MA552 Axiomatic Linear algebra

Instructor: Nikolay S. Strigul
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Office Hours: by appointment
Lectures: Tuesdays 06:15-08:45 pm, Babbio Center, 104
Homework: There will be weekly homework assignments, due every Tuesday, when the correct solutions will be given out.
Exams, Quizzes: There will be Midterm and Final Exams. Every class will start with a closed book quiz consisting of definitions, theorems and some past homework problems.

Course program:

Aug 29. Lecture 1. **- Linear Equations and Vector Spaces.**

Sep 5. Lecture 2. **Review of Matrices. Linear Independence.**

Sep 12. ***Lecture 3.*** **Orthogonality.**

Sep 19. ***Lecture 4.*** **Determinants.**

Sep 26. ***Lecture 5.*** **Eigenvalues and Eigenvectors.**

Oct 3. ***Lecture 6.*** **Basic Properties of Finite-Dimensional Vector Spaces.**

Oct 10. Monday Class Schedule

Oct 17. ***Lecture 7.*** L**inear Transformations.**

Oct 24. ***Lecture 8.*** **Dual and Double Dual Spaces.**

Oct 31. ***Lecture 9.*** **Normed Vector Spaces.**

Nov 7. ***Lecture 10.*** **Isometries.**

Nov 14. ***Lecture 11.*** **Inner Product Spaces.**

Nov 21. ***Lecture 12.*** **Bilinear Operators.**

Nov 28. ***Lecture 13.*** **Tensors.**

Dec 5. ***Lecture 14.*** **Exterior Product.**

Dec 12. Final Exam