

MAT 532 Applied Linear Algebra Fall 2018

MWF 10:35 am - 11:30 pm Carnegie 119

Instructor: Professor Suanne Au
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Office Hours: Mon, Wed, Fri 1 pm - 3 pm or by appointment

Mathematics Prerequisite: MAT 331 or MAT 485

Textbook: *Matrix Analysis and Applied Linear Algebra*, Carl D. Meyer

Textbook Website: www.MatrixAnalysis.com

Course Description: Algorithmic issues of solving linear systems, factorization of matrices, singular values, orthogonality. Applications to least squares approximation, differential equations, and others as time allows. How much we can cover will depend to some extent on the backgrounds of the students. We expect to cover the first five chapters of the text, with some omissions. Hopefully much of chapters 1 - 3 can be reviewed quickly.

Grading: Course grades will be based on homework (25%), two in-class exams (25% each), and cumulative final exam (25%). The grading scheme will be no stricter than: 93 for A, 90 for A-, 87 for B+, 83 for B, 80 for B-, 77 for C+, 73 for C, 70 for C-, 60 for D.

Homework: Homework will be assigned in almost every class, and due at the beginning of the following class. Some assignments may involve the use of Matlab (available at SU computer clusters), but no prior familiarity with software is expected. Homework will not be accepted late, and the lowest two homework scores will be dropped.

Exams: There will be two in-class exams during the semester.

Exam 1: Monday, October 8

Exam 2: Monday, November 12

The cumulative final exam is scheduled for Thursday, December 13, 12:45 - 2:45 pm. Any changes to this schedule will be announced in class. There will be no make-up exams for any reason. An exam will count as a zero unless it is due to a documented religious observance, University-sponsored event, or documented emergency. For religious observances and for University-sponsored events, documentation must be submitted in advance. It is the student's responsibility to make arrangement to take the exam before the class does. For emergencies, you must present documentation from a physician or from the Deans Office as soon as possible. In such cases, a missed exam score will be replaced by the score on the corresponding portion of the material on the final exam.

Students with Disabilities: If you believe that you need academic adjustments (accommodations) for a disability, please contact the Office of Disability Services (ODS) at

<http://disabilityservices.syr.edu>

located in Room 309 of 804 University Avenue, or call (315) 443-4498 or TDD: (315) 443-1371 for an appointment to discuss your needs and the process for requesting academic adjustments. ODS is responsible for coordinating disability-related academic adjustments and will issue students with documented Disabilities Accommodation Authorization Letters, as appropriate. Since academic adjustments may require early planning and generally are not provided retroactively, please contact ODS as soon as possible.

Academic Integrity: Syracuse University's Academic Integrity Policy reflects the high value that we, as a university community, place on honesty in academic work. The policy defines our expectations for academic honesty and holds students accountable for the integrity of all work they submit. Students should understand that it is their responsibility to learn about course-specific expectations, as well as about university-wide academic integrity expectations. The policy governs appropriate citation and use of sources, the integrity of work submitted in exams and assignments, and the veracity of signatures on attendance sheets and other verification of participation in class activities. The policy also prohibits students from submitting the same work in more than one class without receiving written authorization in advance from both instructors. Under the policy, students found in violation are subject to grade sanctions determined by the course instructor and non-grade sanctions determined by the School or College where the course is offered as described in the Violation and Sanction Classification Rubric. SU students are required to read an online summary of the University's academic integrity expectations and provide an electronic signature agreeing to abide by them twice a year during pre-term check-in on MySlice.

The Violation and Sanction Classification Rubric establishes recommended guidelines for the determination of grade penalties by faculty and instructors, while also giving them discretion to select the grade penalty they believe most suitable, including course failure, regardless of violation level. Any established violation in this course may result in course failure regardless of violation level. For more information and the complete policy, see <http://class.syr.edu/academic-integrity/>.

Religious Observances Policy: Syracuse University's Religious Observances Policy recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty, and staff to observe religious holy days according to their tradition. Under the policy, students are provided an opportunity to make up any examination, study, or work requirements that may be missed due to a religious observance provided they notify their instructors no later than the end of the second week of classes. For fall and spring semesters, an online notification process is available through MySlice (Student Services → Enrollment → My Religious Observances) from the first day of class until the end of the second week of class.