date of recorded attendance.

See [Academic Policies](https://catalog.pointloma.edu/content.php?catoid=46&navoid=2650#Class_Attendance) (https://catalog.pointloma.edu/content.php?catoid=46&navoid=2650#Class_Attendance) in the Undergraduate Academic Catalog. If absences exceed these limits but are due to university excused health issues, an exception will be granted.

Asynchronous Attendance/Participation Definition

A day of attendance in asynchronous content is determined as contributing a substantive note, assignment, discussion, or submission by the posted due date. Failure to meet these standards will result in an absence for that day. Instructors will determine how many asynchronous attendance days are required each week.

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](https://www.pointloma.edu/offices/spiritual-development) [.\(https://www.pointloma.edu/offices/spiritual-development\)](https://www.pointloma.edu/offices/spiritual-development)

USE OF TECHNOLOGY

In order to be successful in the online environment, you will need to meet the minimum technology and system requirements; please refer to the [Technology and System Requirements](https://help.pointloma.edu/TDClient/1808/Portal/KB/ArticleDet?ID=108349) [.\(https://help.pointloma.edu/TDClient/1808/Portal/KB/ArticleDet?ID=108349\)](https://help.pointloma.edu/TDClient/1808/Portal/KB/ArticleDet?ID=108349) information. Additionally, students are required to have headphone speakers compatible with their computer available to use. If you are a student in need of technological resources please contact student-tech-request@pointloma.edu [.\(mailto:student-tech-request@pointloma.edu\)](mailto:student-tech-request@pointloma.edu).

Problems with technology do not relieve you of the responsibility of participating, turning in your assignments, or completing your class work.

ASSIGNMENTS AT-A-GLANCE

The class schedule will be posted on CANVAS. You can also see the course flow on a week by week basis by accessing the Modules section in CANVAS.

SCHEDULE

| Week | Activity |
|------|-----------------------|
| 1 | Example of Modeling |
| 2 | AIDS 1 |
| 3 | AIDS 2 |
| 4 | AIDS 3 |
| 5 | AIDS 4 |
| 6 | LAB |
| 7 | LAB |
| 8 | LAB |
| 9 | EXAM 1 |
| 10 | FINANCE 1 |
| 11 | FINANCE 2 |
| 12 | FINANCE 3 |
| 13 | FINANCE 4 |
| 14 | ETHICS |
| 15 | REVIEW FOR FINAL EXAM |
| 16 | FINAL EXAM |