



**MAS 3105**  
**Linear Algebra**  
**84872 901**  
**Fall 2026**

**Instructor Name**

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Sherwin Kouchekian

**University Course Description**

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Linear systems, matrix algebra, vector spaces, linear independence, inner product spaces, Gram-Schmidt algorithm, linear transformations and matrix representations, determinants, eigenvalues, diagonalization, quadratic forms.

**Course Requisites**

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**Prerequisite(s):**

(MGF 3301 Minimum Grade: C (may be taken during same term))  
and (MAC 2283 Minimum Grade: C (may be taken during same term))  
or MAC 2313 Minimum Grade: C (may be taken during same term))

**Corequisite(s):**

**Course Format**

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**Homework Exercises:** The homework exercises are selected from the textbook and they will not be collected or graded; nevertheless, the students are strongly encouraged to work on their given problems as the most essential part of the learning process.

Homework exercises will be posted on Canvas in the module for each covered chapter of textbook.

**Assignments:** There will be assignments during this course. The lowest graded assignment will be dropped and the rest will count for 20% of your final grade. The assignments will be given on Canvas, where you must also submit your work as a PDF file. (See Assignment Policy.)

**Exams:** This course has three in-class exams and they will count for 60% of your final grade. All

exams will be announced at least one week before they are given.

**Final Exam:** There is a comprehensive in-class final exam on Monday, December 8, 3:00pm–

5:00pm. The final exam will count for 20% of your final grade.

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**Final Exam:** There is a comprehensive in-class final exam on TBA. The final exam will count for 20% of your final grade.

## **Student Learning Outcomes**

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Solutions to linear systems, matrix algebra, vector spaces, linear independence, inner product spaces, Gram-Schmidt algorithm, linear transformations and matrix representations, determinants, eigenvalues, diagonalization, and Quadratic forms.

## **Course Objectives**

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This course is intended to provide the students with an understanding of the fundamental ideas of solutions to linear systems, matrix algebra, vector spaces, linear independence, inner product spaces, Gram-Schmidt algorithm, linear transformations and matrix representations, determinants, eigenvalues,

diagonalization, and Quadratic forms. Roughly speaking, we will cover chapter 1–7 of the textbook and parts of Chapter 8 if time permits.

## **Required Texts and/or Readings and Course Materials**

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### **Required Course Materials:**

1. Either the physical copy or the electronic version of the textbook: Linear Algebra with Ap-

plications, Fifth Edition, by Otto Bretscher.

1. Any PDF Scanner software/application which allows you to make a single multipage-PDF of

your assignments. (See the Assignment Policy for more details.)

1. Microsoft Teams. As a USF student, you already have an account with MS Teams linked to

your USF account.

## **Grading Scale**

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**Grading Scale:** The final grade is based on your overall percentage and is calculated according to the following scale.

97–100 A+; 93–96 A; 90–92 A–; 87–89 B+; 83–86 B; 80–82 B–;

77–79 C+; 73–76 C; 70–72 C–; 67–69 D+; 63–66 D; 60–62 D–;

0–59 F.

## Grade Categories and Weights

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**Assignments:** There will be assignments during this course. The lowest graded assignment will be dropped and the rest will count for **20%** of your final grade. The assignments will be given on Canvas, where you must also submit your work as a PDF file. (See Assignment Policy.)

**Exams:** This course has three in-class exams and they will count for **60%** of your final grade. All exams will be announced at least one week before they are given.

Final Exam: There is a comprehensive in-class final exam on TBA. The final exam will count for **20%** of your final grade.

## Major Topics and Course Schedule

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Class meets MW 5:00 pm- 6:15

## USF Core Syllabus Policies

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USF has a set of central policies related to student recording class sessions, academic integrity and grievances, student accessibility services, academic disruption, religious observances, academic continuity, food insecurity, pregnancy and related conditions, and sexual harassment that **apply to all courses at USF**. Be sure to review these online:

<https://www.usf.edu/provost/faculty-success/resources-policies-forms/core-syllabus-policy-statements.aspx>

## Student Recordings

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### Florida Statute 1004.097 Free Expression on Campus

Students may, without prior notice, record video or audio of a class lecture for a class in which the student is enrolled for their own personal, educational use (USF Policy 10-048).

A class lecture is defined as a formal or methodical oral presentation as part of a university course intended to present information or teach enrolled students about a particular subject. Recording class activities other than class lectures, including but not limited to lab sessions, student presentations (whether individually or part of a group), class discussion, clinical presentations such as patient history, academic exercises involving student participation, test or examination administrations, field trips, private conversations between students in the class or between a student and the faculty member is prohibited. Recordings may not be used as a substitute for class participation and class attendance and may not be published or shared without the written consent of the faculty member. Failure to adhere to these requirements may constitute a violation of the USF Student Conduct Code.

## **Course Policies: Grades**

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### **Make-Up Exam Policy:**

Make-Up Exams Will Only be Granted for Excused Absences. In general, reasons for excused absences include documented illness, deaths in the immediate family and other documented crises, call to active military duty, court-imposed legal obligations (e.g., jury duty and subpoenas), religious days, special requirements of other courses and university sponsored events (e.g., performances, games/meets, judging trips, field trips), and severe weather conditions. Employment schedules, family reunions, vacations and athletic training/practice schedules of students do not comprise a valid excuse for absences. Also, students must notify their instructors of scheduled absences (for approved reasons as noted above) or religious observances USF Policy 10-045 at the beginning of each academic term. Pointing out specific conflicts with scheduled examinations or other scheduled assignments/activities should be part of this notification. In the event of an emergency unscheduled absence (as described above), students must contact their instructors as soon as possible and provide documentation if required. Extended illnesses may interfere with the satisfactory completion of courses, and in such cases a student should contact his or her college by the deadline to drop a course. After the drop deadline, students may submit an Academic Regulations Committee (ARC) petition with proper documentation to drop a course or withdraw for medical reasons. Students may find additional information through their college ARC representative. An instructor may determine that missing a certain amount of

participation-dependent activities (whether excused or not) precludes successful accomplishment of learning outcomes. In such cases the student is advised to withdraw from the course.

## **Grades of "Incomplete"**

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The current university policy concerning incomplete grades will be followed in this course. For undergraduate courses: An “I” grade may be awarded to a student only when a small portion of the student’s work is incomplete and only when the student is otherwise earning a passing grade. The time limit for removing the “I” is to be set by the instructor of the course. For undergraduate students, this time limit may not exceed two academic semesters, whether or not the student is in residence, and/or graduation, whichever comes first. For graduate students, this time limit may not exceed one academic semester. “I” grades not removed by the end of the time limit will be changed to “IF” or “IU,” whichever is appropriate.

## **Campus Free Expression**

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It is fundamental to the University of South Florida’s mission to support an environment where divergent ideas, theories, and philosophies can be openly exchanged and critically evaluated. Consistent with these principles, this course may involve discussion of ideas that you find uncomfortable, disagreeable, or even offensive.

In the instructional setting, ideas are intended to be presented in an objective manner and not as an endorsement of what you should personally believe. “Objective” means that the idea(s) presented can be tested by critical peer review and rigorous debate, and that the idea(s) is supported by credible research.

In this course you may be asked to engage with complex ideas and to demonstrate an understanding of the ideas. Understanding and engaging with an idea does not require you to believe it or to agree with it.

## **Course Policies: Technology and Media**

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1. Having reliable internet access as part of being a USF student.
2. Any PDF Scanner software/application which allows you to make a single multipage-PDF of

your assignments. (See the Assignment Policy for more details.)

1. Microsoft Teams. As a USF student, you already have an account with MS Teams linked to

your USF account.

Email Requirement:

1. You should use your USF email account (Outlook) for any communication with the instructor

and not the Canvas messaging system; otherwise, you run the risk of not receiving a timely and proper response to your email.

## **Course Policies: Student Expectations**

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### **Health and Wellness**

Your health is a priority at the University of South Florida. We encourage members of our community to look out for each other and to reach out for help if someone is in need. If you or someone you know is in distress, please make a referral at [www.usf.edu/sos](http://www.usf.edu/sos) so that the Student Outreach & Support can contact and provide helpful resources to the student in distress. A 24-hour licensed mental healthcare professional, offered through the counseling center, is available by phone at 813-974-2831, option 3. Please remember that asking for help is a sign of strength. In case of emergency, please dial 9-1-1.

### **Title IX Policy**

USF is committed to fostering a safe and respectful learning environment, free from sex discrimination and sexual harassment, in accordance with Title IX and USF Policy 0-004. If a student shares an experience of sexual harassment, sexual assault, stalking, or relationship violence with a USF employee (including faculty), that employee will notify the Title IX Office. This allows the Title IX Office to send the student an email with information about support resources and options—if it is safe to do so. Students are not required to respond to this email. The Title IX Office is a private resource. Information is shared only on a need-to-know basis to provide students with support measures. To speak to a confidential resource, students may contact USF Center for Victim Advocacy at

813-974-5757. Confidential resources do not notify the Title IX Office unless the student requests it. For more information about Title IX, available resources, or to make a report, please visit [www.usf.edu/title-ix](http://www.usf.edu/title-ix).

### **Course Hero / Chegg Policy**

The USF Policy on Academic Integrity specifies that students may not use websites that enable cheating, such as by uploading or downloading material for this purpose. This does apply specifically to Chegg.com and CourseHero.com – almost any use of these websites (including uploading proprietary materials) constitutes a violation of the academic integrity policy.

### **Professionalism Policy**

Per university policy and classroom etiquette; mobile phones, iPods, etc. must be silenced during all classroom and lab lectures. Those not heeding this rule will be asked to leave the classroom/lab immediately so as to not disrupt the learning environment. Please arrive on time for all class meetings. Students who habitually disturb the class by talking, arriving late, etc., and have been warned may suffer a reduction in their final class grade.

### **Turnitin.com**

In this course, turnitin.com may be utilized. Turnitin is an automated system which instructors may use to quickly and easily compare each student's assignment with billions of web sites, as well as an enormous database of student papers that grows with each submission. Accordingly, you may be expected to submit all assignments in both hard copy and electronic format. After the assignment is processed, as instructor I receive a report from turnitin.com that states if and how another author's work was used in the assignment. For a more detailed look at this process visit <http://www.turnitin.com>.

### **Netiquette Guidelines**

- Act professionally in the way you communicate. Treat your instructors and peers with respect, the same way you would do in a face-to-face

environment. Respect other people's ideas and be constructive when explaining your views about points you may not agree with.

- Be sensitive. Be respectful and sensitive when sharing your ideas and opinions. There will be people in your class with different linguistic backgrounds, political and religious beliefs or other general differences.
- Proofread and check spelling. Doing this before sending an email or posting a thread on a discussion board will allow you to make sure your message is clear and thoughtful. Avoid the use of all capital letters, it can be perceived as if you are shouting, and it is more difficult to read.
- Keep your communications focused and stay on topic. Complete your ideas before changing the subject. By keeping the message on focus you allow the readers to easily get your idea or answers they are looking for.
- Be clear with your message. Avoid using humor or sarcasm. Since people can't see your expressions or hear your tone of voice, meaning can be misinterpreted.

### **Email and Discussion Board Guidelines**

- Use the subject line effectively by using a meaningful line of what your email or discussion is about.
- Keep your emails and postings related to the course content. You should not post anything personal on a discussion board unless it is requested by the instructor.
- Any personal, course or confidential issues should be directly communicated to the instructor via email. The discussion boards are public spaces; therefore, any issues should not be posted there.

### **End of Semester Student Evaluations**

All classes at USF make use of an online system for students to provide feedback to the University regarding the course. These surveys will be made available at the end of the semester, and the University will notify you by email when the response window opens. Your participation is highly encouraged and valued.

### **Food and Drink Policy (for in-campus sessions only).**

Please adhere to the firm policy of no beverages (other than bottled/capped water), food, tobacco products, or like items in the classroom. Your understanding of the necessity for this policy and cooperation will be greatly appreciated. This policy will be strictly enforced.

## **Learning Support and Campus Offices**

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### **Academic Accommodations**

Students with disabilities are responsible for registering with Student Accessibility Services (SAS) in order to receive academic accommodations. For additional information about academic accommodations and resources, you can visit the SAS website.

[SAS website for the Tampa campus and Sarasota-Manatee Teachout site.](#)

[SAS website for the St. Pete campus.](#)

### **Academic Support Services**

The USF Office of Student Success coordinates and promotes university-wide efforts to enhance undergraduate and graduate student success. For a comprehensive list of academic support services available to all USF students, please visit the [Office of Student Success website.](#)

### **Canvas Technical Support**

If you have technical difficulties in Canvas, you can find access to the Canvas guides and video resources in the “Canvas Help” page on the homepage of your Canvas course. You can also contact the help desk by calling 813-974-1222 in Tampa or emailing [help@usf.edu](mailto:help@usf.edu).

[USF IT Services](#)

### **Center for Victim Advocacy**

The [Center for Victim Advocacy](#) empowers survivors of crime, violence, or abuse by promoting the restoration of decision making, by advocating for their rights, and by offering support and resources. Contact information is available online.

### **Counseling Center**

The Counseling Center promotes the wellbeing of the campus community by providing culturally sensitive counseling, consultation, prevention, and training

that enhances student academic and personal success. Contact information is available online.

[Counseling Center website for the Tampa campus and Sarasota-Manatee Teachout site.](#)

[Counseling Center website for the St. Pete campus.](#)

## **Tutoring**

The Tutoring Hub offers free tutoring in several subjects to USF undergraduates. Appointments are recommended, but not required. For more information, email [asctampa@usf.edu](mailto:asctampa@usf.edu).

[Tutoring website for the Tampa campus and Sarasota-Manatee Teachout site.](#)

[Tutoring website for the St. Pete campus.](#)

## **Writing Studio**

The Writing Studio is a free resource for USF undergraduate and graduate students. At the Writing Studio, a trained writing consultant will work individually with you, at any point in the writing process from brainstorming to editing. Appointments are recommended, but not required. For more information or to make an appointment, email: [writingstudio@usf.edu](mailto:writingstudio@usf.edu).

[Writing studio website for the Tampa campus and Sarasota-Manatee Teachout Site.](#)

[Writing studio website for the St. Pete campus.](#)

## **Student Ombuds Office**

Florida Statute 1006.51 and Florida Board of Governors Regulation 6.011 require that all public institutions provide ombuds services to students. The Student Ombuds Office at USF is a confidential, impartial, informal, and independent resource for students experiencing challenges related to the university. Ombuds can help students safely explore options, clarify processes, and consider next steps. [Learn more or make an appointment at usf.edu/student-ombuds.](https://usf.edu/student-ombuds)