MTH 133-1	Pre-Calculus for the Sciences (3 units)	
Class Time	TR 1:30 pm — 2:45 pm	
Location	LA 102	
Instructor	Jesús Jiménez PhD, Professor of Mathematics	
Office	LA 102	
Phone	619-849-2634	
Email	jjimenez@pointloma.edu	
Office Hours	M 1 — 4 pm, TH 11 am — 12 pm and 3 — 4 pm	
Prerequisites	MTH 113 or equivalent	
Textbook	Pre-calculus with calculus previews by Zill and Dewer, 5th Edition.	
Important Dates	**Exam 1**	Feb 16
	Exam 2	March 30
	Final Exam	May 4 (Thursday), 1:30 pm — 4:00 pm

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.

Course Description
This course is an introduction to the functions necessary for the study of calculus with an emphasis on numerical and graphical notions of continuity, limits, and derivatives. The following function types are used as examples for the study of the concepts: polynomial, rational, exponential, logarithmic, and trigonometric functions.

Learning Outcomes for this Course
1. Students will be able to understand polynomial, rational, trigonometric, exponential and logarithmic functions.
2. Students will be able to formulate solutions to problems involving the applications of these functions.

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 in which a student is registered is considered essential to optimum academic achievement. Therefore, regular attendance and participation in each course are minimal requirements to be met. There are no allowed or excused absences except as approved in writing by the Provost for specific students participating in certain university-sanctioned activities. Excused absences still count toward the 10%-20% limits, but allow students to make up work, quizzes, or tests missed as a result of a university-sanctioned activity. Activities of a unique nature, such as labs or other activities identified clearly on the syllabus, cannot be made up except in rare instances when instructors have given advanced, written approval for doing so. Whenever the number of accumulated absences in a class, for any cause, exceeds ten (10) percent of the total number of class meetings, the faculty member should send an e-mail to the student and the Vice Provost for Academic Administration (VPAA) warning of attendance jeopardy. If more than twenty (20) percent of the total number of class meetings is reported as missed, the faculty member or VPAA may initiate the student's de-enrollment from the course without further advanced notice to the student. If the date of de-enrollment is past the last date to withdraw from a class, the student will be assigned a grade of W or WF consistent with university policy in the Grading section of the catalog. There are no refunds for courses where a

de-enrollment was processed. For more details see the PLNU
catalog: http://catalog.pointloma.edu/content.php?catoid=14&navoid=1089#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 academic standards for completion of their courses as
established by the instructors, students with special needs may require academic accommodations. At Point
Loma Nazarene University, students requesting academic accommodations must file documentation with the
Disability Resource Center (DRC), located in the Bond Academic Center. Once the student files documentation,
the Disability Resource Center contacts the student's instructors and provides written recommendations for
reasonable and appropriate accommodations to meet the individual needs of the student. This policy assists the
university in its commitment to full compliance with Section 504 of the Rehabilitation Act of 1973, the
Americans with Disabilities (ADA) Act of 1990, and ADA Amendments Act of 2008, all of which prohibit
discrimination against students with special needs and guarantees all qualified students equal access to the
benefits of PLNU programs and activities. For more details see the PLNU
catalog: http://catalog.pointloma.edu/content.php?catoid=14&navoid=1089#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
The Point Loma Nazarene University community holds the highest standards of honesty and integrity in all
aspects of university life. Any violation of the university's commitment is a serious affront to the very nature of
Point Loma's mission and purpose. Violations of academic honesty include cheating, plagiarism, falsification,
aiding academic dishonesty, and malicious interference. The details of PLNU's meaning of each of these words
can be found in the PLNU catalog
at: http://catalog.pointloma.edu/content.php?catoid=14&navoid=1089#Academic_Honesty

A student remains responsible for the academic honesty of work submitted in PLNU courses and the
consequences of academic dishonesty beyond receipt of the final grade in the class and beyond the awarding of
the diploma. Ignorance of these catalog policies will not be considered a valid excuse or defense. Students may
not withdraw from a course as a response to a consequence.

A student who is caught cheating on any item of work will receive a zero on that item and may receive an "F" for
the semester. See the PLNU Catalog for a further explanation of the PLNU procedures for academic dishonesty
(http://catalog.pointloma.edu/content.php?catoid=14&navoid=1089#Academic_Honesty).

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. 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.

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.

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

Grading
Grades for the course will be based on homework (30%), three exams (20% each; total of 40 %), and a final exam (30%).

Homework (30%)
Homework due dates will be determined during class meetings. A homework assignment is late if it is not received at the start of class on the due date. No late homework will be accepted; however the two lowest homework scores will be dropped. Please be sure that your homework is stapled together and the problems are in order. Homework will be scored on a combination of completeness and correctness. A random selection (the same for all people) of the problems will be graded on any homework assignment.

Tests (2 @ 20% each) and Final Exam (30%)
Tests and the 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. 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.

The Final Exam is COMPREHENSIVE
Thursday, May 4 2017, (1:30 pm − 4:00 pm)

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]

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 to me and your classmates) 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:
1.   Me. If you have questions, ask me. See my office hour's schedule.
2.   Other classmates. Form study groups! Work together!

Tentative Daily Schedule

Lecture	Day	Date	Section
1	Tuesday	1/10/16	**NO CLASS**
2	Thursday	1/12/16	1.1, 1.2
3	Tuesday	1/17/16	1.3, 1.4
4	Thursday	1/19/16	2.1, 2.2
5	Tuesday	1/24/16	2.2, 2.3
6	Thursday	1/26/16	2.4, 2.5
7	Tuesday	1/31/16	2.5, 2.6
8	Thursday	2/2/16	2.7, 2.8
9	Tuesday	2/7/16	2.8, 3.1
10	Thursday	2/9/16	3.1, 3.2
11	Tuesday	2/14/16	**REVIEW**
12	Thursday	2/16/16	**EXAM 1**
13	Tuesday	2/21/16	3.3, 3.4
14	Thursday	2/23/16	3.4, 3.5
15	Tuesday	2/28/16	3.6, 4.1
16	Thursday	3/2/16	4.1, 4.2
17	Tuesday	3/7/16	**SPRING BREAK**
18	Thursday	3/9/16	**SPRING BREAK**
19	Tuesday	3/14/16	4.2, 4.3
20	Thursday	3/16/16	4.4, 4.5
21	Tuesday	3/21/16	4.5, 4.6
22	Thursday	3/23/16	4.6, 4.7
23	Tuesday	3/28/16	**REVIEW**
24	Thursday	3/30/16	**EXAM 2**
25	Tuesday	4/4/16	4.8, 5.1
26	Thursday	4/6/16	5.1, 5.2
27	Tuesday	4/11/16	5.3, 5.4
28	Thursday	4/13/16	**EASTER BREAK**
29	Tuesday	4/18/16	5.4, 6.1
30	Thursday	4/20/16	6.2, 6.4
31	Tuesday	4/25/16	8.1, 10.1
32	Thursday	4/27/16	10.1, 10.2
33	Tuesday	5/2/16	**FINAL EXAM**
34	Thursday	5/4/16	

Homework

Section	Problems	Section	Problems
1.1	2, 3, 9, 12, 27, 30, 37, 42, 51, 62	4.1	2, 3, 10, 14, 5, 17, 18, 28, 31, 39, 59, 60, 82
1.2	3, 6, 8, 9, 15, 22, 23, 34, 55, 57 (b)	4.2	2, 3, 12, 13, 27, 28,37, 41, 42, 49, 50
1.3	2, 10, 13, 22, 23, 28, 29, 40, 47, 55	4.3	3, 5, 8, 9, 20, 21, 26, 27, 34, 35, 53
1.4	5, 6, 11, 12, 19, 24, 29, 43, 51, 63, 69, 70	4.4	1, 2, 5, 6, 7, 33, 38, 43, 23, 27, 36
1.5	1, 2, 8, 9, 13, 17, 21, 27	4.5	23, 24, 45, 62, 75
2.1	3, 5, 14, 17, 27, 28, 39, 40, 47, 56, 59, 61, 63	4.6	4, 5, 14, 15, 24, 25, 35, 40
2.2	5, 6, 12, 13, 23-32, 37	4.7	3, 5, 6, 15, 18, 21, 26, 33, 36
2.3	3, 4, 7, 27, 29, 33, 39, 53, 55, 56	4.8	2, 3, 4, 5, 6, 16, 17, 33, 35, 42, 43
2.4	11, 13, 15, 25, 28, 34, 35, 46, 50	5.1	2, 3, 4, 11, 12, 23, 24
2.5	2, 3, 7, 10, 13, 14, 19, 27, 34, 37, 43,	5.2	1, 2, 11, 18, 21
2.6	5, 7, 9, 11, 12, 31, 34, 47, 48	5.3	3, 4, 18
2.7	3, 4, 5, 7, 9, 17, 21, 24, 43, 44, 45, 57	5.4	3, 4, 24
2.8	5, 7, 11, 12, 21, 26	6.1	2, 3, 4, 7, 14, 15, 23, 24, 35, 40
2.9	1, 3, 5, 8	6.2	1, 4, 5, 14, 15, 19, 20, 21, 26, 31, 39, 45, 59
3.1	23, 27, 29,	6.3	2, 3, 7, 13, 22, 23, 27,
3.2	2, 3, 12, 13,	6.4	1, 9, 10, 29, 30
3.3	2, 3, 9, 10, 19, 20, 41, 42,	8.1	1, 2, 3, 4, 15, 18, 46, 47, 51, 56, 57
3.4	4, 5, 11, 17, 31, 32, 48.	8.2	1,7,8,13,26,33,34,35,38,51,52
3.6	3, 7, 8, 27, 29, 37, 38	10.1	3,4,5,6,7,19,20,23,26,31,32
		10.2	3,4,5,6,9,10,15,16,29,32,45,51