MATH211 Section 02 Linear Algebra - Syllabus

When and Where: MWF, 13:00pm -13: 50pm; Johns Hall—Room 306

Instructor: Dr. Yuting Yuan, yyuan11@wm.edu
Office hour: ISC 2271, Wednesday 2:30pm - 4:30pm
Questions are always welcome. Post on blackboard or email me.

Important dates:

08/31, Wed	First day of class
09/05, Mon	**Labor day, No class**
09/12, Mon	Last day to add/drop
10/10, Mon	**Midterm exam 1, in class**
10/14, Fri	**Fall Break, No class**
10/31, Mon	Last day to withdraw
11/18, Fri	**Midterm exam 2, in class**
11/21, Mon	**Remote class/Not in exam**
11/23 - 11/25	**Thanksgiving, No class**
12/09, Fri	Last day of class
12/20, Tue	**Final exam, 2:00pm - 5:00pm**

Grading policy:

Homework	30%
Attendance	10%
Midterm exam 1	15%
Midterm exam 2	15%
Final exam	30%

Grade	Mark
A	>92
A-	>89
B+	>86
B	>82
B-	>79
C+	>76
C	>72
C-	>69
D+	>66
D	>62
D-	>59
F	<59

- **Attendance** is tracked at the beginning of each class.
- **Homework:** Late homework will **not** be accepted.
- **Mark** is the weighted average of Homework, Attendance, Midterm and Final exams. Two class absences are allowed.

Textbook: *Linear Algebra and its Applications*, sixth edition, by *David C. Lay et al. W*e cover:

Book Section	Topics
1.1	Systems of Linear Equations
1.2	Row Reduction and Echelon Forms
1.4	The Matrix Equation
1.7	Linear Independence
1.8	Linear Transformation
1.9	The Matrix of a Linear Transformation
2.1	Matrix Operations
2.2	The Inverse of a Matrix
2.3	Characterization of Invertible Matrices
2.4	Partitioned Matrices
2.5	Matrix Factorizations
3.3	Cramer's Rule, Volume, and Linear Transformations
4.1	Vector Spaces and Subspaces
4.2	Null Spaces, Column Spaces, Row Spaces, and Linear Transformations
4.3	Linearly Independent Sets; Bases
4.4	Coordinate Systems
4.5	The Dimension of a Vector Space
4.6	Change of Basis
4.7	Digital Signal Processing
5.3	Diagonalization
6.1	Inner Product, Length, and Orthogonality
6.2	Orthogonal Sets
6.3	Orthogonal Projections
6.4	The Gram-Schmidt Process
6.5	Least-Squares Problems
6.6	Machine Learning and Linear Models
7.1	Diagonalization of Symmetric Matrices
7.2	Quadratic Forms
7.3	Constrained Optimization

Honor Code: Students are expected to uphold the honor code. The Honor Code prohibits lying, cheating, and stealing. Any infractions will be referred to the Honor Council.

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