Course Coordination:
Linear Algebra (MATH-UA.0140) is a coordinated course. All the sections are following almost identical syllabus (e.g. topics to cover, grading policy). The coordinator is Naima Hammoud (hammoud@nyu.edu)

Teaching Assistants and Recitations:

<table>
<thead>
<tr>
<th>Name</th>
<th>Email</th>
<th>Office Hour</th>
<th>Section</th>
<th>Time</th>
<th>Place</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simon Harris</td>
<td><a href="mailto:sh5653@nyu.edu">sh5653@nyu.edu</a></td>
<td>Thu.18:00–19:00;Fri.10:00–11:00</td>
<td>017</td>
<td>Fri. 15:30 – 16:45</td>
<td>CIWW 109</td>
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<tr>
<td></td>
<td></td>
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<td>019</td>
<td>Fri. 14:00 – 15:15</td>
<td>CIWW 109</td>
</tr>
<tr>
<td>Yue Huang</td>
<td><a href="mailto:yh3095@nyu.edu">yh3095@nyu.edu</a></td>
<td>Wed.17:10–18:10;Wed.18:10–19:10</td>
<td>018</td>
<td>Fri. 11:00 – 12:15</td>
<td>CIWW 109</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>020</td>
<td>Fri. 12:30 – 13:45</td>
<td>CIWW 109</td>
</tr>
</tbody>
</table>


If you feel our class material is very simple for you and you would like to explore more by yourself, you may read the following more challenging books:


Grading Policy: Homework (15%), Quiz (10%), Recitation Participation (5%), Forum Participation (5%), Asynchronous Assessments (20%), Midterm I (15 %), Midterm II (15 %), Final (15 %)

Exam Schedule:

- Midterm 1 ....................... Oct 20 2020
- Midterm 2 ....................... Nov 24 2020
- Final Exam ..................... TBD
Class policy:

- **We shall follow the NYU COVID-19 Prevention and Response policies.** In particular, keep your mouth and nose covered by a face mask and keep social distance from each other.

- Our Section (MATH-UA.0140-016) is in a **blended** format. When enrolling in this class, you need to indicate whether to attend in-person lectures or participate entirely online. **If you can not come to school or prefer not to, you can always use the zoom link for lecture.**

- Those who choose to attend in-person lectures shall be put into two **cohorts**, one attending in-person lectures on Tuesday, the other on Thursday. For each cohort, students' seats shall be fixed throughout the semester. **Once the cohorts and seats are assigned, we cannot make further changes on that.**

- We value **integrity** and do not tolerate academic dishonesty. You are expected to uphold academic integrity as specified by the university and the College of Arts and Science.

- **Homework** will be released each Thursday or Friday, and due on the following Friday. You will receive instructions on how to upload your answers when homework question sheets are posted. Late homework shall NOT be accepted. You may discuss with your classmates about homework, but you should write your solutions by yourself. Copying others’ homework is violation of university academic integrity policy. One lowest homework grade shall be dropped when calculating your course grade.

- If you miss any due day of assignments or exams due to **emergency** such as illness, the corresponding documentation proofs should be submitted no later than 24 hours after the deadline or scheduled exam time in order to apply for making up.

- We will NOT be able to accommodate **out-of-sequence exams** for purposes of more convenient travel, including already purchased tickets. Please note again the date of the exams and plan your travel accordingly.

- **Recitation** sessions are **mandatory** and will focus on solving problems related to the concepts explained during lecture. Attendance (in-person or online) will be taken and will count toward your participation grade.

- Your are encouraged to ask questions and answer others’ questions on the online forum Campuswire. **Online participation** on the Forum will count toward your participation grade.

- There will be several **asynchronous lectures**, when class meet briefly, and then you will use the time watching a video lecture and learn the topics by yourself. After that there will be some assessment regarding the topic for you to answer. The assessment will be timed.

- There will be a **quiz** each week on Friday. The quiz will be on Gradescope and it will be timed.

- For the submission of any work online, please leave enough time for upload. Failure of upload on time is not an excuse for late submission.
Tentative Course Outline:

09/03: Vectors, Dot Product
09/08: Matrices
09/10: Linear System, Elimination
09/15: Matrix Operations
09/17: Inverses
09/22: Matrix Lower-Upper Triangular Factorisation
09/24: Vector Spaces
09/29: Nullspace
10/01: Complete Solutions
10/06: Independence, Dimension
10/08: Four Subspaces and Orthogonality
10/13: Projections
10/15: Review
10/20: Midterm 1
10/22: Least Squares
10/27: Orthogonal Basis
10/29: Determinants
11/03: Applications of Determinants
11/05: Eigenvalues
11/10: Diagonalisation
11/12: Symmetric, Positive Definite Matrices
11/17: Singular Value Decomposition
11/19: Review
11/24: Midterm 2
11/26: Thanksgiving Day, no class
12/01: Principal Component Analysis
12/03: Linear Transformations
12/08: Change of Basis
12/10: Final Review