University of North Texas at Dallas  
Fall 2016  
SYLLABUS

**MATH 2700: Linear Algebra: 3 HRS**

<table>
<thead>
<tr>
<th>Department of</th>
<th>Math &amp; Info Sciences</th>
<th>School of</th>
<th>Liberal Arts and Sciences</th>
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</thead>
</table>

**Instructor Name:** Dr. Arya  
**Office Location:** DAL2-226  
**Office Phone:** 972-317-1718  
**Email Address:** vinod.arya@untdallas.edu

**Office Hours:**  
MW: 9-10 am, M 11:30 am – 1 pm, W 12:30 pm – 1pm, MW 2:30 pm – 3:00 pm

**Course Format/Structure:** Face-to-Face  
**Classroom Location:** DAL2-243  
**Class Meeting Days & Times:** Lecture: MW 1:00 pm – 2:20 pm

**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 D (Calculus II)  
**Co-requisites:** None  
**Required:** MyMathLab Code: arya59805

**Recommended Text and References:** Linear Algebra and Its Applications, 5e  
Author(s): Lay, David | Lay, Steven | McDonald, Judi  

**Access to Learning Resources:**  
UNT Dallas Library: (Founders Hall)  
phone: (972) 780-1616  
web: [http://www.untdallas.edu/library](http://www.untdallas.edu/library)  
e-mail: Library@untdallas.edu  
UNT Dallas Bookstore: (Building 1)  
phone: (972) 780-3652  
web: [http://www.untdallas.edu/bookstore](http://www.untdallas.edu/bookstore)  
e-mail: untdallas@bkstr.com

**Course Goals or Overview:** The goals of this course are as follows -  
1. Strengthen ability to construct sound mathematical arguments.  
2. Learn about important issues in linear algebra.  
3. Improve mathematical intuition.  
4. Improve oral and written communication skills in Mathematics.  
5. Improve problem solving skills.  
6. Help the student develop the skills of logical reasoning and careful presentation of proof.

**Learning Objectives/Outcomes:** At the end of this course, the student will be able to  
1. Solve, by different methods, systems of linear equations.  
2. Compute determinants, matrices inverses and transposes  
3. Define a vector space and subspace and give examples  
4. Extract the eigenvalues and eigenvectors of a given matrix.

**Program Learning Outcomes:** In this course, the student will be able to:  
read, understand, formulate, explain, and apply mathematical statements.
Course Outline

This schedule is subject to change by the instructor. Any changes to this schedule will be communicated in class or via class email or Blackboard announcement. Additional readings and activities may be added, these will be noted in the Readings and Activities/Assignments sections.

<table>
<thead>
<tr>
<th>Dates</th>
<th>Topics</th>
<th>Activities</th>
<th>Assignments Deadlines</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/24</td>
<td>1.1, 1.2, 1.3</td>
<td>Homework</td>
<td>1.1, 1.2, 1.3</td>
</tr>
<tr>
<td>8/31</td>
<td>1.4, 1.5</td>
<td>Homework</td>
<td>1.4, 1.5</td>
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<tr>
<td>9/7</td>
<td>1.7, 1.8</td>
<td>Homework</td>
<td>1.7, 1.8</td>
</tr>
<tr>
<td>9/14</td>
<td>1.8, 1.9</td>
<td>Homework</td>
<td>1.8, 1.9</td>
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<tr>
<td>9/21</td>
<td>Review, Test I</td>
<td>Test</td>
<td>Test I</td>
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<tr>
<td>9/28</td>
<td>2.1, 2.2</td>
<td>Homework</td>
<td>2.1, 2.2</td>
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<tr>
<td>10/5</td>
<td>2.2, 2.3</td>
<td>Homework</td>
<td>2.2, 2.3</td>
</tr>
<tr>
<td>10/19</td>
<td>2.3, 2.8</td>
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</tr>
<tr>
<td>10/26</td>
<td>2.8, 2.9</td>
<td>Homework</td>
<td>2.8, 2.9</td>
</tr>
<tr>
<td>11/2</td>
<td>Review, Test II</td>
<td>Test</td>
<td>Test II</td>
</tr>
<tr>
<td>11/9</td>
<td>3.1, 3.2</td>
<td>Homework</td>
<td>3.1, 3.2</td>
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<tr>
<td>11/16</td>
<td>3.3, 5.1</td>
<td>Homework</td>
<td>3.3, 5.1</td>
</tr>
<tr>
<td>11/30</td>
<td>5.2, 5.3</td>
<td>Homework</td>
<td>5.2, 5.3</td>
</tr>
<tr>
<td>12/7</td>
<td>Comprehensive Final Exam – 12/7/16 – 1:00 PM – 3:00 PM</td>
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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 tests designed to measure knowledge of presented course material

**Assignments:** - Online/in-class homework assignments, quizzes and projects

Grading Matrix: (sample given)

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Value (points or percentages)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework Assignments</td>
<td>20%</td>
<td>20</td>
</tr>
<tr>
<td>Quizzes/Projects</td>
<td>20%</td>
<td>20</td>
</tr>
<tr>
<td>Tests</td>
<td>2 Tests at 20% each</td>
<td>40</td>
</tr>
<tr>
<td>Comprehensive Final Exam</td>
<td>20%</td>
<td>20</td>
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<tr>
<td><strong>TOTAL:</strong></td>
<td></td>
<td>100</td>
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Grade Determination

A = 90-100 pts; i.e.90% or better
B = 80-89 pts; i.e.80 – 89 %
C = 70-79 pts; i.e.70 – 79 %
D = 60-69 pts, i.e.60 – 69 %
F = 60 pts or below; i.e. less than 60%

Revised April 2016 supersedes all previous versions
University Policies and Procedures

Students with Disabilities (ADA Compliance): The University of North Texas at Dallas makes reasonable academic accommodation for students with disabilities. Students seeking accommodations must first register with the Disability Services Office (DSO) to verify their eligibility. If a disability is verified, the DSO will provide you with an accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request accommodations at any time, however, DSO notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet/communicate with each faculty member prior to implementation in each class. Students are strongly encouraged to deliver letters of accommodation during faculty office hours or by appointment. Faculty members have the authority to ask students to discuss such letters during their designated office hours to protect the privacy of the student. For additional information see the Disability Services Office website at http://www.undallas.edu/disability. You may also contact them by phone at 972-338-1777; by email at UNTDdisability@untdallas.edu or at Founders Hall, room 204. (UNTD Policy 7.004)

CoursEval Policy: Student’s evaluations of teaching effectiveness is a requirement for all organized classes at UNT Dallas. 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 students’ evaluations to be an important part of your participation in this class.

Assignment Policy: All assignments (homework/online quizzes/projects) are due on the announced last dates. The assignments submitted late will carry a penalty of 20%.

Exam Policy: Exams should be taken as scheduled. No makeup examinations will be allowed except for documented emergencies (See Student Handbook).

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 (Policy 7.002) at http://www.undallas.edu/sites/default/files/page_level2/pdf/policy/7.002%20Code%20of%20Academic_Integrity.pdf Refer to the Student Code of Student Rights, Responsibilities and Conduct at http://www.undallas.edu/sites/default/files/page_level2/hds0041/pdf/7_001_student_code_of_conduct_may_2014.pdf. Academic dishonesty includes, but is not limited to, cheating, plagiarizing, fabrication of information or citations, facilitating acts of dishonesty by others, having unauthorized possession of examinations, submitting work of another person or work previously used without informing the instructor, or tampering with the academic work of other students. In addition, all academic work turned in for this class, including exams, papers and written assignments must 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: Campus facilities will close and operations will be suspended when adverse weather and/or safety hazards exist on the UNTD campus or if travel to the campus is deemed dangerous as the result of ice, sleet or snow. In the event of a campus closure, the Marketing and Communication Department will report closure information to all appropriate major media by 7 a.m. That department will also update the UNTD website, Facebook and Twitter with closing information as soon as it is possible. For more information please refer to http://www.undallas.edu/police/resources/notifications

Attendance and Participation Policy: The University attendance policy is in effect for this course. Please refer to Policy 7.005 Student Attendance at http://www.undallas.edu/hr/upol

Diversity/Tolerance Policy: Students are encouraged to contribute their perspectives and insights to class discussions. However, offensive and 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 Dean of Students as the instructor deems appropriate. (UNTD Policy 7.001)