

MAT 531 — Second Course in Linear Algebra
Fall 2014, Section M002

Instructor: Professor Moira McDermott

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Office: 305 Carnegie (443-1481)

Time & Place: MWF 10:35–11:30 am, Carnegie 115

Office hours: MW 4:00-5:00, T 3:30-4:30 pm, Th 2:30-3:30, and by appointment

Prerequisites: ((MAT 375 or CIS 275) and MAT 331) or graduate standing in mathematical sciences.

Textbook: *Linear Algebra*, 4th ed., by Friedberg, Insel, and Spence, Prentice Hall, 2003. The course covers parts of Chapters 1, 2, 5, and 6 with possible additions.

Official Course Description: Abstract vector spaces and inner product spaces, linear transformations and linear operators, eigenvalues and diagonalization. Primarily for mathematics majors.

Course Overview and Goal: The main goal of this course is to give a rigorous, proof-based treatment of linear algebra. Some of the material will be familiar from MAT 331, but here it will be developed in a more abstract setting. We will emphasize proof-writing skills.

Grading: Course grades will be based on homework and quizzes (20%), three in class exams (50%, lowest exam counts 10%), and a cumulative final exam (30%). The three in class exams are tentatively scheduled for Sept. 19, Oct. 17, and Nov. 14. There will be no makeups for the in class exams or the final exam. If you have a documented excused absence for one of the in class exams, your grade on the relevant portion of the final will be used.

The final exam is scheduled for **Thursday, December 11, 3:00-5:00 pm** (Exam Period 13). This information will also be available on MySlice.

Homework: The key to success in this course is to master the homework. Homework from the textbook will be assigned at each class and collected weekly. **Late homework will not be accepted.** A portion of the homework problems will be graded for accuracy. Working independently of the assignments will probably help you to learn the material more effectively and to do better on exams. However, you may, and sometimes should, work with others to fully understand the material. You must write your own solutions to homework problems.

Attendance: You are expected to attend and participate in class. Missing class is among the most common reasons for poor performance in the course (not doing the homework is another one). If you miss a class, you are responsible for obtaining notes for that class from a student who attended. It is also your responsibility to find out about any announcements concerning homework, quizzes, or exams made during the class.

Academic Integrity: The Syracuse University Academic Integrity Policy holds students accountable for the integrity of the work they submit. Students should be familiar with the Policy and know that it is their responsibility to learn about instructor and general academic expectations with regard to proper citation of sources in written work. The policy also governs the integrity of work submitted in exams and assignments as well as the veracity of signatures on attendance sheets and other verifications of participation in class activities. Serious sanctions can result from academic dishonesty of any sort. For more information and the complete policy, see <http://academic.integrity.syr.edu>.

Complete academic honesty is expected of all students. Any incidence of academic dishonesty, as defined by the SU Academic Integrity Policy, will result in both course sanctions and formal notification of the College of Arts & Sciences. (A first violation will result in a 0 on the quiz or exam. A second violation will result in failing the course.) I encourage you to work together on homework and discuss problems and their solutions, but you must write up your solutions individually. What you write must reflect *your own understanding* of the problems. Copying a homework solution, in part or in full, is considered a violation of academic integrity. If you have any questions about the differences between working together and copying or how to document sources, please see me.

Students with Disabilities: Students who may need academic accommodations due to a disability are encouraged to discuss their needs with me at the beginning of the semester. In order to obtain authorized accommodations, students should be registered with the Office of Disability Services (ODS), 804 University Avenue, Room 309, 315-443-4498, and have an updated accommodation letter for the instructor. Accommodations and related support services such as exam administration are not provided retroactively and must be requested in advance. For more information about services and policy, see <http://disabilityservices.syr.edu>.

Faith Tradition Observance: SU's religious observances policy can be found at http://supolicies.syr.edu/emp_ben/religious_observance.htm. Under the policy, students are provided an opportunity to make up any examination, study, or work requirement that may be missed due to a religious observance provided they notify their instructors before the end of the second week of classes. There is an online notification process available on MySlice.

Tips for success in this course:

- Stay caught up. Mathematical concepts build on each other cumulatively.
- Know how to solve each assigned homework problem. Be able to explain your solutions and write coherent proofs. Practice communicating your solution effectively.
- Ask questions at the earliest sign of confusion.
- Work independently and with others on assignments.
- Expect to work hard. Don't get discouraged if you find some of the material difficult. Be persistent and patient.