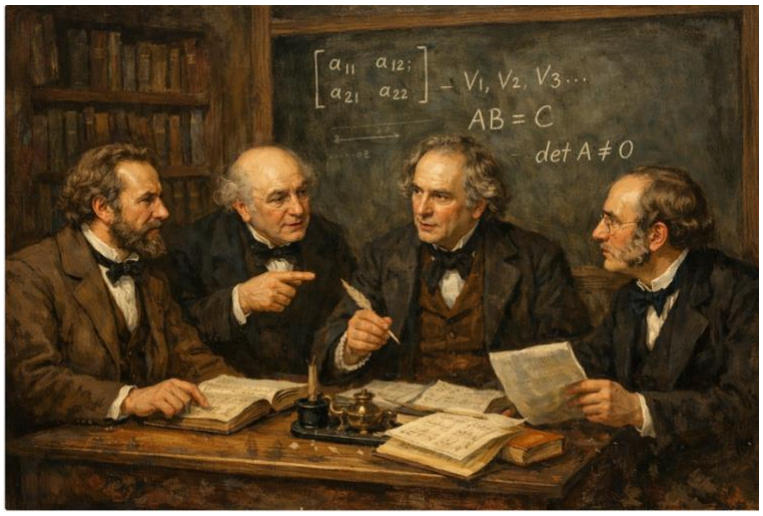

ChatGPT imagining Grassmann, Sylvester, Hamilton and Cayley discussing Linear Algebra

Policy on the Use of AI Tools in Linear Algebra

Purpose

Artificial Intelligence (AI) tools (such as ChatGPT, Wolfram Alpha, MATLAB's AI features, and similar systems) are increasingly common and can be valuable learning aids when used appropriately. This policy is designed to clarify **when and how AI tools may be used** in this Linear Algebra course, while maintaining academic integrity and ensuring that students develop essential mathematical reasoning skills.

Guiding Principles

1. **Learning First**: The primary goal of this course is for you to understand concepts, develop problem-solving skills, and communicate mathematical reasoning clearly. AI tools should support—not replace—your learning.
2. **Transparency**: Any permitted use of AI must be acknowledged.
3. **Responsibility**: You are responsible for understanding, verifying, and being able to explain any work you submit, regardless of whether AI was used.

Permitted Uses of AI Tools

Unless otherwise specified for a particular assignment, you may use AI tools for the following purposes: - Clarifying definitions or terminology (e.g., eigenvalues, linear independence, diagonalization). - Asking for **conceptual explanations** or alternative ways of understanding material discussed in class. - Checking computations *after* you have attempted a problem yourself. - Generating practice problems or additional examples for self-study. - Debugging code for computational assignments (e.g., MATLAB or Python), provided you understand the final code.

Prohibited Uses of AI Tools

The following uses are **not allowed** unless explicitly authorized by the instructor: - Submitting AI-generated solutions (in whole or in part) to homework, quizzes, exams, or projects as your own work. - Using AI tools during **quizzes or exams** (take-home or in-class) unless explicitly permitted. - Using AI to bypass essential reasoning steps, proofs, or explanations required in an assignment. - Copying AI-generated text, proofs, or solutions without proper acknowledgment.

Attribution and Disclosure

If you use AI tools on an assignment where their use is permitted, you must include a brief disclosure statement such as: > "I used an AI tool to help clarify concepts related to matrix diagonalization and to check intermediate computations."

Failure to disclose permitted AI use may be treated as an academic integrity violation.

Accuracy and Accountability

AI tools can make mistakes, produce incomplete reasoning, or give answers that are mathematically incorrect or inappropriate for this course. You are fully responsible for: - Verifying correctness of all results. - Ensuring that notation, methods, and explanations align with course standards. - Being able to explain your submitted work orally if asked.

Academic Integrity

Improper use of AI tools will be treated in the same manner as other forms of academic dishonesty and may result in penalties consistent with Middlebury's policies, including a zero on the assignment, failure of the course, or further disciplinary action.

Instructor Discretion

Specific assignments may have **stricter or more flexible rules** regarding AI use. Always follow the instructions given for individual assignments, even if they differ from this general policy.

Final Note

Used responsibly, AI tools can be a powerful supplement to your study of Linear Algebra. Misused, they can undermine your learning. When in doubt about whether a particular use is allowed, **ask before using the tool**

Citation for my use of AI to generate this policy

"Write a policy on the use of AI tools in a Linear Algebra Course" prompt. ChatGPT 4.0, OpenAI, January 23, 2026, chat.openai.com/chat.