MTH 233-1	Linear Algebra (3 units)
Class Time	TR 8:00 am – 9:15 am
Location	RS 13

Instructor	Jesús Jiménez, PhD. Professor of Mathematics.
Office	RS 218
Phone	619-849-2634
Email	jjimenez@pointloma.edu
Office Hours	M (1 – 4 pm) W (1 – 3 pm) TH (10:00 – 11:45 am)

Textbook:	Linear Algebra, 4th ed. Lay, David C. 2011. **ISBN**: 978-0321836144
Prerequisite:	MTH 144 or MTH 164 (or equivalent).
Important Dates	
Exam 1	**2/16/16**
Exam 2	**3/30/16**
Final exam	**May 2 (Tuesday) 7:30 am – 10:00 am at RS 13**

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 computational introduction to linear algebra with applications. A study of linear equations, matrix algebra, Euclidean spaces and subspaces, vector spaces, linear transformations, eigenvalues, eigenvectors, and inner products.

Course and General Education Learning Outcomes
- Students will be able to apply their mathematical knowledge to solve problems.
- Students will be able to demonstrate facility with algebraic structures.
- Students will be able to speak about their work with precision, clarity and organization.
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- Students will collaborate effectively in teams.
- Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand.
- Students will be able to gather relevant information, examine information and form a conclusion based on that information.
- Students will be able to understand and create arguments supported by quantitative evidence, and they can clearly communicate those arguments in a variety of formats.

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 http://catalog.pointloma.edu/content.php?catoid=24&navoid=1581#Class_Attendance in the Undergraduate Academic Catalog.

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
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. For more details see the PLNU Catalog. See http://catalog.pointloma.edu/content.php?catoid=24&navoid=1581#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
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 http://catalog.pointloma.edu/content.php?catoid=24&navoid=1581#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.

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 delivered over 16 weeks. Specific details about how the class meets the credit hour requirements can be provided upon request.

Final Exam: Date and Time and 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. 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.

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

Homework (30%): Homework will be assigned every class meeting. 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 (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.

Please note: **The Final Exam is COMPREHENSIVE. May 2, (Tuesday) 7:30 a.m. to 10:00 a.m.**

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 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 working on homework and going over concepts for every one hour in class. When doing your homework, please note it is normal to not be able to do every problem correctly 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, RS-230. Hours are posted on the door.
        3. Other classmates. Form study groups! Work together!

Tentative Schedule: While topic order may change- the test dates will not.

	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	1.5, 1.6
5	Tuesday	1/24/16	1.6, 1.7
6	Thursday	1/26/16	1.8, 1.9
7	Tuesday	1/31/16	1.9, 1.10
8	Thursday	2/2/16	2.1, 2.2
9	Tuesday	2/7/16	2.2, 2.3
10	Thursday	2/9/16	2.4, 2.5
11	Tuesday	2/14/16	**REVIEW**
12	Thursday	2/16/16	**EXAM 1**
13	Tuesday	2/21/16	2.6, 2.8
14	Thursday	2/23/16	2.8, 2.9
15	Tuesday	2/28/16	3.1, 3.2
16	Thursday	3/2/16	3.2, 4.1
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	4.3, 4.4
21	Tuesday	3/21/16	4.5, 4.6
22	Thursday	3/23/16	4.6, 5.1
23	Tuesday	3/28/16	**REVIEW**
24	Thursday	3/30/16	**EXAM 2**
25	Tuesday	4/4/16	5.1, 5.2
26	Thursday	4/6/16	5.2, 5.3
27	Tuesday	4/11/16	5.3, 5.4
28	Thursday	4/13/16	**EASTER BREAK**
29	Tuesday	4/18/16	5.5, 6.1
30	Thursday	4/20/16	6.1, 6.2
31	Tuesday	4/25/16	6.3, 6.4
32	Thursday	4/27/16	6.4, 6.5
33	Tuesday	5/2/16	**FINAL EXAM**
34	Thursday	5/4/16	

Homework

Chapter	Section	Problems	HW #	Due Date
1	1	1, 4, 5, 8, 10, 12, 13, 15, 18, 21, 22, 23, 24, 28, 29, 31, 32, 33, 34	1	
	2	1-5, 7, 12, 13, 16, 21-29	1	
	3	2, 3, 6, 8, 9, 11, 14, 15, 18, 20, 21, 22, 23, 25, 27, 29, 32	2	
	4	1, 4, 6, 7, 8, 9, 12, 15, 17-22, 23, 26, 30, 35, 37, 40, 42	2	
	5	1, 4, 5, 9, 12, 13, 14, 15, 21, 23, 24, 26, 34, 37, 38	2	
	6	3, 6, 11	3	
	7	2, 3, 6, 9, 13, 14, 15-20-26, 33-38	3	
	8	1, 2, 5, 6, 9, 11, 13-18, 21, 22, 25, 26, 29-31, 35	3	
	9	2, 3, 6, 10, 11, 13-16, 18, 20, 22, 23, 29, 30	4	
	10	1, 11	4	
2	1	1, 3, 10, 12, 15, 16	4	
	2	1, 3, 5, 6, 7, 9, 10, 25		
	3	1-8, 11-15		
	4	1, 2, 11, 12		
	5	1, 2, 5		
3	1	1, 2, 4, 10, 11, 12		
	2	1-4, 5, 15-20		
4	1	1, 3, 5, 8, 11, 12, 13, 23, 24, 33		
	2	1-6, 8, 9, 11, 15,		
	3	1-6, 10, 13, 15, 16, 20, 21, 22		
	4	2, 3, 6, 7, 9, 10, 13, 17		
	5	2, 5, 10, 13, 14, 17, 19, 20		
	6	1-15		
5	1	2, 3, 5, 8, 9, 15, 16		
	2	3-6, 9, 16, 17		
	3	1, 4, 5, 10, 12		
	4	1, 3, 8, 11		
	5	3, 7, 8		
6	1	1-3, 9, 10, 14, 15, 16, 19, 20		
	2	1, 2, 5, 7, 10, 12, 13		
	3	1, 6, 7, 11, 14, 15		
	4	2, 5, 11, 13, 15		
	5	2, 3, 5, 6		