

Assignment

Linear Algebra and Matrix Theory

July 16, 2025

Assignment Instructions

This assignment is designed to assess your understanding of the foundations of linear algebra and matrix theory. It includes a mix of theoretical and coding-based questions.

- **Theoretical questions:** These must be answered using your own understanding and words. The responses will be closely reviewed for originality and will be checked for any form of AI-generated content. Please explain concepts clearly and concisely.
- **NumPy-based questions:** For problems requiring computational solutions using NumPy, submit:
 - The Python code you used to solve the problem.
 - A screenshot or image of the output displayed in your terminal or notebook.
- The final document should be compiled as a **PDF file**, which includes:
 - A cover page
 - Table of contents
 - All answers in order
- **Deadline:** July 21, 2025

Good luck, and take this as an opportunity to strengthen your mathematical thinking and coding fluency.