

MATH 413/513: LINEAR ALGEBRA

MOTuWeThFr 10:30 am - 11:45 am.

Math building, Rm 501.

Section 01, Summer-I 2019.

Instructor: Dr. Houssam Abdul-Rahman

Office Hours: Monday, Wednesday, and Thursday - 12:00-12:50 pm, and by appointment.

Office: Mathematics building, room 715.

Phone: 621-4364.

Email: houssam@math.arizona.edu.

Instructor Homepage: <http://math.arizona.edu/~houssam>.

Course Website: at <http://math.arizona.edu/~houssam/Teaching.html>.

Text: The main textbook is

Linear Algebra as an introduction to abstract mathematics, by Isaiah Lankham, Bruno Nachtergaele and Anne Schilling. World Scientific Publishing Co Inc, Nov 30, 2015.

It is available online at:

https://www.math.ucdavis.edu/~anne/linear_algebra/mat67_course_notes.pdf.

Material to be Covered: My goal is to cover most of Chapters 1-11, this includes the main topics: Vector spaces, linear transformations and matrices, determinants, eigenvalues and diagonalization, bilinear forms, orthogonal and unitary transformations, Jordan canonical form.

Supplementary Textbooks: We will use the following books for more examples and exercises.

Linear Algebra Done Right, by Sheldon Axler, Third Edition, Springer.

Linear Algebra: An Introductory Approach, by Charles W. Curtis, Springer.

Attendance: Students are expected to attend every scheduled class.

- The UA's policy concerning Class Attendance, Participation, and Administrative Drops is available at:
<http://catalog.arizona.edu/policy/class-attendance-participation-and-administrative-drop>.
- The UA's policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable. See: <http://policy.arizona.edu/human-resources/religious-accommodation-policy>.
- Absences pre-approved by the UA Dean of Students (or Dean Designee) will be honored. See: <https://deanofstudents.arizona.edu/absences>.

Classroom Behavior Policy: To foster a positive learning environment, students and instructors have a shared responsibility. We want a safe, welcoming, and inclusive environment where all of us feel comfortable with each other and where we can challenge ourselves to succeed. To that end, our focus is on the tasks at hand and not on extraneous activities (e.g., texting, chatting, reading a newspaper, making phone calls, web surfing, etc.).

Grading Policy: The final grade will consist of homework, 2 in-class exams, and the final exam.

Item	Percentage
Homework/Quizzes	20%
Test 1	20%
Test 2	20%
Final Exam	40%

Homework: Several homework assignments will be given throughout the term. The lowest homework will be dropped. No late homework will be accepted.

In-class Tests: Two in-class exams are tentatively scheduled for

- Friday, May 31.
- Friday, June 14.

Final Exam: The final exam is comprehensive, on June 28.

Incompletes: Must be made in accordance with University policies, which are available at <http://catalog.arizona.edu/policy/grades-and-grading-system#incomplete>

Other Important Information:

- **Students with disabilities:** Contact the Disability Resource Center (520-621-3268) to establish reasonable accommodations. For information on the Disability Resource Center and reasonable accommodations, please visit <http://drc.arizona.edu> . If you have reasonable accommodations, please plan to meet with me by appointment or during office hours to discuss accommodations and how my course requirements and activities may impact your ability to fully participate.
- **Students withdrawing from the course:** Must be made in accordance with University policy <http://catalog.arizona.edu/policy/grades-and-grading-system#Withdrawal>. You may drop the class without a W through **May 18th** using UAccess (For graduate students: **May 24th**). The class will appear on your UAccess record, but will not appear on your transcript. You may withdraw with a W through **June 11th** using UAccess. The University allows withdraws after June 11 but only with the Dean's approval. Late withdraws are dealt with on a case by case basis, and requests for late withdraw without a valid reason may or may not be honored.
- **Threatening Behavior Policy:** The UA Threatening Behavior by Students Policy prohibits threats of physical harm to any member of the University community, including to oneself. See <http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students>.

Note: Information contained in the course syllabus, other than the grade and absence policy, may be subject to change with advance notice, as deemed appropriate by the instructor.