

Math 173: Business Calculus (3.0 units)**Time & Place: TTH 1:30-2:45 in RLC 102**

Instructor: Dr. Catherine Crockett
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Office Rohr Science, Room 226
Office hours: MWF 11-12, MW 1-2:30, TTH 3-4:30 or by appointment

Important Dates: **Exam 1: February 23 (Thursday)**

 Exam 2: April 6 (Thursday)

 Final Exam (comprehensive): Thursday, May 4 1:30-4:00

Text: *Calculus and its applications*, 11th Edition by Bittinger, Ellenbogen and Surgent

Needed Supplies: A scientific calculator.

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

A calculus course intended for those studying business economics, or other related business majors. This course covers differential and integral calculus of elementary functions with an emphasis on business applications. This is a brief calculus course and not appropriate for students majoring in science, computer science or mathematics.

Prerequisite(s): MTH 113 or equivalent.

This course is one of the components of the General Education Program at Point Loma Nazarene University, in support of the general education learning outcome: *Quantitative Reasoning: Students will be able to solve problems that are quantitative in nature*. The purpose of general education is to provide a common educational experience, to develop essential skills, and to provide a broad cultural background for personal and professional growth.

LEARNING OUTCOMES

GE Learning Outcome:

- 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 find the derivatives of elementary functions.
- Students will be able to find the anti-derivatives (integral) of elementary functions.
- Students will be able to apply differentiation and integration to solve business problems.

ASSESSMENT AND GRADING

Grades for the course will be based on:

Exams (2 at 250 points each)	500 points
Homework	250 points
Final exam (comprehensive)	<u>250 points</u>
Total:	1,000 points

Grading Scale: Approximate minimal percentages required to obtain a given grade are:

Grades in percentages

	A	B	C	D	F
+		[87.5,90)	[77.5, 80)	[67.5, 70)	[0,60)
	[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)	

*A percentage score lower than 60.0% will result in a course grade of F. Failure to pass at least one of the two exams or the final exam will result in a course grade of F regardless of all other grade components.

Homework (25%): Homework will be assigned every class meeting. All homework assigned in a week will be due **at the start of class** the next Thursday. A homework assignment is late if it is not received at the start of the class on the due date. No late homework will be accepted except by prior arrangement (with me) or with a documented emergency. However, the two lowest homework scores will be dropped.

The object of the homework is to learn how to do the problems so there should be calculations on your homework using the terminology and methods of the class and not just an answer. Please be sure that your homework is stapled together and the problems are in order. Homework will be scored on a combination of completeness (with work shown) and correctness. A random selection (the same for all people) of the problems will be graded on any homework assignment

Exams (25% each): There are two in-class exams. If you do not take an exam you will receive a zero for it. Late exams may be taken only by prior arrangement with me 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.

Final Exam (25%): The final is **comprehensive and is given on Thursday, May 4 1:30 to 4:00**. 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.

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.

Side Note: 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 your classmates and me. You may be asked to leave the class for such behavior, resulting in an absence.

General Advice:

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.

For information about the class, homework assignments, handouts or grades, please log onto canvas.pointloma.edu. There you will find all of this class information. Please let me know if you can't access the class information or have any questions.

Sources of Help:

1. Me. If you have questions, ask me. See my office hours or email catherinecrockett@pointloma.edu
2. Other classmates. Form study groups! Work together!
3. The MLC (in Rohr science room 230)- schedule posted outside the room.

University Policies:**FINAL EXAMINATION 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.

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.

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 4-unit class delivered over 15 weeks. Specific details about how the class meets the credit hour requirements can be provided upon request.

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](#) for definitions of kinds of academic dishonesty and for further policy information.

PLNU ACADEMIC ACCOMMODATIONS POLICY

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. See [Disability Resource Center](#) for additional information.

PLNU ATTENDANCE AND PARTICIPATION POLICY

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 in the Undergraduate Academic Catalog.

Course Schedule:

Please note this schedule is tentative. Any changes will be announced.

week	Monday	Tuesday	Wednesday	Thursday	Friday
1 1/9- 1/13	1/9 No class	1/10 Monday schedule No class	1/11	1/12 Chapter R	1/13
2 1/16- 1/20	1/16 No Class MLK	1/17 Sections 1.1&1.2	1/18	1/19 Sections 1.3 & 1.4	1/20
3 1/23- 1/27	1/23	1/24 Sections 1.4 & 1.5	1/25	1/26 Sections 1.5 & 1.6	1/27
4 1/30- 2/3	1/30	1/31 Sections 1.6 &1.7	2/1	2/2 Section 1.7	2/3
5 2/6- 2/10	2/6	2/7 Section 2.1	2/8	2/9 Section 2.2	2/10
6 2/13- 2/17	2/13	2/14 Sections 2.3 & 2.4	2/15	2/16 Section 2.5	2/17
7 2/20- 2/24	2/20	2/21 Review for Exam #1	2/22	2/23 Exam #1	2/24
8 2/27- 3/3	2/27	2/28 Sections 2.6 & 2.7	3/1	3/2 Sections 2.7 & 2.8	3/3
Spring Break- no classes					
9 3/13- 3/17	3/13	3/14 Sections 3.1 & 3.2	3/15	3/16 Sections 3.2 & 3.3	3/17
10 3/20- 3/24	3/20	3/21 Sections 3.4 & 3.5	3/22	3/23 Sections 3.5 & 3.6	3/24
11	3/27	3/28	3/29	3/30	3/31

3/27- 3/31		Sections 4.1 & 4.2		Sections 4.2 & 4.3	
12 4/3- 4/7	4/3	4/4 Review for Exam #2	4/5	4/6 Exam #2	4/7
13 4/10- 4/14	4/10	4/11 Section 4.4	4/12	4/13 Easter Break No class	4/14 Easter Break No class
14 4/17- 4/21	4/17 Easter Break No class	4/18 Section 4.5	4/19	4/20 Section 4.6	4/21
15 4/24- 4/28	4/24	4/25 Section 5.1	4/26	4/27 Review &wrap up	4/28
Finals week 5/1- 5/5	5/1	5/2	5/3	5/4 Final exam 1:30-4:00	5/5