NORTH CAROLINA STATE UNIVERSITY
Department of Mathematics

MA 303 Tentative Schedule for Spring Semester 2024

Text: *Introduction to Linear Analysis,* by N. J. Rose
Instructor: Dr. Mikhail Gilman

Date	Sections	Topics
Jan. 09	1.1, 1.2	Difference Equations
11	1.2, 1.3	Difference Equations, Compound Interest
16	1.3	Compound Interest
18	1.4, 1.5	Mortgage Amortizations, 1st Order Difference Equation
23	1.6	1st Order Difference Equations
25	1.7	Complex Numbers
30	1.7, 1.8	Complex Numbers, Fibonacci Numbers
Feb. 01		**Midterm test # 1 (online, no face-to-face class!)**
06	1.9	Properties of Solutions of Second Order Linear Difference Equations
08	1.10	Homogeneous 2nd Order
Feb. 13	---	**Wellness day (no classes)**
15	1.11	Non-homogeneous
20	1.12, 1.13	Economic Model, Gambler's Ruin
22	2.1, 2.2	Differential Equations, Separation of Variables
27	2.3	1st Order and 2nd Order Linear Differential Equations
Feb. 29		**Midterm test # 2 (online, no face-to-face class!)**
Mar. 05	3.0, 3.1	Introduction to Vectors and Matrices, Vector Algebra
07	3.2, 3.3	Matrix Notation for Linear Systems, Properties of Solutions
Mar. 11-15		**Spring Break (no classes)**
19	3.4, 3.5	Elementary Operations, REF & RREF
21	3.6, 3.7	Solution of Linear Systems, Consistency of Linear Systems
26	3.8	Matrix Algebra
28	3.9, 3.10	Powers, Transposes, Inverses
Apr. 02	3.10	Inverses
04	3.11, 3.12	Linear Dependence and Linear Independence, Determinants
Apr. 09		**Midterm test # 3 (online, no face-to-face class!)**
11	3.13, 3.14	Eigenvalues & Eigenvectors
16	3.15	Systems of Differential Equations
18	3.16	A^k and Solutions of Systems of Difference Equations
Apr. 25		**Final exam (IN PERSON, scheduled between 3:30pm and 6pm in SAS 2229)**