

## Point Loma Nazarene University

Mathematical, Information, and computer Science

|                      |   |
|----------------------|---|
| <b>MTH 121-1</b>     | Calculus and modeling   |
| <b>Class Time</b>    | F 7:25 am — 8:20 am   |
| <b>Location</b>      | RLC 108   |
| <b>Instructor</b>    | Jesús Jiménez PhD, Professor of Mathematics   |
| <b>Office</b>        | RS 218  |
| <b>Phone</b>         | 619-849-2634  |
| <b>Email</b>         | <a href="mailto:jjimenez@pointloma.edu">jjimenez@pointloma.edu</a>                                |
| <b>Office Hours</b>  | MTW 1:15 pm – 3:15 pm or by appointment   |
| <b>Prerequisites</b> | A score of 3 or more on AP 114 or AP 115 or credit for a calculus course from another institution |
| <b>Textbook</b>      | No textbook is required   |

**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 becomes an expression of faith. Being of Wesleyan heritage, we aspire 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 gives an introduction to mathematical modeling using mathematical concepts from Calculus I.  
**Graded** Credit/No Credit.

**LEARNING OUTCOMES FOR THIS COURSE**

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

**COURSE PHILOSOPHY**

Mathematics requires active participation. Participation means: asking questions, making conjectures and checking them, providing solutions to problems, sharing ideas with classmates. During class time I will participate in the same way. My advantage is that I have seen the material several times.

**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.

**COPYRIGHT PROTECTED MATERIALS**

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**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 1 unit class delivered over 16 weeks. Specific details about how the class meets the credit hour requirements can be provided upon request.

**GRADING**

The grade for the labs is based on the **weekly labs** (40%), one **midterm exam** (30%) and a **final exam** (30%).

**Grading Scale:** Course grades will be assigned according to the following scale:

### 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]   |

### LATE ASSIGNMENT POLICY

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.

### PARTIAL EXAMS POLICY

Make-up tests (or the exam) will be given only by arrangement prior to the test (exam) scheduled date with the instructor for reasons of documented emergency.

### FINAL EXAM POLICY

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.

### CELL PHONES

Turn off any cell phone, pager or things that are distracting while you are in class. Also, you should not work on other classes while in class to do so is disrespectful and it is not the best use of class time.

### GENERAL ADVICE

The key to success in this class is to attend lectures regularly and do your homework. You learn mathematics by doing it yourself. You should expect to spend approximately two hours outside of class for every one hour in class working on homework and going over concepts. When doing homework, please note it is normal to not be able to do every problem correct on the first attempt.

Do not be discouraged, instead seek help.

### SOURCES OF HELP

- The instructor. If you have questions, ask me. See my office hour's schedule.
- Other classmates. Form study groups! Work together!

| Lab Calendar |        |               |  |      |        |                   |
|--------------|--------|---------------|--|------|--------|-------------------|
| Week         | Date   | Activity      |  | Week | Date   | Activity          |
| 1            | 1-Sep  | Coke          |  | 8    | 27-Oct | Work 1            |
| 2            | 8-Sep  | Aids 1        |  | 9    | 3-Nov  | Work 2            |
| 3            | 15-Sep | Aids 2        |  | 10   | 10-Nov | Population        |
| 4            | 22-Sep | Aids 3        |  | 11   | 17-Nov | Finance 1         |
| 5            | 29-Sep | Aids 4        |  | 12   | 24-Nov | Finance 2         |
| 6            | 6-Oct  | Review        |  | 13   | 1-Dec  | Finance 3         |
| 7            | 13-Oct | <b>Exam 1</b> |  | 14   | 8-Dec  | <b>Final Exam</b> |