

## MATH 34600L (32334) **Elements of Linear Algebra**

Spring, 2025      Tuesday, Thursday 9:30 am– 10:45 am      NAC 6/121

Book: W. Keith Nicholson, *Linear algebra with Applications (Open edition)*, Lyryx A free pdf is obtainable from the publisher at the following link:

<https://lyryx.com/wp-content/uploads/2018/01/Nicholson-OpenLAWA-2018A.pdf>

This is the older, 2018, version which we will use. The latest version can be obtained via the link below provided you sign in. However, the exercises are not included in the new version are so we will use the 2018 download.

<https://lyryx.com/linear-algebra-applications/>

You can also order a (large) paperback copy of the book. I recommend getting it because it is not very expensive and it is easier to navigate than is the pdf. There is a color version and a slightly cheaper black and white version. See the links below:

Color: <https://www.lulu.com/shop/w-keith-nicholson/linear-algebra-with-applications/paperback/product-4dqe7p.html?page=1&pageSize=4>

B&W: <https://www.lulu.com/shop/w-keith-nicholson/linear-algebra-with-applications/paperback/product-7dn5rw.html?page=1&pageSize=4>

Syllabus:

Chapter 2, Matrices: 2.1-2.6

Chapter 1, Systems of Linear Equations: 1.1-1.3

Chapter 3, Determinants: 3.1, 3.2, 3.6

Chapter 6, Vector Spaces: 6.1-6.4

Chapter 7, Matrix of Linear , Linear Transformations: 7.1-7.3

Chapter 9, Matrix of Linear Transformation, Diagonalization: 9.1, 3.3, 3.5

Chapter 8, Orthogonality and Symmetric Matrices: 8.1, 5.6, 8.2

The classes will use slides that I have prepared. These slides will be posted on my website:

[https://math.sci.ccny.cuny.edu/people?name=Ethan\\_Akin](https://math.sci.ccny.cuny.edu/people?name=Ethan_Akin)

Also posted there will be this class information document and the syllabus with the list of homework problems from the book. I will be collecting and recording the homework.

It is a good idea to work with others, collaborating on studying, doing homework and preparing for tests. On the internet you will find treatments of linear algebra that you may find to be helpful, e.g. the Kahn Academy. Of course, such collaboration and internet browsing during a test would be cheating. I hope that you will engage with the course in an honorable fashion.

**Grading:** There will be three in-class tests during the term. The term average, which will count for 55% of the grade, will be computed from these with an adjustment of 5% for the cumulative homework grade. The final exam will count the remaining 40% of the grade. You should be warned that there are no makeups. If you have missed work with a legitimate reason, the remaining work will simply be counted more heavily.

**Office Hours:** Tuesdays, 11:00am – 1:00pm, Thursdays 11:00am – 12:00.

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