

## Course Information

Course Number:	MATH 304
Course Title:	Linear Algebra
Section:	502
Time:	11:30am-12:45pm, Tue, Thu
Location:	Online
Credit Hours:	3
Course website:	Canvas and <a href="https://www.math.tamu.edu/~chliu/teaching/spring21math304.html">https://www.math.tamu.edu/~chliu/teaching/spring21math304.html</a>

## Instructor Details

Instructor:	Chun-Hung Liu
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Office Hours:	11:00am-12:00pm Mon, 2:00pm-3:00pm Tue, or by appointments.

## Course Description

Introductory course in linear algebra covering abstract ideas of vector space and linear transformation as well as models and applications of these concepts, such as systems of linear equations, matrices and determinants.

## Course Prerequisites

MATH 148, MATH 152, or MATH 172.

## Course Learning Outcomes

The objective of this course is making students excel in basic notions and techniques in linear algebra. Upon successful completion of this course, students will have the abilities to explore advanced or related topics.

## Textbook and/or Resource Materials

“Linear Algebra with Applications” by Steven J. Leon, 10th edition.

## Grading Policy

Homework assignments (10%)

- There will be one homework assignment almost every week. Practicing is the best way to absorb the materials covered in lectures. Collaboration and discussion for homework assignments are allowed, but you must write down the solutions on your own and submit your own copy.
- No late assignment will be accepted except for university approved excuses. Deadline and detailed instructions will be included in the problem sheet of each assignment.
- Only the best 10 grades among the assignments will be counted toward the final semester grade.

- Homework assignment will be graded by checking the completion only instead of checking the correctness. Each assignment contains two types of questions: “required submission questions” and “suggested practice”. You are only required to submit the “required submission questions” part.
- The solutions of all “required submission questions” will be posted at the course website at Canvas.
- All homework will be submitted to Gradescope. No paper submission or email submission will be accepted unless you obtain an extra permission.

#### Quizzes (20%)

- There will be 10 or more quizzes, mostly on a weekly basis.
- Quizzes will be taken at Gradescope. For each quiz, there is a time window (e.g. 48 hours) that you can login Gradescope to start your work on the quiz. And once you start, you have to complete and upload your work within a time limit (e.g. 15 minutes). Once the time limit has been passed, you will not be able to upload or update your solution, even if it is still in the time window. The precise time window and time limit for each quiz will be announced later.
- No collaboration or discussion are allowed for quizzes. As long as you have seen the quiz questions, you are not allowed to reveal the questions or discuss with anyone enrolled in this course until the time window is passed, even if you have submitted your work.
- Only the best 10 grades among these quizzes will be counted.
- If you miss a quiz, it will be counted as 0 point.
- Since you have freedom to work on each quiz in a sufficiently long time window, make-up quizzes will unlikely be granted. No make-up quiz will be granted unless you have university approved excuses that cover the entire time window.
- All quizzes will be submitted to Gradescope. No paper submission or email submission will be allowed unless you obtain an extra permission.

#### Midterm exams (40%: 20% for each midterm exam)

- Exam time: **Lecture time (11:30am-12:45pm) on March 4 Thursday, and April 8 Thursday.**
- No collaboration or discussion are allowed for exams.
- All exams will be submitted to Gradescope. No paper submission or email submission will be allowed unless you obtain an extra permission.
- No late submission will be accepted except for university approved excuses.
- Midterm exams will be taken and proctored online. That is, you can work on your exam at any place that you choose. And you have to have a second device that allows the proctors to see your workspace during the exam period. More details will be given when dates approach.

#### Final exam (30%)

- Exam time: **May 3 Monday, 11:00am-1:30pm** (official final exam schedule).
- No collaboration or discussion are allowed for exams.
- The final exam will be submitted to Gradescope. No paper submission or email submission will be allowed unless you obtain an extra permission.
- No late submission will be accepted except for university approved excuses.
- The final exam will be taken and proctored online. That is, you can work on your exam at any place that you choose. And you have to have a second device that allows the proctors to see your workspace during the exam period. More details will be given when the date approaches.

For the final semester grade, students who get **90%-100% of points will be an A, 80%-90% of points will be a B, 70%-80% of points will be a C, 60%-70% of points will be a D, and an F for otherwise.**

Grades record will be frequently updated at the course website at Canvas. You are required to frequently check the correctness of the grades record posted there. Requests for record correction or regrading for any question in quizzes or assignments should be made by the end of the lecture after the grading is completed. The deadline for requesting regrading midterm or final exams will be announced when the grading is complete.

### *Attendance*

Attending lectures is expected. Each lecture will be streamed via Zoom during the lecture time. It is very likely that each lecture will be recorded and will be accessible later. You are not allowed to share the lecture videos to anyone who is not enrolled in this course.

### *Late Work Policy*

No submission of assignments, quizzes, midterm exams or final exam after the established deadline will be accepted except for university approved excuses.

Make-ups for missed exams or quizzes will be given only if the absence is due to university approved excuses.

Based on university rules, all absence notifications should be sent to the instructor in writing no later than the end of the next working day after the absence (and prior to the absence if possible).

The make-up should be done within one week after you return school.

Details about university approved excuses can be found in student rule 7 (<https://student-rules.tamu.edu/rule07/>).

### *Course Schedule*

Dates for midterm exams and the final exam are listed in the “**Grading Policy**” section.

Topics that will be covered in this course include the following. (Number of weeks: 15)

- Matrices and systems of equations: Sections 1.1-1.5 (around 2 weeks)
- Determinants: Sections 2.1-2.3 (around 1 week)
- Vector spaces: Sections 3.1-3.6 (around 3 weeks)
- Linear transformation: Sections 4.1-4.3 (around 1.5 weeks)
- Orthogonality: Sections 5.1-5.6 (around 3 weeks)
- Eigenvalues: Sections 6.1-6.3 (around 1.5 weeks)

More detailed tentative weekly schedule and deadlines for submitting assignments and quizzes will be included in other documents.

### *Math Learning Center (MLC) support*

The Math Learning Center (MLC) offers various forms of support for Math 304, both online and face-to-face, including drop-in Help Sessions and other activities. Additionally, the MLC hosts an archive of Supplemental Material, such as Python tutorial videos and recorded review sessions. Visit the website (<https://mlc.tamu.edu/>) for more details.

## University Policies

### Attendance Policy

The university views class attendance and participation as an individual student responsibility. Students are expected to attend class and to complete all assignments.

Please refer to [Student Rule 7](#) in its entirety for information about excused absences, including definitions, and related documentation and timelines.

### Makeup Work Policy

Students will be excused from attending class on the day of a graded activity or when attendance contributes to a student's grade, for the reasons stated in Student Rule 7, or other reason deemed appropriate by the instructor.

Please refer to [Student Rule 7](#) in its entirety for information about makeup work, including definitions, and related documentation and timelines.

Absences related to Title IX of the Education Amendments of 1972 may necessitate a period of more than 30 days for make-up work, and the timeframe for make-up work should be agreed upon by the student and instructor" ([Student Rule 7, Section 7.4.1](#)).

"The instructor is under no obligation to provide an opportunity for the student to make up work missed because of an unexcused absence" ([Student Rule 7, Section 7.4.2](#)).

Students who request an excused absence are expected to uphold the Aggie Honor Code and Student Conduct Code. (See [Student Rule 24](#).)

### Academic Integrity Statement and Policy

"An Aggie does not lie, cheat or steal, or tolerate those who do."

"Texas A&M University students are responsible for authenticating all work submitted to an instructor. If asked, students must be able to produce proof that the item submitted is indeed the work of that student. Students must keep appropriate records at all times. The inability to authenticate one's work, should the instructor request it, may be sufficient grounds to initiate an academic misconduct case" ([Section 20.1.2.3, Student Rule 20](#)).

You can learn more about the Aggie Honor System Office Rules and Procedures, academic integrity, and your rights and responsibilities at [aggiehonor.tamu.edu](http://aggiehonor.tamu.edu).

### Americans with Disabilities Act (ADA) Policy

Texas A&M University is committed to providing equitable access to learning opportunities for all students. If you experience barriers to your education due to a disability or think you may have a

disability, please contact Disability Resources in the Student Services Building or at (979) 845-1637 or visit [disability.tamu.edu](http://disability.tamu.edu). Disabilities may include, but are not limited to attentional, learning, mental health, sensory, physical, or chronic health conditions. All students are encouraged to discuss their disability related needs with Disability Resources and their instructors as soon as possible.

## Title IX and Statement on Limits to Confidentiality

Texas A&M University is committed to fostering a learning environment that is safe and productive for all. University policies and federal and state laws prohibit gender-based discrimination and sexual harassment, including sexual assault, sexual exploitation, domestic violence, dating violence, and stalking.

With the exception of some medical and mental health providers, all university employees (including full and part-time faculty, staff, paid graduate assistants, student workers, etc.) are Mandatory Reporters and must report to the Title IX Office if the employee experiences, observes, or becomes aware of an incident that meets the following conditions (see [University Rule 08.01.01.M1](#)):

- The incident is reasonably believed to be discrimination or harassment.
- The incident is alleged to have been committed by or against a person who, at the time of the incident, was (1) a student enrolled at the University or (2) an employee of the University.

Mandatory Reporters must file a report regardless of how the information comes to their attention – including but not limited to face-to-face conversations, a written class assignment or paper, class discussion, email, text, or social media post. Although Mandatory Reporters must file a report, in most instances, a person who is subjected to the alleged conduct will be able to control how the report is handled, including whether or not to pursue a formal investigation. The University's goal is to make sure you are aware of the range of options available to you and to ensure access to the resources you need.

Students wishing to discuss concerns in a confidential setting are encouraged to make an appointment with [Counseling and Psychological Services](#) (CAPS).

Students can learn more about filing a report, accessing supportive resources, and navigating the Title IX investigation and resolution process on the University's [Title IX webpage](#).

## Statement on Mental Health and Wellness

Texas A&M University recognizes that mental health and wellness are critical factors that influence a student's academic success and overall wellbeing. Students are encouraged to engage in healthy self-care by utilizing the resources and services available from Counseling & Psychological Services (CAPS). Students who need someone to talk to can call the TAMU Helpline (979-845-2700) from 4:00 p.m. to 8:00 a.m. weekdays and 24 hours on weekends. 24-hour emergency help is also available through the National Suicide Prevention Hotline (800-273-8255) or at [suicidepreventionlifeline.org](http://suicidepreventionlifeline.org).

## COVID-19 Temporary Amendment *Campus Safety Measures*

To promote public safety and protect students, faculty, and staff during the coronavirus pandemic, Texas A&M University has adopted policies and practices for the Spring 2021 academic term to limit virus transmission. Students must observe the following practices while participating in face-to-face courses and course-related activities (office hours, help sessions, transitioning to and between classes, study spaces, academic services, etc.):

- Self-monitoring—Students should follow CDC recommendations for self-monitoring. **Students who have a fever or exhibit symptoms of COVID-19 should participate in class remotely if that option is available, and should not participate in face-to-face instruction.**
- Face Coverings—[Face coverings](#) (cloth face covering, surgical mask, etc.) must be properly worn in all non-private spaces including classrooms, teaching laboratories, common spaces such as lobbies and hallways, public study spaces, libraries, academic resource and support offices, and outdoor spaces where 6 feet of physical distancing is difficult to reliably maintain. Description of face coverings and additional guidance are provided in the [Face Covering policy](#) and [Frequently Asked Questions \(FAQ\)](#) available on the [Provost website](#).
- Physical Distancing—Physical distancing must be maintained between students, instructors, and others in course and course-related activities.
- Classroom Ingress/Egress—Students must follow marked pathways for entering and exiting classrooms and other teaching spaces. Leave classrooms promptly after course activities have concluded. Do not congregate in hallways and maintain 6-foot physical distancing when waiting to enter classrooms and other instructional spaces.
- To attend a face-to-face class, students must properly wear an approved face covering. If a student refuses to wear a face covering, the instructor should ask the student to leave and join the class remotely. If the student does not leave the class, the faculty member should report that student to the [Student Conduct office](#) for sanctions. Additionally, the faculty member may choose to teach that day's class remotely for all students, or dismiss the class in the case of a traditional face to face lecture.

### *Personal Illness and Quarantine*

Students required to quarantine must participate in courses and course-related activities remotely, if that option is available, and **must not attend face-to-face course activities**. Students should notify their instructors of the quarantine requirement. Students under quarantine are expected to participate in courses and complete graded work unless they have symptoms that are too severe to participate in course activities.

Students experiencing personal injury or illness that is too severe for the student to attend class qualify for an excused absence (See [Student Rule 7, Section 7.2.2.](#)) To receive an excused absence, students must comply with the documentation and notification guidelines outlined in Student Rule 7.

### Copyright Policies

All printed handouts and materials posted at the websites for this course are protected by US Copyright Laws. Videos of recorded lectures are confidential. It is not allowed to share these materials with any person who is not enrolled in this class.