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Department of Mathematics

# MAS 4105 (17885) – Linear Algebra 1 – Spring 2025

Instructor: Dr. Richard Crew

Place and time: MAT 4, MTWF 3

Office Hours: LIT 404, M5, T6, or by appointment

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## Course Description

The course provides a rigorous and thorough introduction to linear algebra, a subject which is basic to nearly all branches of pure and applied mathematics, with many applications in science, engineering and economics. Prerequisites: Calculus 3 in some form, and MHF 3202 (Sets and Logic) or equivalent).

The student will learn to read and write proofs of theorems, and develop computational skills. This course is designed to serve majors in mathematics and those engineering and science students interested in a conceptual understanding of the subject. The text is Linear Algebra by Insel, Friedberg and Spence (5th ed.). You may also use the 4th or earlier editions. The homework problem numbers below are for the 5th ed. and mostly apply to the 4th editions, but a few conversions will be needed for the 4th and earlier eds.

## Software

Although there will not be much computer work in this course, the following software will be useful:

MATLAB

GNU Octave is a free and open source software package for numerical linear algebra, very similar to MATLAB

SageMath is a free and open source mathematics software system with linear algebra capabilities (and a lot more). It is written in Python and uses that as a scripting language.

## Quizzes, Exams and Homework

The course grade will be based on 4 exams (each worth 1/8 of the final grade), a number of quizzes and assigned homework (in total, the remaining 1/2 of the grade). Dates for all of these will be announced later. Late Homework will *not* be accepted without arrangements being made at least two days in advance. Automatic makeups for quizzes and exams will be given for documented emergencies, curricular requirements of other University units, military service or mandatory Court appearances. In all other situations, a makeup must be arranged *at least one week ahead of time*. Dates of exams and quizzes may be changed due to extreme weather or other natural disasters.

## Grading Scale

Grades: A=90-100, A-=87-89, B+=83-86, B=78-82, B-=75-77, C+=70-74, C=65-69, C-=60-64, D=50-59, E=0-49. The UF regulations on grades are here (<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>). The UF policy on minus grades is here (<https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies>).

## Course Policies

Attendance is not mandatory, but missing a large number of classes is *definitely* a bad idea. If you must miss a class, try to get notes from one of your fellow students. This policy is consistent with UF policy on attendance, which is here (<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>).

UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Honor Code (<http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obliged to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor of this class.

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available here (<http://gatorevals.aa.ufl.edu/students/>). Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or else here (<https://ufl.bluera.com/ufl/>). Summaries of course evaluation results are available to students here (<https://gatorevals.aa.ufl.edu/public-results/>).

Students are *always* allowed to discuss homework assignments amongst themselves; this counts as “authorized aid” for the purposes of this course and the Honor Code. Of course the work that you submit must be your own.

## Accommodations

Students requesting accommodations for disabilities should first register with the Disability Resource Center (<http://www.dso.ufl.edu/drc/>), (352-392-8565) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

## Health and Wellness

U Matter, We Care: If you or a friend is in distress, please contact [umatter@ufl.edu](mailto:umatter@ufl.edu) or 352-392-1575 so that a team member can reach out to the student. Other resources:

Counseling and Wellness Center (<http://www.counseling.ufl.edu>), 352-392-1575.

Sexual Assault Recovery Services (SARS)

Student Health Care Center, 352-392-1161

University Police Department (<http://www.dso.ufl.edu/drc/>), 392-1111 (or 9-1-1 for emergencies).

## Metadata

This page is the official syllabus for this course, and will be modified as needed. Last modified Jan. 15, 2025.



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