MA 2073 Matrices and Linear Algebra II

Instructor: Prof. D. VOLKOV
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Stratton Hall 104B

Webpage for this class:

Class time: M, T, R, F,  3:00- 3:50, Stratton Hall 106.

Office hours: M: 3:50- 4:50
T: 12:00- 12:50
R: 2:00- 2:50
F: by appointment (contact me by email to schedule an appointment)


Course Description and Goals:

The goal of this course is to provide a solid mathematical foundation in linear algebra. This class assumes familiarity with the basic concepts introduced in MA 2071 such as operations on matrices, computations of eigenvalues and eigenvectors. Special attention will be brought to rigorous proof writing, and students will be expected to prove or disprove statements in homework problems. All vector spaces in this class will be over \( \mathbb{R} \) or \( \mathbb{C} \).
Syllabus:
(Note that by a week, we mean a set of four consecutive classes)

**Week 1:** Real and complex numbers. Vector spaces and subspaces.
   Finite dimensional vector spaces. (Chapter 1).
**Week 2:** Linear mappings. Matrix representation. (Chapter 2).
**Week 3, 4:** Trace and determinant. Polynomials. (Chapter 4).
**Week 5:** Eigenvalues and eigenvectors. (Chapter 5).
**Week 6:** Inner product spaces. (Chapter 6).
**Week 7:** Review and final exam.

Homework: Homework is due on Thursday.
   Weekly assignments are posted on

Grade policy:
   Midterm: 30%
   Final: 30%
   Homework: 40%

**Academic honesty:**
WPI students will be held to the highest ethical standards. Hard-working honest students can be assured that I will do my best to preserve the integrity of their good work by being vigilant and promptly and forcefully prosecuting cases of academic dishonesty. Each student should be familiar with the university's Academic Honesty Policy, to be found at
[http://www.wpi.edu/Pubs/Policies/Honesty/](http://www.wpi.edu/Pubs/Policies/Honesty/).

**Special Needs:**
If you need course adaptations or accommodations because of a disability, or if you have medical information to share with me, please make an
appointment with me as soon as possible, or come talk to me during office hours. My office location and hours are listed at the top of this syllabus. Students with disabilities, who believe that they may need accommodations in this class, are encouraged to contact the Disability Services Office http://www.wpi.edu/Admin/Disabilities/ (DSO), as soon as possible to ensure that such accommodations are implemented in a timely fashion. The DSO is located in Daniels Hall, (508) 831-5235.