Point Loma Nazarene University, Spring 2026

Calculus With Applications

Department of Mathematical, Information, and Computer Science – School of STEM

Professor: Kyle Havens	**Course:** Math 1044	**Classroom:** RS 295	**Units:** 4
Office: Rohr Science 288	**Days:** Monday, Wednesday, Friday	**Section 1:** 8:30-9:35am	
Phone: (619) 849-3362	**Email:** kylehavens@pointloma.edu	**Section 2:** 10:55-12:05pm	

Final Exam: The final exam is cumulative and will be held at the following time in our classroom:

Section 1: Monday, May 4th from 7:30am to 10:00am

Section 2: Wednesday, May 6th from 10:30am to 1:00pm

PLNU Mission – Teach, Shape, 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.

General Education 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.

Course Description: Differential and integral calculus of the elementary functions of one variable. Limits, continuity, derivatives, integrals and applications.

Office Hours: Located in Rohr Science. Professor Havens has open office hours at the following times:

Monday	Tuesday	Wednesday	Thursday	Friday
7:30am-8:15am	9:00-11:45am	*12:15-2:30pm	10:45-11:45am	7:30am-8:15am
9:45-10:45am		*by appointment		12:15-1:15pm

Program and Course Learning Outcomes: Upon completion of this course:

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

General Education Learning Outcomes: Upon completion of this course:

1. Students will be able to solve problems that are quantitative in nature. The Signature Assignment for assessing this GELO is: Questions on the Final Exam

Required Materials: You should have the required course materials by the end of the **first day of class**.

1. A graphing calculator (TI-84+ recommended, CAS calculators are not allowed)
2. Paid access code to MyLab Math using the Access Pearson link in Canvas which includes eText
3. Physical text optional: *Calculus & Its Applications*, 15th edition by Goldstein, Lay, Schneider & Asmar

Class Performance: Your final grade in this course is calculated by the following system. Details on next page.

30%	Final Exam	A cumulative exam covering all the course material
40%	Exam Average	The average score of your three in-class exams
12%	Written Homework	Traditional written homework from the eText
8%	Weekly Quiz	Completed in Access Pearson covering the week's material
8%	Class Activities	Based on completion of individual and group activities
2%	Participation	You lose points for being late, leaving early, or missing class

Good Attendance: A student with no more than one unexcused absence is defined to have good attendance.

Letter Grade: The letter grade you receive in this course is based on the final percentage score you earned in the previously described weighted grading system. Requests for an opportunity to improve your grade due to personal circumstances will be denied. Borderline grades may be rounded up if student has good attendance.

[92%,100%]: A	[82%,88%): B	[70%,78%): C
[90%,92%): A-	[80%,82%): B-	[68%,70%): C-
[88%,90%): B+	[78%,80%): C+	[60%,68%): D

Final Exam: Successful completion of this class requires taking the final examination on its scheduled day. The final examination schedule is posted on the PLNU's Final Exam Schedules site. If you find yourself scheduled for three (3) or more final examinations on the same day, you are authorized to contact each professor to arrange a different time for one of those exams. However, unless you have three (3) or more exams on the same day, no requests for alternative final examinations will be granted.

Exams: There are three examinations, each covering roughly four weeks of content. See the course schedule for more information. Scientific or graphing calculators are allowed on the exam, but CAS calculators such as the TI-Nspire are not allowed. Your calculator will be inspected to make sure it follows the rules. Notes are not allowed on exams. Smart devices, such as phones, watches, and glasses, are not allowed on the exam. No make-up exams are allowed without prior consent. **Contact me before missing an exam if you have a critical emergency**. If you do not inform me that you will be missing an exam you will get a zero on that exam. Exams are weighted equally at $13.\overline{3}\%$ of your total grade. If you have good attendance, I will adjust the weighted scale of the exams in your favor, 20% for the highest exam and $6.\overline{6}\%$ for the lowest. Practice questions will be posted on Canvas in advance designed to help you identify topics that you need to study further.

Written Homework: Written homework problems are assigned from the textbook and will be submitted to Canvas. The problems are to be done by hand and are assigned from your textbook. The due dates will be posted in Canvas, but typically you will have at least one week to complete the assignments from a chapter after it is covered in class. Each written problem set will consist of anywhere from ten to thirty questions. A random sample 5-10 questions will be graded for correctness by a student grader. The rest will be graded for completion. Your homework must be submitted to Canvas upload as a single PDF file. It is important that your work is legible and organized. If your submission is **blank, illegible, or causes an error it will receive a zero**. You must check your submission to ensure it can be viewed or downloaded and opened. I encourage you to work together or get help on your homework if needed. Attending office hours is highly recommended. Directly copying an online source (such as AI or a solutions manual) or another student's homework is considered academic plagiarism and will not be tolerated. **Submitting work directly copied from any source will result in a warning and a score of zero**. Repeat offenses will be reported as dictated in PLNU's Academic Honesty Policy.

Class Activities: Mathematics requires active participation. Participation means asking questions, taking notes, making conjectures and checking them, providing solutions to problems, and sharing ideas with classmates. I will act as the expert facilitator during class time, with a mixture of lecture, group problem solving, use of technology, and integrated discussion. You will receive participation credit for your attendance by using the sign-in sheet. If you arrive late or leave early you will be marked ½ off for the day. Every class we will work on an individual or group-oriented activity directly related to the chapters of study. You are to work on them in your groups and submit them to Canvas by the last day of lecture on the subject. Generally, you will be graded by a mixture of completeness and correctness as with the written homework.

Weekly Quiz: There is weekly quiz in MyLab and Mastering which can be accessed in Canvas by clicking the Access Pearson menu or by using the individual quiz module. The quizzes are designed to check student progress and provide additional practice for the examinations. Each quiz is due Saturday at 11:59pm and will contain five to ten questions related to the current week's material. Each student will have 1 hour to complete each quiz. If you are having a difficult time completing the quizzes on your own, I suggest you plan to spend more time reading your textbook, getting tutoring, forming study groups, and coming to office hours.

Late Work: A maximum of one assignment from each category (written homework, class activities, weekly quiz) can be turned in late subject to a 10% penalty as long as the assignment is submitted before the corresponding exam. Other late work (which includes blank, illegible, or erroneous files) is not accepted. If you have a documented emergency that might require you to submit any additional late work, contact me before the assignment deadline with your emergency.

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 150 estimated total hours meeting the course learning outcomes.

Artificial Intelligence Policy: You are allowed to use Artificial Intelligence (AI) tools (e.g. ChatGPT, Gemini Pro 1.5, GrammarlyGo, Perplexity, etc.) to generate ideas, but you are **not allowed** to use AI tools to generate content (math, text, video, audio, images) that will end up in any work submitted to be graded for this course. If you have any doubts about using AI, please gain permission from the instructor.

PLNU Academic Accommodations Policy: PLNU is committed to providing equal opportunity for participation in all its programs, services, and activities in accordance with the Americans with Disabilities Act (ADA). 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 619-849-2533). Once a student's eligibility for an accommodation has been determined, the EAC will work with the student to create an Accommodation Plan (AP) that outlines allowed accommodations. Professors are able to view a student's approved accommodations through Accommodate.

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. Accommodations are not retroactive so clarifying with the professor at the outset is one of the best ways to promote positive academic outcomes.

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. Students cannot assume that because they had accommodations in the past, their eligibility at PLNU is automatic. All determinations at PLNU must go through the EAC process. This is to protect the privacy of students with disabilities who may not want to disclose this information and are not asking for any accommodations.

LomaBooks Instructions for Students: This course is part of our course material delivery program, **LomaBooks**. The bookstore will provide each student with a convenient package containing all required physical materials; all digitally delivered materials will be integrated into Canvas.

You should have received an email from the bookstore confirming the list of materials that will be provided for each of your courses and asking you to select how you would like to receive any printed components (in-store pick up or home delivery). If you have not done so already, please confirm your fulfillment preference so the bookstore can prepare your materials. For more information about **LomaBooks,** please go: HERE

Additional Course Information: Additional PLNU policies and practices that apply to this course can be found at the link below. The link includes PLNU's statement on spiritual care, state authorization, copyright policy, recording notification, academic honesty policy, language and belonging, sexual misconduct and discrimination, attendance and participation policy, course modality definitions, LomaBooks, use of technology, and the Loma Writing Center.

https://docs.google.com/document/d/11BgAANLOJ9tjt837d24EZ181ukM2qzHF/

Course Schedule: This course syllabus and schedule are subject to change due to unforeseen circumstances.

Week of	Monday	Wednesday	Friday
1/12/2026	**Lecture:** Course Intro *Review Algebra*	**Lecture:** Chapter 0 *Review Algebra*	**Lecture:** Chapter 1 *Slope of a Curve*
1/19/2026	*No Class* *MLKJ Day*	**Lecture:** Chapter 1 *Intro to Limits*	**Lecture:** Chapter 1 *The Derivative*
1/26/2026	**Lecture:** Chapter 1 *Rules of Differentiation*	**Lecture:** Chapter 1 *More on Derivatives*	**Lecture:** Chapter 2 *Graphs & Differentiation*
2/2/2026	**Lecture:** Chapter 2 *Derivative Tests*	**Lecture:** Chapter 2 *Intro to Optimization*	**Review:** Chapters 1-2 *Review for Exam*
2/9/2026	**Exam #1** *Covers Chapters 1-2*	**Lecture:** Chapter 3 *Product/Quotient Rules*	**Lecture:** Chapter 3 *The Chain Rule*
2/16/2026	**Lecture:** Chapter 3 *Implicit Differentiation*	**Lecture:** Chapter 3 *Catch Up on Rules*	**Lecture:** Chapter 4 *Exponential Functions*
2/23/2026	**Lecture:** Chapter 4 *Exponential Derivatives*	**Lecture:** Chapter 4 *Logarithmic Functions*	**Lecture:** Chapter 4 *Logarithmic Derivatives*
3/2/2026	**Lecture:** Chapter 5 *Exponential Growth/Decay*	**Lecture:** Chapter 5 *Exp/Log Applications*	*Online Class - Interest* *Professor Out of Town*
3/9/2026	*Spring Break*		
3/16/2026	**Lecture:** Chapter 6 *Antidifferentiation*	**Lecture:** Chapter 6 *Definite Integrals*	**Review:** Chapters 3-6 *Review for Exam*
3/23/2026	**Exam #2** *Covers Chapters 3-6.1*	**Lecture:** Chapter 6 *Integrals and Area*	**Lecture:** Chapter 6 *Area and Applications*
3/30/2026	**Lecture:** Chapter 8 *Intro to Trigonometry*	*Online Class - Trig.* *Day Before Break*	*Easter Break*
4/6/2026	*Easter Break*	**Lecture:** Chapter 8 *Trigonometric Derivatives*	**Lecture:** Chapter 8 *Intro to Identities*
4/13/2026	**Lecture:** Chapter 9 *Integration by Substitution*	**Lecture:** Chapter 9 *Integration by Parts*	**Review:** Chapters 6-9 *Review for Exam*
4/20/2026	**Exam #3** *Covers Chapters 6,8,9*	**Lecture:** Chapter 11 *Intro to Infinite Series*	**Lecture:** Chapter 11 *Taylor Polynomials*
4/27/2026	**Lecture:** Finance *Interest and Amortization*	**Review:** Chapters 1-11 *Review for Final*	*Office Hours Day* *Study Day*
5/4/2026	**Final Exam - Section 1** 7:30am-10:00am	**Final Exam - Section 2** 10:30am-1:00pm	*Finals Week*