University of North Texas at Dallas
Fall 2014
SYLLABUS

MATH 2700D-090: Linear Algebra and Vector Geometry 3Hrs

Department of	Mathematics and Information Sciences	**Division of**	Mathematics

Instructor Name:	*Mehmet Celik*
Office Location:	*DAL2, Room #225*
Office Phone:	*972-338 1568*
Email Address:	*Mehmet.Celik@unt.edu*

Office Hours:	***Office Hours*** *Mon. 12:00pm-02:00pm;* *Tues. 10:00am-01:00pm;* *Wed. 4:00pm-6:30pm;* *Thur. 10:00am-11:30am;*
Virtual Office Hours:	*N/A*

Classroom Location:	*DAL2 Room #241*
Class Meeting Days & Times:	*Monday & Wednesday 2:30pm-3:50pm*

Course Catalog Description:	*Vector spaces over the real number field; applications to systems of linear equations and analytic geometry, linear transformations, matrices, determinants and eigenvalues.*

Prerequisites:	*MATH 1720 Calculus II*
Co-requisites:	N/A

Required Text:	- Title: Linear Algebra and Its Applications, Fourth Edition, 2012, - Author: David C. Lay. ISBN: 13:978-0-321-38517-8; 10-0-32138517-9. **MyMath Lab access , Course code is: <mark>celik42484</mark>** - Class notes and all the handouts distributed by the instructor in this class are as important as the textbook.

Recommended Text and References:	- Elementary Linear Algebra by Howard Anton - Any undergraduate linear algebra text will help

Access to Learning Resources:	UNT Dallas Library:
	   phone: (972) 780-3625;
	   web: http://www.unt.edu/unt-dallas/library.htm
	UNT Dallas Bookstore:
	   phone: (972) 780-3652;
	   e-mail: 1012mgr@fheg.follett.com

Course Goals:	The goal of this course is to

The goal of this course is to:
- Strengthen ability to construct sound mathematical arguments.   - Learn about important issues in linear algebra   - Improve mathematical intuition.   - Improve oral and written communication skills in Mathematics.

	• Improve problem solving skills.
	• Help the student develop the skills of logical reasoning and careful presentation of proof.
Learning Objectives/Outcomes	
	Course Objectives: At the end of this course, the student will be able to: • Solve, by different methods, systems of linear equations. • Compute determinants, matrices inverses and transposes • Define a vector space and subspace and give examples • Extract the eigenvalues and eigenvectors of a given matrix. **Program Learning Outcomes:** • At the end of this course, the student will be able to: read, understand, formulate, explain, and apply mathematical statements.

Course Outline

Priority will be given to understanding the material in depth rather than covering more topics. This schedule is subject to change by the instructor. Any changes to this schedule will be announced in class. We will try to cover as much as we can from the following topics as time permits.

TOPICS	TIMELINE
System of Linear Equations	Week of Aug. 27, Sep. 3, 10,17
Matrix Algebra	Week of Sep. 24, Oct. 1
Determinants	Weeks of Oct.1, 15
Vector Spaces	Weeks of Oct. 15, 22, 29, Nov. 5
Eigenvalues and Eigenvectors	Week of Nov.Nov.5, 12
Inner product Spaces	Week of Nov.26, Dec. 3

Course Evaluation Methods

This course will utilize the following instruments to determine student grades and proficiency of the learning outcomes for the course.

Exams – Written in-class closed-book tests to measure knowledge of presented course material.
Homework- out of class work designed to supplement and reinforce course material.
Quizzes – Weekly quizzes to help students keep fresh with the material.
Projects- At least one project to apply the material learnt in class.

Grading Matrix:

The student's grade is determined solely by his/her performance on the evaluation criteria and the grade assignments listed above. ***Do not expect Extra Credit assignments!***

Instrument	Value (points or percentages)	Total
In-class Quizzes	10 in-class quiz scores (best ones) 5 points each	50
Online Quizzes	15 online quizzes (best ones) 3.3 points each	50
Homework Assignments	Homework	40

Project	Project	20
Mid-Term Exams	2 midterm exams at 70 points each	140
Final Exam	One comprehensive final exam at 100 points	100
Total:		**400**

Grade Determination:
A = 400 – 360 pts; i.e. 90% or better
B = 320 – 359 pts; i.e. 80 – 89 %
C = 280 – 319 pts; i.e. 70 – 79 %
D = 240 – 279 pts; i.e. 60 – 69 %
F = 239 pts or below; i.e. less than 60%

In Class Exams (in class)
  o There will be two Mid-term Exams. You will have a full class period (80 minutes) to complete each. The date for each exam is pointed in the schedule. See Make-up Policy section for more information on the Exams.
  o The final exam will be comprehensive. Students must take the final exam at the prescribed time; no exceptions. Make necessary arrangements now to attend the final exam.
    Final Exam Date and Time: Monday, December 8, 2014 from 2:00pm to 4:00pm

In-class Quizzes (in class)

  o In-class quizzes will be hold during the first 10 minutes of the class. Be one time so you will get all the time for the quiz. The dates for the quizzes are pointed on the schedule below.
  o There will be 10 in-class quizzes throughout the course.
  o There will be no make-ups for any missed in-class quizzes **for any reason**. Instead, at the end of the semester only the best ten in-class quizzes will be considered.
  o The material that will be covered in the quizzes will be announced a head of time.

Technology Use Policy:
Using technology, when appropriate, is encouraged. We will be using TI 84. You **<u>cannot</u>** use the TI-89 Calculator or any other calculator, which performs symbolic operations.

Homework Policy:
Homework will be in two parts, **recommended part**, that is for practice and the student doesn't need to turn in and **mandatory part** that is to be handed in at the beginning of the class on the due date. You should view the assigned homework problems as the minimum number of problems required to attain some level of mastery of the material. It is acceptable for students to work in groups as they make their preliminary efforts to explore and work through homework problems. However, after any such preliminary and cooperative efforts, it is expected each student to write up his/her final homework papers individually and without outside assistance. The act of copying another student's homework, or writing a problem solution as dictated by a tutor or from a solution manual, constitutes academic misconduct. You should do all homework problems but only selected problems will be graded. Keep a spiral notebook for all homework assignments. Be as neat as possible on the homework and try to keep the problems in order with space between them for professors' comments. Late homework will **<u>NOT</u>** be accepted.

Online Assignments Policy:
There will be different online quizzes and homework assignments that every student needs to complete on line using MyMathLab. Each student should buy an access code for MyMathLab to get access to these assignments. Students must purchase and register in MyMathLab (MML) **by the 3rd class meeting.** Students may access MML at any general access lab on campus. More information about the due dates of the assignments will be announced in class.

Online Homework Assignments (on MyMathLab)

- For each section covered in the course there will be an online Homework assignment on MyMathLab.
- You will have an unlimited number of attempts to complete the assignment.
- You must score at least 80% on each Online Homework Assignment to access the corresponding Online Quiz.
- The Online Homework Assignments on MyMathLab won't count towards your overall grade, but the Online Quizzes' grades will count.

Online Quizzes (on MyMathLab)

- There will be an Online Quiz on each section covered in class.
- Remember! You must earn at least 80% on the corresponding Online Homework Assignment (on MyMathLab) before you can access that Online Quiz.
- Online Quizzes' due dates will be announced on the MyMathLab and there will be no extension for the due times for any reason.
- You are supposed to work on the Online Quizzes on your own.
- At the end of the semester only the **best 15** online quizzes will be considered.

Course Project: Each student will complete a project during the semester. The project questions will be announced (you can see the project questions list from the BlackBoard) during the semester. You are strongly advised to work on your project seriously. Doing a mathematical project not only will it enable you to test your understanding of the material you saw in class - you will understand mathematics through trying, failing, and eventually succeeding in solving a math problem. When you work on your project, first try to do it by yourself. After that, you may discuss it with others. You will learn from talking about mathematics. However, **do not copy any solutions from any internet sources or from others.** You are supposed to understand the problem (either through own research or discussion) and then formulate the solution in your own words. Discussing a project with a classmate (or your instructor), understanding it, and then formulating it in your own words are allowed. Copying a solution from others is NOT allowed. **The due date for all projects submission is November 14th, 2014**. The project worth 20 points.

Make-up exam policy:
Exams should be taken as scheduled in the class time. No makeup examinations will be allowed except for documented emergencies (See Student Handbook). All requests for make-up exams MUST be submitted to the instructor in writing, with the supported documents. It is important that you contact your instructor as soon as possible (do **NOT** wait until you return to class!).

General Policies:
- It is the student's responsibility to stay abreast of all class announcements and changes made to this syllabus in class, whether present or not.

- You are expected to review all graded quizzes, homework and exam papers as soon as they are returned. All questions about the grading of quizzes, homework or exam papers must be reported within **seven** calendar days of the date on which the paper was returned.

University Policies and Procedures
Students with Disabilities (ADA Compliance):
The University of North Texas Dallas faculty is committed to complying with the Americans with Disabilities Act (ADA). Students' with documented disabilities are responsible for informing faculty of their needs for reasonable accommodations and providing written authorized documentation. Grades assigned before an accommodation is provided will not be changed as accommodations are not retroactive. For more information, you may visit the Student Life Office, Suite 200, Building 2 or call 972-780-3632.

Student Evaluation of Teaching Effectiveness Policy:
The Student Evaluation of Teaching Effectiveness (SETE) is a requirement for all organized classes at UNT. This short survey will be made available to you at the end of the semester, providing you a chance to comment on how this class is taught. I am very interested in the feedback I get from students, as I work to continually improve my teaching. I consider the SETE to be an important part of your participation in this class.

Assignment Policy:
There will be no make-ups for any missed in-class quizzes. Instead, at the end of the semester two of the lowest in-class quizzes will be dropped.

Exam Policy:
Exams should be taken as scheduled. No makeup examinations will be allowed except for documented emergencies (See Student Handbook). Specifically, in the case of injury or illness, you need to provide a note from a health care professional affirming date and time of a medical office visit regarding the injury or illness and stating that you should not be in class that day. You must notify me no later than the end of the second working day after the missed exam.

Academic Integrity:
Academic integrity is a hallmark of higher education. You are expected to abide by the University's code of Academic Integrity policy. Any person suspected of academic dishonesty (i.e., cheating or plagiarism) will be handled in accordance with the University's policies and procedures. Refer to the Student Code of Academic Integrity at http://www.unt.edu/unt-dallas/policies/Chapter%2007%20Student%20Affairs,%20Education,%20and%20Funding/7.002%20Code%20of%20Academic_Integrity.pdf *for complete provisions of this code. In addition, all academic work submitted for this class, including exams, papers, and written assignments should include the following statement:* **On my honor, I have not given, nor received, nor witnessed any unauthorized assistance that violates the UNTD Academic Integrity Policy.**

Bad Weather Policy:
On those days that present severe weather and driving conditions, a decision may be made to close the campus. In case of inclement weather, call UNT Dallas Campuses main voicemail number (972) 780-3600 or search postings on the campus website www.unt.edu/dallas. *Students are encouraged to update their Eagle Alert contact information, so they will receive this information automatically.*

Attendance and Participation Policy:
The University attendance policy is in effect for this course. Class attendance and participation is expected because the class is designed as a shared learning experience and because essential information not in the textbook will be discussed in class. The dynamic and intensive nature of this course makes it impossible for students to make-up or to receive credit for missed classes. Attendance and participation in all class meetings is essential to the integration of course material and your ability to

demonstrate proficiency. Students are responsible to notify the instructor if they are missing class and for what reason. Students are also responsible to make up any work covered in class. It is recommended that each student coordinate with a student colleague to obtain a copy of the class notes, if they are absent.

- **Excessive absences**
  - **more than 5 lectured classes**

  may result in being dropped from the course or receiving an F for the course.

For security measures once a student signs an attendance sheet she/he cannot leave the class without professor's permission.

- *If a student needs to leave the class earlier she/he should talk to the professor before the class; the student should leave the classroom quietly.*
- *If a student has to leave the class (for example in case of a family emergency or a similar situation) the student must invite the professor politely out of the classroom to explain the situation.*

Diversity/Tolerance Policy:

Students are encouraged to contribute their perspectives and insights to class discussions. However, offensive & inappropriate language (swearing) and remarks offensive to others of particular nationalities, ethnic groups, sexual preferences, religious groups, genders, or other ascribed statuses will not be tolerated. Disruptions which violate the Code of Student Conduct will be referred to the Center for Student Rights and Responsibilities as the instructor deems appropriate.

Copyright Policy:

The handouts used in this course are copyrighted. By "handouts," I mean all materials generated for this course, which include but are not limited to syllabi, lecture notes, quizzes, exams, in-class materials, review sheets, projects, and problems sets. Because these materials are copyrighted, you do not have the right to copy and distribute the handouts, unless I expressly grant permission.

Other Policy:

Use of Cell Phones & other Electronic Gadgets (such as Laptops) in the Classroom are prohibited. **Food** *is prohibited, drink is allowed in the Classroom.*

Fall 2014 Important Deadlines

Date	Deadline
August 25	Classes Begin.
September 8	Census.
September 9	Beginning this date a student who wishes to drop a course must first receive written consent of the instructor.
October 3	Last day for student to receive automatic grade of W for nonattendance. Last day for change in pass/no pass status. Last day to drop a course or withdraw from the semester with a grade of W for courses that the student is not passing. After this date, a grade of WF may be recorded.

October 4	Beginning this date instructors may drop students with a grade of WF for nonattendance.
November 3	Last day to drop with either W or WF. Last day for a student to drop a course with consent of the instructor.
November 10	Beginning this date, a student who qualifies may request an Incomplete, with a grade of I.
November 21	Last day to withdraw (drop all classes). Last day for an instructor to drop a student with a grade of WF for nonattendance.
December 5	Reading Day (no classes).
December 6 - 12	Final Exams.
December 12	Last Class Day.