

**MTH 1021-1**      Calculus and Modeling (1.0 units)  
**Class Time**      F 7:25-8:20  
**Location**        RS 295

**Instructor**      Catherine Crockett, PhD  
**Office**            RS 222  
**Phone**            619-849-2723  
**Email**            catherinecrockett@pointloma.edu  
**Office Hours**    Monday: 1-3:30  
                          Tuesday: 9:30-11:30  
                          Wednesday: 10:30-11:30  
                          Thursday: 9:30-11:30  
                          or by appointment

**Textbook:**        No textbook required  
**Prerequisite:**    MTH 1033 or equivalent  
**Important Dates**

**Lab Midterm:**      **October 18**  
**Lab Final:**        **December 13**

**Course Description:**

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

**Course Credit Hours:**

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 15 weeks. Specific details about how the class meets the credit hour requirements can be provided upon request.

**Course Learning Outcomes:**

Students will be able to develop mathematical models for simple problems.

Students will be able to solve these problems using calculus

**University 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.

**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.

**Grading Scheme:**

Grades for the course will be based on

**Labs (40%)**

**Midterm (30%)**

**Final Exam (30%)**

**Grading Scale:** Grades are based on the number of points accumulated throughout the course with the following exception. A student must pass at least one of the Exams or Final Exam in order to pass the class. That is, a score of 60% must be achieved on one of these four Examinations or else the final course grade will be an F regardless of all other point totals. Approximate minimal percentages required to obtain a given grade are:

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)

**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 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 change the exam date and time for that particular student.

**Midterm and Final Exam:** 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 by me or a well documented emergency beyond your control. In such cases, all make-up exams will occur at 8:30 am on the Saturday between classes and Final Exam Week. A score of zero will be assigned for an examination that is missed without prior consent or a well-documented emergency beyond your control. The examination schedule is included in the daily schedule. I do not intend to accept excuses such as poor communication with parents, benefactors, sport team sponsors and/or travel agents.

**Labs:** All assignments are to be submitted/ turned in by the beginning of the class when they are due. Late work need not be accepted or may be assessed a penalty.

Labs must be prepared in a style suitable for grading. The following are guidelines:

- The organization must be easy to follow
- Pages are stapled together,
- The work must be legible

- Complete solutions must be written for problems ( not just the answers)
- Answers must be clearly marked
- Complete sentences and correct spelling must be used.

Any Labs not following these guidelines may lose points.

**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 the Undergraduate Academic Catalog [Class Attendance](#).

**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:**

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 (a) 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.

**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 [Academic Honesty](#) for definitions of kinds of academic dishonesty and for further policy information.

### Copyright Protected Materials:

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.

**Cell Phones:** Turn off any cell phone, pager or things that make noise while you are in class. Also, do not text or work on other classes while in class -to do so is disrespectful to me and your classmates.

**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:

1. Me. If you have questions, ask me. See office hours.
2. FREE TUTORING- Math Learning Center-hours are posted on the door.
3. Other classmates. Form study groups! Work together!

**Tentative Schedule and Homework assignment:** While topic order may change — the test dates will not.

Lab Calendar						
Week	Date	Activity		Week	Date	Activity
1	9/6	Lab #1		9	11/1	Lab #6
2	9/13	Lab #2		10	11/8	Lab #7
3	9/20	Lab #3		11	11/15	Lab #8
4	9/27	Lab #4		12	11/22	Lab #9
5	10/4	Lab #5		13	11/29	No Class
6	10/11	Prep for Mid term		14	12/6	Review
7	10/18	Lab Midterm		15	12/13	Lab Final Exam
8	10/23	No Class				