Math 2995 (Linear Algebra I) Spring 2015

I. **Course and Instructor Information**

Section	02 WF 2:00 – 3:15 pm (B206)
Instructor:	Dr. Pablo Zafra
Telephone number:	908 737 3709
Email address:	pzafra@kean.edu
Office:	C213
Office Hours:	MTF 9:30 – 11:00 am, M 11:50 - 12:30 pm, 1:20 - 2:00 pm,
	W 11:50 - 2:00 pm (by appointment only)

II. **Course Description**

Systems of linear equations, matrices, determinants, vector spaces, linear transformations, eigenvalues and eigenvectors, and applications.

Corequisite: Math 2415 or the equivalent

III. **Course Objectives**

Upon completion of this course, the student should be able to:
● Understand the basic concepts of matrix and linear algebra
● Solve systems of linear equations utilizing matrix techniques
● Solve problems involving various applications of linear algebra
● Use the computer (and/or calculator) to facilitate the solution of problems involving matrices

IV. **Textbook & Materials**

Textbook Title: Linear Algebra and Its Applications, Fourth Edition by David C. Lay
Publisher: Pearson
ISBN-13:   978-0-321-38517-8

Calculator: TI-84+ or comparable

V. **Important Dates**

January 21	Classes begin
January 27	Last day to withdraw with 100% refund
February 3	Last day to withdraw with 75% refund
February 10	Last day to withdraw with 50% refund

February 16	President's Day, no classes
March 2	Last day to withdraw from courses with a **W** grade, 0% refund
March 16--22	Spring recess
April 3	Good Friday, no classes
May 18	Term Ends

VI.   Course Requirements and Evaluations

A. ATTENDANCE
Attendance and class participation do not formally carry a percentage point for the final grade. However, with good attendance record and active class participation, borderline cases are normally rewarded with the higher mark. Keep in mind, your success in this course depends largely on your regular attendance.

B. HOMEWORK
To supplement and reinforce concepts that were discussed in the lecture, homework exercises from the textbook will be assigned. Homework problems are generally NOT collected but you are strongly encouraged to make any attempt to work on them. Although homework exercises do not formally carry a percentage point for the final grade, quiz and exam questions will be based primarily on the homework problems. Solutions to some problems will be discussed in the class if necessary.

C. QUIZZES
There will be a number of announced short quizzes to be given in class throughout the semester. Missed quizzes cannot be made up. **Grades from these quizzes and textbook problems will contribute 10% to your final grade.**

D. EXAMS
There will be three in-class exams tentatively scheduled on week 6, 12 and 16 of the semester, respectively. Alternative arrangements for missed exam will be given only under exceptional circumstances. You are strongly advised to notify me as soon as you know that you will not be able to take a test, and to contact me no later than the day after the test if you've missed it. **Each exam grade will contribute 30% towards the final grade.**

E. APPROXIMATE GRADING POLICY

93-100 **A**   89-92 **A-**   86-88 **B+**   82-85 **B**   78-81 **B-**   72-77 **C+**   66-71 **C**   60-65 **D**   0-59 **F**

VII.   Important University Policies and Information

- Students are responsible to review and understand the *University Academic Integrity Policy* (available at the Center for Academic Success or at http://www.kean.edu/admin/uploads/pdf/AcademicIntegrityPolicy.pdf)

- Students should review the *Student Code of Conduct*, as it discusses expectations of appropriate conduct in the classroom: http://www.kean.edu/KU/Code-of-Conduct.

- The **Students Rights and Responsibilities handbook** is available at:
      http://www.kean.edu/KU/Forms-Policies-and-Publications.

You are expected to conduct yourself in a manner that is consistent with the learning mission of the University. All forms of academic dishonesty are strictly forbidden. This includes but is not limited to the following: communicating with other students during exams; unapproved references to books, notes or "cheat sheets" during exams; and plagiarism—representing another person's work as your own. You should be aware that plagiarism is generally easy to recognize. In instances where I suspect plagiarism, I reserve the right to ask you to orally defend your work. The minimum penalty for an incident of academic dishonesty will be failure of the assignment where the dishonesty occurred. Do not underestimate my determination to enforce this policy.

For further information on academic ethics, please consult the Student Handbook found on the weblink above.

- Students are strongly encouraged to register for the University's emergency notification system (www.mir3.com/kean) in order to be informed of campus emergencies, weather notices, and other announcements.

- All students must have a valid Kean email account. For those who do not already have one, forms are available on-line at http://www.kean.edu/KU/Forms-OCIS; click on E-mail Account Request Form.

- **Americans with Disabilities Statement & Non-Discrimination Statement:**
  Kean University is an affirmative action, equal opportunity institution. Students with documented disabilities who may need special instructional accommodations or who may need special arrangements in the event of an evacuation should notify the instructor as soon as possible, no later than the second week of the term. Students may contact Kean Disability Office in Downs Hall Rm 122 to discuss special needs, 737-4910.

- **KU Non-Discrimination Policy:** Kean University is an affirmative action, equal opportunity institution.

VIII.   Tentative Schedule of Lessons

Week   Chapter

1   Chapter 1: Linear Equations
2   Chapter 1: Linear Equations
3   Chapter 1: Linear Equations
4   Chapter 1: Linear Equations
5   Chapter 2: Matrix Algebra
6   Chapter 2: Matrix Algebra; Exam 1
7   Chapter 2: Matrix Algebra
8   Chapter 2: Matrix Algebra
9   Chapter 2: Matrix Algebra; Chapter 3: Determinants
10   Chapter 3: Determinants
11   Chapter 4: Vector spaces
12   Exam 2; Chapter 4: Vector spaces
13   Chapter 4: Vector spaces
14   Chapter 4: Vector spaces
15   Chapter 5: Eigenvalues and Eigenvectors
16   Review; Final Exam

IX.   Suggested Homework Exercises

Note: If there are exercises related to materials that were not covered in class due to time constraint, then you are not responsible to self-study any of these materials.

1.1 #1-18, 29-32
1.2 #1-16
1.3 #1-6, 9-16, 23-27
1.4 #1-26, 37-40
1.5 #1-24, 33-36
1.6 #1-4, 12-14
1.7 #1-29, 31-38, 41-42
1.8 #1-22, 29-40
1.9 #1-10, 17-27, 37-40
1.10 (skip)

2.1 # 1-12, 15, 16
2.2 #1-22, 29-33, 35
2.3 #1-15, 33, 34
2.4 skip
2.5 #1-16
2.6 skip
2.7 #1-11

3.1 #1-18, 37, 38
3.2 #1-14, 21-26, 37, 38

3.3 #11-16

4.1 #1-18, 21-24, 32, 33, 35, 36
4.2 #1-29, 33, 37-39
4.3 #1-22
4.4 skip
4.5 #1-20
4.6 #1-4

5.1 #1-20
5.2 #1-17