Academic Inquiries: Texas Wesleyan University
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# MAT 3321 - Linear Algebra

**Basic Information:**

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|---|---|
| **Instructor Name** | TBA |
| **E- Mail** | |
| **Home Institution** | |
| **Office** | TBA |
| **Office Hours** | TBA, and by appointment |

**Course Description**:
Matrices,systems of linear equations, non-homogeneous systems,vector spaces and subspaces, dimension, linear transformations, invertible linear operators, diagonalizable operators, and polynomial theory.

**Required Course Materials:**

| **Textbook** | **Edition** | **Author** | **Publisher** | **ISBN-13** |
|---|---|---|---|---|
| Elementary Linear Algebra | 11 | Anton | Wiley | 978-1118434413 |
| Link to e-book purchase address: http://www.slader.com/textbook/9781118473504-elementary-linear-algebra-11th-edition/ | | | | |

**Course Hours:**
The course has 17 class sessions , a 5-hour field trip and four 80-minute after-class discussion. Each class session is 160 minutes in length. The course normally meets from Monday to Friday. This course has a total of 66 contact hours including a final exam. Final exams are scheduled on July 27, 2019.

**Prerequisite:**
None

**Tentative Course Schedule:**

| **Week** | **Session** | **Day** | **Topic (s)** | **Chapter(s)** |
|---|---|---|---|---|
| Week 1 | July 4 | Th | School Orientation | |
| | July 5 | F | Introduction to Systems of Linear Equations<br>Guassian Elimination | 1 |
| | July 5<br>18:40-20:00 | F | After-class Discussion | |
| | July 6 | Sat | Matrices and Matrix Operations<br>Inverses;Algebraic Properties of Matrices | 1 |
| Week 2 | July 8 | M | Elementary Matrices and a method for Finding<br>More on Linear System and Invertible Matrices | 1 |
| | July 9 | T | Diagonal, Triangular, and Symmetric Matrices<br>Matrix Transformations | 1 |
| | July 10 | W | Determinants by Cofactor Expansion<br>Evaluating Determinants by Row Reduction | 2 |

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|---|---|---|---|---|
| | | | Properties of Determinants;Cramer's Rule | |
| | July 11 | Th | Vectors in 2-space,3-spaces and n-space<br>Norm,Dot product, and Distance in R^n<br>**Test #1** | 3 |
| | July 11<br>18:40-20:00 | Th | After-class Discussion | |
| | July 12 | F | Orthogonality<br>Cross product | 3 |
| Week 3 | July 15 | M | Real Vector Spaces<br>Subspaces<br>Linear Independence | 4 |
| | July 16 | T | Coordinates ad Basis<br>Dimension<br>Change of Basis | 4 |
| | July 17 | W | Row Space,Column space and null space<br>Rank,Nullity and the fundamental matrix spaces<br>Basis Matrix transformations in R^2 and R^3 | 4 |
| | July 18 | Th | Properties of Matrix Transformations<br>Eigenvalues and Eigenvectors<br>Diagonalization<br>**Test #2** | 4&5 |
| | July 18<br>18:40-20:00 | Th | After-class Discussion | |
| | July 19 | F | **Field Trip (5 hours)**<br>Company Visit of Industrial Bank Co.,LTD<br><br>Industrial Bank is one of the first batch of joint-stock commercial banks in China and represents a time of change. Industrial Bank will arrange their HR manager and Business manager to introduce key elements of their bank operations. | |
| Week 4 | July 22 | M | Inner Products<br>Angle and Orthognality in Inner Product Spaces<br>Gram-Schmidt process; QR-Decomposition | 6 |
| | July 23 | T | Orthogonal Matrices<br>Orthogonal Diagonalization | 7 |
| | July 24 | W | General Linear Transformations | 8 |
| | July 25 | Th | Final Exam Review | |
| | July 25<br>18:40-20:00 | Th | After-class Discussion | |
| | July 26 | F | Reading Day | |
| | July 27 | Sat | Final Exam | |

**Grading Policies:**

| **Part** | **Percentage** |
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| Homework | 25% |
| Tests*2 | 30% |

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|---|---|
| Attendance/ Participation | 15% |
| Final Exam | 30% |
| Course Total | 100% |

**Grade Distribution:**

| Percentage | Letter Grade | Grade Points |
|---|---|---|
| 100-90 | A | 4.0 |
| 80-89 | B | 3.0 |
| 70-79 | C | 2.0 |
| 60-69 | D | 1.0 |
| 59 or below | F | 0.0 |

**Academic Integrity**

School expects honesty from students in presenting all of their academic work. Students are responsible for knowing and observing accepted principles of scholarly research and writing in all academic work.

Academic dishonesty or cheating includes acts of plagiarism, forgery, fabrication or misrepresentation, such as the following:

- claiming the work or thoughts of others as your own
- copying the writing of others into your written work without appropriate attribution
- writing papers for other students or allowing them to submit your work as their own
- buying papers and turning them in as your own
- having someone else write or create all or part of the content of your assignments
- submitting the same paper for more than one study or class without explicit permission from the faculty members

**General Principles**

This program is committed to principles of trust, accountability, clear expectations and consequences. It is also committed to redemptive efforts, which are meaningful only in light of these principles. Students will be granted due process and the opportunity for an appeal.
Academic dishonesty offenses generally are subject to incremental disciplinary actions. Some first offenses, however, receive severe penalties, including dismissal from the program.

**General Disciplinary**

The following is a non-comprehensive list of possible actions apart from dismissal from the program: warning from a professor, program director; a lower or failing grade on an assignment, test or course; suspension or dismissal from the course; suspension or dismissal from the program.

**Disciplinary Actions for Specific Offenses**

Some academic dishonesty offenses call for specific disciplinary actions. The following have been identified:

Falsification of documents: Students who falsify or present falsified documents may be dismissed. Prospective students who are discovered to have presented falsified admission documents prior to admission shall be denied

admission to the program. Should it be discovered after admission that a student had presented falsified documents for admission, such admission may be annulled and the record of academic achievement removed from the academic record, with appropriate notations. Such annulments or denials may be reviewed after one year.

Dishonesty in course requirements: Course work (a quiz, assignment, report, mid-term examination, research paper, etc.) in which a student has been dishonest generally will receive zero points towards the grade in fulfillment of a course requirement, and/or the student may receive a failing grade for the course. The professor of the course determines the appropriate consequence.

Final assignment: When a student cheats in a major or final assignment such as a comprehensive examination or presents plagiarized material in a major or final assignment, that student shall receive an F in that particular subject. Student cheats on more than two exams shall be dismissed from this program.