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

MTH 1074: Calculus II

4.0 Units

Fall 2026

MWF 8:30 am – 9:35 am in Rohr Science 295

Final Exam: Wednesday, December 16, 7:30- 10:00 am

Instructor: Dr. Catherine Crockett
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Office Location and Office Hours: Rohr Science 222 , see Canvas for Office Hours

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

A continuation of Calculus I supported by the use of computer graphics and a symbolic computer algebra system. Methods of integration, sequences, series, elementary differential equations, polar coordinates and parametric equations.

Program and Course Learning Outcomes

1. Demonstrate facility with analytical concepts.
2. Demonstrate facility with algebraic structures.
3. Use technology to solve problems.
4. Speak about their work with precision, clarity and organization.
5. Write about their work with precision, clarity and organization.
6. Collaborate effectively in teams.
7. Identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand.
8. Gather relevant information, examine information and form a conclusion based on that information.
9. Understand and create arguments supported by quantitative evidence, and they can clearly communicate those arguments in a variety of formats.

Required Texts and Recommended Study Resources

Students are responsible for having the required course textbooks prior to the first day of class.

All supplemental materials posted on this course site (including articles, book excerpts, or other documents) are provided for your personal academic use. These materials may be protected by copyright law and should not be duplicated or distributed without permission of the copyright owner.

1. **Text: Calculus, by James Stewart, 9th ed. or Calculus: Multivariable Calculus**

2. A platypus that's house trained, has a sense of humor and able to walk on a lead preferred.

Assessment and Grading

Grading distribution:

- Weekly Participation 5%
- Written Homework: 15%
- Quizzes: 10%
- Exams (3 at 15% each): 45%
- Final Exam: 25%

Grades will be based on the following:

Weekly Participation: Attendance at each class is required. In these class meetings, we will have lectures, works on activities, problems, and labs. **Some classwork will be collected and graded, and some will be collected and given credit for attempting the work.**

Written Homework: Homework problems will be assigned regularly and posted on Canvas. A homework assignment is late if it is not submitted at the beginning of class on the due date. Please check regularly to ensure that you are keeping up with the homework. Late homework will not be accepted with the following exception: 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**. Your lowest written homework score will be dropped.

Quizzes: Quizzes will be given at the beginning of class time, so please be in your seat before the class period begins (less disruption to others). Quizzes are designed to take no more than five minutes to complete. However, ten to fifteen minutes of class time are set aside to complete these activities. Quiz dates are set in advance and are listed on the class calendar. During the course, you may find that you must be absent on the day of a quiz due to a personal situation. For this reason, you are allowed to drop your two lowest quiz scores. There will be no make-up quizzes, no exceptions, so use your dropped quizzes wisely.

Examinations and Final Examination: Exams and the Final Exam will include problems and questions from the material assigned in the text, readings and handouts, as well as material presented in class. No exam shall be missed without a well-documented emergency beyond your control.

Late work will not be accepted. Homework that are submitted late will be recorded with a score of zero. During the course, you may find that you are unable to submit homework on time due to a personal situation (for example, a personal or family illness, accident, business trip, etc.). This is why your lowest assignment will be dropped, as described above. Beyond the single use of the 3-day extensions described above, there are no exceptions to this policy so please use your dropped assignments wisely.

Grades are based on the number of points accumulated throughout the course with the following exception. A student must pass at least one of Exam 1, Exam 2, Exam 3 or the Final Exam in order to pass the class. That is, a minimum score of 60% must be achieved on one of the exams, or else the final grade will be an F regardless of all other point totals. Approximate minimal percentage required to obtain a given grade are:

Sample Standard Grade Scale Based on Percentages

A	B	C	D	F
A [92.5-100]	B+ [87.5-90)	C+ [77.5-80)	D+ [67.5-70)	F [0-60)
A- [90-92.5)	B [82.5-87.5)	C [72.5-77.5)	D [62.5-67.5)	
	B- [80-82.5)	C- [70-72.5)	D- [60-62.5)	

Final Examination Policy

Successful completion of this class requires taking the final examination on its scheduled day. The final examination schedule is posted on the Traditional Undergraduate Records: 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.

Incompletes and Late Assignments

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.

Artificial Intelligence (AI) 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 (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, by email or phone at 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 approved 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 approved accommodations in that particular course. Accommodations are not retroactive; as such, 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-related need should contact the EAC as early as possible (i.e., ideally before the beginning of the semester) to assure appropriate accommodations can be provided. In accordance with ADA, accommodations cannot constitute a fundamental alteration to course outcomes; therefore, planning ahead is vital in establishing appropriate accommodations for equal access to this course. 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 eligibility 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.

Additional Course Information

Additional PLNU policies and practices that apply to this course can be found at the following link: https://docs.google.com/document/d/1SoL5YMfCv_5cobhBwrDjbcZJzNKKTCfM/edit?usp=sharing&ouid=104297418648613020764&rtpof=true&sd=true

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 LomaBooks materials.

Calendar:

week	Monday	Wednesday	Friday
1 8/31 – 9/4	Course Introduction Review – functions & limits	Review: derivatives & limits	Review: integration Quiz #1
2 9/7-9/11	No Class- Labor Day	Review: u-sub Homework #1	7.1: Integration by parts Quiz #2
3 9/14- 9/18	7.2: Trig. Integrals	7.3: Trigonometric Substitution Homework #2	7.3: Trig. Sub Quiz #3
4 9/21 -9/25	7.4: Integration of rational functions by partial fractions	7.4: Integration of rational functions by partial fractions Homework #3	7.5: Strategy for integration Quiz #4
5 9/28- 10/2	Review For Exam #1	Exam #1 Homework #4	7.8 Improper integrals
6 10/5 – 10/9	5.2: Volumes of revolutions- disk/washer	5.3: Volumes of revolution - shell	8.1: Arc length Quiz #5
7 10/12 – 10/16	8.2: Area of surface of revolution	8.3 & 8.4: Applications Homework #5	10.1: Curves defined by parametric equations Quiz #6

8 10/19 – 10/23	10.2: Calculus with parametric curves	10.3: Polar Coordinates Homework #6	No class-Fall break
9 10/26 – 10/30	10.4: Area and lengths in Polar coordinates	11.1: Sequences	Review for Exam #2 Quiz #7
10 11/2 – 11/6	Exam #2 Homework #7	11.2 Series	11.2 & 11.3: Series & Integral test
11 11/9 – 11/13	11.4: Comparison Tests	11.5: Alternating series & test Homework #8	11.6: Abs. con & ratio test Quiz #8
12 11/16 – 11/20	11.6: A.C. & root test	11.7: Testing Series	Review for Exam #3 Quiz #9
13 11/23 – 11/27	Exam #3 Homework #9	No class- Thanksgiving	No class-Thanksgiving
14 11/30 – 12/4	11.8: Power Series	11.9: Representations of Functions as Power series	11.10: Taylor and Maclaurin Series Quiz #10
15 12/7 – 12/11	11.10: Taylor and Maclaurin Series	11.11: Applications of Tylor Polynomials Homework #10	Review for final Quiz #11
Finals week 12/14 -12/18		Final Exam 7:30 to 10:00 AM Homework #11	