MA 2073: MATRICES AND LINEAR ALGEBRA II (C-Term 2025)

All plans are **tentative** and subject to change.

Instructor: Dr. Qingshuo Song (Department of Mathematical Sciences)
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Office: SH 314
Zoom: 596 513 9109
Lectures: MTRF 3 pm at SH 205
Office Hours: T 10 - 11 am at SH 314 or other times by appointment

Discussions and TAs:

If you have any questions or would like to discuss the course content, you can find
- Lil Peeler, lbpeeler@wpi.edu
- Discussion: W 3 pm, SH 205
- Office hours: Th 2-3pm, SH 410

Course Description
This course provides a deeper understanding of topics introduced in MA 2071, and continues the development of linear algebra. Topics covered include abstract vector spaces, linear transformations, matrix representations of a linear transformation, determinants, characteristic and minimal polynomials, diagonalization, eigenvalues, eigenvectors, the inner product spaces. This course is designed primarily for Mathematical Science majors and those interested in the deeper mathematical issues underlying linear algebra.

Textbook
- Linear Algebra, 5th Edition by Stephen, H. Friedberg, Arnold Insel, Lawrence E. Spence (2019).
- (reference) Linear Algebra and Its Applications by D. C. Lay, S. R. Lay, and J. J. McDonald
- (reference) Linear Algebra and Its Applications by Gilbert Strang

Lecture Engagement
There will be in-person lectures four times a week and attendance is strongly encouraged.

Discussions
The TAs will organize weekly discussion sessions for students to discuss their progress and any relevant issues related to the course. Attendance at these sessions is strongly encouraged.

Assessment
Homework: 20%
Quizzes (4-6 quizzes): 20%
Midterm: 30%, **on 02/13 Th**
Final: 30%, **on 03/06 Th**

Letter grades will be assigned based on the following scale:
A: 90.00 – 100.00% B: 80.00 – 89.99% C: 70.00 – 79.99% NR: 0.00 – 69.99%
The instructor has the discretion to make adjustments to the course as necessary. Evidence of active engagement in class, discussion, and office hours may be taken into consideration when making adjustments. However, it should be noted that NR (No Record) grades will not be given upon request.

Quizzes and exams
Quizzes may be given at each discussion hour throughout the term to encourage attendance, unless there is midterm or final exam in the week. In addition, there will be a scheduled midterm and final exam during the in-class time. No make-up exams will be allowed, except in cases of documented evidence. **All requests for make-up exams must be made within 2 days after the quiz or exam date.**

Homework
Homework problems will be announced through Canvas every week and the due dates will be usually one week later. You are expected to check Canvas regularly for the due dates, which may change depending on class progress and the amount of material covered. **There will be no deadline extensions for any assignment under any circumstances. Instead, the lowest score will be dropped when calculating the final grade whenever your grade is at the margin.**

Grading Corrections Policy:
If you believe that there has been a grading error on your exam, you must notify the course grader within two days of receiving your exam back. Grade changes will not be made outside of this time frame.

Canvas
Material for this course will be made available on Canvas (https://canvas.wpi.edu/). Course information (including a copy of the syllabus), supplementary material and worksheets, recommended problems from the text, and useful links will be posted on this site. Grades will also be posted on Canvas.

WPI Email Account
Make sure to check your WPI email account daily for any course announcements that the instructor may send.

Additional Help from MTC
Tutoring is available for free on a first-come, first-served basis at the Mathematics Tutoring Center (MTC). No appointment is necessary, so you may drop in at any time. The schedule of tutors will be posted on Canvas or alternatively online on the Department of Mathematical Sciences resources page
- https://www.wpi.edu/academics/departments/mathematical-sciences/resources

Additional Help from MASH
Peer tutoring and Math and Science Help (MASH) will be offered in person by the Academic Resources Center (ARC) tutors on the 5th floor of Unity Hall in the ARC or the Exam Proctoring Center (EPC, UH 505). Students should use tutortrac.wpi.edu to sign up for individual tutoring appointments that fit their schedules. No appointments are needed for MASH group sessions. If a student has a time conflict or there is limited tutoring availability, they can complete and submit an ARC Inquiry Form to request an appointment that aligns with their schedule.

Calculators
Using calculators will not be permitted on any exam or quiz unless otherwise instructed.

Academic Integrity
All students are expected to be familiar with and adhere to WPI's policy on academic integrity (i.e., no cheating, fabrication, facilitation, or plagiarism). Please refer to the WPI Academic Honesty Policy within the Student Code of Conduct (https://www.wpi.edu/about/policies/academic-integrity).
Academic integrity violations will be prosecuted according to the university's policy. For more details as to what constitutes academic dishonesty, please see https://www.wpi.edu/about/policies/academic-integrity/dishonesty.

Disability Services
Reasonable accommodations will be made for students with verifiable disabilities. In order to take advantage of available accommodations, students must register with the Office of Accessibility Services (OAS). The OAS can be contacted by phone at 508-831-4908 and by e-mail at accessibilityservices@wpi.edu. Students granted extended testing time should arrange to take their exams at the OAS.

WPI Policies
Students are responsible for reviewing WPI's policies at https://www.wpi.edu/about/policies, pertaining to their rights and responsibilities.