MATH 203-A01: Linear Algebra

Syllabus, Summer 2022

Course goals. To understand and be able to make use of linear equations, the concepts of matrix, determinant, vector space, eigenvalue and eigenvector, matrix diagonalization, length, orthogonality, and approximation.

Syllabus will be posted on the GMU Black Board.

Prerequisite. Grade *C* or better in MATH 114.

Textbook. Lay, Lay, McDonald, *Linear Algebra and its Applications*, 6th edition (and NOT a 6th Global Edition), Addison-Wesley, 2016. ISBN: 9780135851258. We will not be using Pearson MyLab Math, so you do not need to purchase an access code. Nevertheless, for those who wish to use MyLab Math, Course ID is **soltan30464**

Material to be covered. Chapters 1-6 (with some sections omitted).

Lectures. MTWR, 10:30 am–12:35 pm. Horizon Hall, Room 3012.

Instructor. Dr. Valeriu Soltan. **Email:** vsoltan@gmu.edu

Office hours. MTWR, 1:00 pm–2:00 pm, or by appointment. Exploratory Hall, Room 4202.

Homework. Problems for the homework are assigned regularly (see page 3 below). Although these will not be collected, success in quizzes, midterm, and final exam strongly depends on their completing and understanding.

Exams and Quizzes. There will be 15 quizzes, a midterm, and a final exam. All these are closed-book and closed-notes. Simple calculators are allowed.

Attendance and make-ups. Each student is expected to attend the class regularly. No make-ups for quizzes, midterm, and final exam are allowed unless you provide a serious written excuse. Excused tests should be taken within a timely fashion, but not later than the last day of classes.

Grading. Quizzes are 48%, midterm is 24%, and final exam is 28% of the total grade. There is no grade curving or dropping, etc. Equivalence between scores and letters, recommended by GMU, is given in the table below.

A+	A	A-	B+	B	B-	C+	C	C-	D	F
100-96+	96-92+	92-89+	89-85+	85-80+	80-77+	77-73+	73-69+	69-66+	66-60+	60-0

Free tutoring. Free tutoring is available for the enrolled students. For details see
https://science.gmu.edu/academics/departments-units/mathematical-sciences/math-tutoring/tutoring-center-hours-and.

ODS. If you are a student with a disability and you need academic accommodations, please contact the Office of Disability Services. All academic accommodations must be arranged through this office.

GMU policies on final exams. The final exam may not be given before the last day of classes. If you need to change the date of your final exam for unusual circumstances, you have to obtain professor's approval at least a week prior to the last day of classes. Retaking final exams is not permitted.

The absence from the final exam will not be excused except for sickness on the day of the exam confirmed by physician's note or for other causes approved by the student's academic dean or director. If a student missed the final exam due to illness or a family emergency, an incomplete grade (IN) may be assigned provided the student took all quizzes and the midterm. If absence from the final exam is unexcused, the grade for the course is F.

Academic integrity and university policies. Mason is an Honor Code university; please see the University Catalog for a full description of the code and the honor committee process. Other policies are available at http://universitypolicy.gmu.edu/. Students are responsible for knowing and following established policies.

COURSE OUTLINE

Day	Tests	Sections Covered in Class
05/23		1.1, 1.2
05/24	Quiz 1 (Section 1.1)	1.2, 1.3
05/25	Quiz 2 (Section 1.2)	1.4, 1.5
05/26	Quiz 3 (Section 1.3)	1.7, 1.8
05/30	*Memorial Day*	
05/31	Quiz 4 (Section 1.4)	1.9, 2.1
06/01	Quiz 5 (Section 1.5)	2.1, 2.2
06/02	Quiz 6 (Section 1.7)	Practice
06/06	**Midterm**	**Class time**
06/07		2.3, 2.8
06/08	Quiz 7 (Section 2.8)	2.9, 3.1
06/09	Quiz 8 (Section 2.9)	3.2, 3.3
06/13	Quiz 9 (Section 3.1)	4.4, 4.6
06/14	Quiz 10 (Section 3.2)	5.1, 5.2
06/15	Quiz 11 (Section 3.3)	5.3
06/16	Quiz 12 (Section 4.4)	6.1, 6.2
06/20	*Juneteenth*	No classes
06/21		6.3, 6.4
06/22		Practice
06/23	**Final exam**	**10:30 am-1:15 pm**

HOMEWORK ASSIGNMENT

Sections	Homework Problems
1.1	1, 3, 7, 9, 11, 13, 19, 21
1.2	1, 3, 7, 9, 11, 13
1.3	1, 3, 5, 7, 9, 11, 13
1.4	1, 3, 5, 7, 9, 11, 13, 21
1.5	1, 3, 5, 7, 9, 11, 17, 19, 21, 23, 25
1.7	1, 3, 5, 7, 15, 17, 19
1.8	1, 3, 5, 9, 11, 13, 15, 17, 19
1.9	1, 3, 5, 7, 9, 15, 17, 19, 21
2.1	1, 3, 5, 7, 11, 25, 35
2.2	1, 3, 5, 7, 9a, 29, 39, 41, 43
2.3	1, 3, 5, 7, 41
2.8	1, 3, 5, 7, 9, 11, 15, 17, 19, 31, 33
2.9	1, 3, 5, 9, 11, 13
3.1	1, 3, 5, 7, 9, 11, 13, 15, 17, 25, 27, 29
3.2	1, 3, 5, 7, 9, 11, 13, 15, 17, 21, 23, 25
3.3	1, 3, 5, 11, 13, 15, 19, 21, 23, 27
4.4	1, 3, 5, 7, 9, 11
4.6	1, 5, 7, 9
5.1	1, 3, 5, 7, 9, 11, 13, 15, 17
5.2	1, 3, 5, 7, 9, 11, 13, 15, 17
5.3	1, 5, 7, 9, 11, 13, 15, 17, 19
6.1	1, 3, 5, 7, 9, 11, 13, 15, 17
6.2	1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21
6.3	1, 3, 5, 7, 9, 11, 13, 15
6.4	1, 3, 5, 7, 9, 11