

**THE UNIVERSITY OF TEXAS AT EL PASO**  
**COLLEGE OF SCIENCE**  
**DEPARTMENT OF MATHEMATICS**

Course #: MATH 3323-36442  
Course Title: Matrix Algebra  
Credit Hrs: 3  
Term: Summer 2020  
Course Meetings & Location: **MTWRF Blackboard Collaborate 12:00 pm to 02:20 pm: lectures start 12:00 pm when live, live office hours continue for any remaining time after live lectures or whole time period if lecture is pre-recorded/absent. Midterm exams (2) will take place 12:00 pm to 01:20 pm on scheduled dates.**  
Prerequisite Courses: MATH 1312: students are assumed to be proficient on all prerequisites  
Instructor: Dr. Luis Valdez-Sanchez  
Office Location: Bell Hall 222  
Contact Info:

Phone # (915) 747-6766  
E-mail address: [lvsanchez@utep.edu](mailto:lvsanchez@utep.edu)  
Fax # (915) 747-5761

Office Hrs: MTWRF after lecture; can also contact by email anytime.  
Textbook(s), Materials: **Required: *Introduction to Linear Algebra, Fifth Edition, by Johnson-Riess-Arnold, Addison Wesley (any earlier edition may be used)***  
**Suggested: *A first course in Linear Algebra, by Robert Beezer; free textbook, download at <http://linear.ups.edu/>  
*Linear Algebra, by Jim Hefferon; free textbook/answers, download at <http://joshua.smcvt.edu/linearalgebra/>****

Course Objectives: This is a first course in Linear Algebra which introduces the theory and concepts of matrix algebra, including systems of linear equations, matrices, determinants, eigenvalues and eigenvectors, diagonalization, vector spaces and linear transformations. Chapters 1, 3, and 4 will be covered in detail.

Course Activities & Assignments: More emphasis than usual on proofs and verification of statements will be necessary in order to make sense of procedures/computation. Homework for each section is suggested but not collected. Solutions to all quizzes and exams will be posted in BlackBoard.

**See below for more details on Hw, quizzes, exams, and lecture schedule.**  
All class announcements (midterm dates, corrections) will be distributed via Blackboard Announcements and email. You are responsible for regularly checking for any announcements.

**All lecture files, quizzes and exams will be delivered online via Blackboard. Live lectures will be delivered via Blackboard Collaborate, recorded, and posted in Blackboard for later access.**

**I will also offer live office hours after the end of live lectures. Our TA will offer daily office hours at later times (TBA).**

The **MaRCS Tutoring Center** will be available for online consultation during summer. For details visit their webpage  
<https://www.utep.edu/science/math/marcs/>

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Assessment of Course Objectives: There will be two midterm exams and a comprehensive final. Online quizzes on material coming from Hw problems and the examples discussed in the textbook/lecture will be regularly given via BlackBoard.

Course Schedule -- Target midterm dates: Midterm 1 (Ch 1) 07/15, Midterm 2 (Ch 3) 07/23.  
-- **The final exam will be on MON Aug 3, time TBA. It will be comprehensive and include material from chapters 1, 3, and 4.**  
-- July 24 Drop/Withdrawal Deadline  
-- July 31 Last day of classes

Grading Policy: Each midterm is worth 25%, quizzes are worth 10%, and the final exam is worth 40%. Grades will be assigned as follows:  $A \geq 90$ ;  $B \geq 80$ ,  $C \geq 70$ ,  $D \geq 60$ ,  $F < 60$ .

The course grade will be the average grade of midterms, quizzes and final, or a C if the final exam grade is  $\geq 70$  and the average is  $< 70$ .

A course grade of F will be assigned when the final exam is missing.

**Academic performance in the items indicated above will be the only factor used in determining course grades.**

In order to be granted a grade of Incomplete, a student must have completed at least 60 percent of the coursework with a grade of C or better. An Incomplete grade cannot be granted to anyone who has taken the final exam.

Make-up Policy: **There are no make-ups for quizzes or the final exam.** In case of missing a midterm exam due to an emergency, contact me as soon as possible to discuss a possible make-up schedule (depending upon officially documented and academically valid reason for missing exam). If a make-up cannot be given, the grade for the missed midterm or final will be 0.

Attendance Policy: --Students are expected to read the textbook in detail and cover the online material following the course schedule provided (see below).

-- Each summer week we cover as much material as that covered during 4.375 weeks in a regular semester; each summer week amounts to more than a month and 1 week of regular semester material.

**It is therefore strongly recommended to closely follow the lecture schedule and not fall behind it, as otherwise the fast pace of the course may make it very difficult to get back on track.**

-- By University policy, a student may be dropped by the instructor prior to the drop deadline for excessive absence, neglect, or lack of effort (for example, after missing 3 quizzes or 1 midterm without communicating with the instructor and providing an academically valid excuse).

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**Academic Integrity Policy** The University policy is that all suspected cases or acts of alleged scholastic dishonesty must be referred to the Dean of Students for investigation and appropriate disposition. Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes, but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts. Each student is responsible for notice of and compliance with the provisions of the Regents' Rules and Regulations, which are available for inspection electronically at

<http://www.utsystem.edu/bor/rules/homepage.htm>

All students are expected and required to obey the law, to comply with the Regents' Rules and Regulations, with System and University rules, with directives issued by an administrative official in the course of his or her authorized duties, and to observe standards of conduct appropriate for the University. A student who enrolls at the University is charged with the obligation to conduct himself/herself in a manner compatible with the University's function as an educational institution.

Any student who engages in conduct that is prohibited by Regents' Rules and Regulations, U. T. System or University rules, specific instructions issued by an administrative official or by federal, state, or local laws is subject to discipline, whether such conduct takes place on or off campus or whether civil or criminal penalties are also imposed for such conduct.

**Disability Statement:** If a student has or suspects she/he has a disability and needs an accommodation, he/she should contact The Center for Accommodations and Support services (CASS) at 747-5148, [cass@utep.edu](mailto:cass@utep.edu) or directly in Room 106 Union East Building.

The student is responsible for timely presenting to the instructor any CASS accommodation letters and instructions and setting up an appointment (by email) to discuss the details in person. No action will be taken otherwise.

**Military Statement:** If you are a military student with the potential of being called to military service and/or training during the semester, please contact me by the end of the first week of class.

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**SCHEDULE:** material to be covered each day and quiz due dates.

< > July 2020 🔍 ? ⚙️ Month ▾ ☰

SUN	MON	TUE	WED	THU	FRI	SAT
28	29	30	Jul 1	2	3	4
5	6	7 1.1 - 1.2	8 1.2-1.3 Quiz 1.1-1.2 due	9 1.5-1.6 Quiz 1.3 due	10 1.7 Quiz 1.5-1.6 due	11
12	13 1.9	14 3.1-3.2 Quiz 1.7-1.9 due	15 Midterm 1, 3.2	16 3.3	17 3.4 Quiz 3.3 due	18
19	20 3.5	21 3.6-3.7 Quiz 3.4-3.5 due	22 4.1-4.2 Quiz 3.6-3.7 due	23 Midterm 2, 4.2	24 4.3 Quiz 4.1-4.2 due	25
26	27 4.4 Quiz 4.3 due	28 4.5	29 4.5-4.7	30 4.7 Quiz 4.5 due	31 4.7 Quiz 4.7 A due	Aug 1 Quiz 4.7 B due

## Suggested homework problems instructions.

1. The textbook homework problems will not be collected; the list is provided as an example of a minimal set of problems to be attempted.
2. You should aim at practicing on as many textbook exercises as possible, even those that do not appear in the list of suggested problems.
3. Work on homework exercises on your own before seeking help in solving them, otherwise you will not benefit as much from this activity.
4. Ideally, you should ask any questions about the homework problems in person, either in class or during office hours. Otherwise, after working on a problem for some time on your own, you may ask me a question via email and include a scan of your work.
5. More solved examples and exercises can be found in the free Suggested Textbooks given in the syllabus or in BlackBoard under Other Resources.

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### Online quizzes instructions.

1. The goal of the quiz problems is to help you diagnose how well you understand the relevant methods and ideas. They also provide a good idea of the type of problems that will appear in the midterms and final exam. It is therefore very important that you are well prepared before attempting each quiz.
2. Online quizzes will be posted in Blackboard and only be accessible for a certain time period (say 12-24 hours). Quizzes will also have a time limit for its completion (15 – 60 minutes); once started, a quiz must be completed within the allotted time, at the end of which the quiz will automatically close. Quizzes will typically be in multiple choice format.
3. Each online quiz should be treated as an in-class quiz, except that you may consult your notes/textbook. **No collaboration with anyone (me included, as well as no online help) is allowed, and no calculator/software may be used.**
4. It is strongly suggested that quiz problems be attempted after reading each textbook section, practicing on the textbook exercises and reviewing the lecture examples and discussion.
5. As a rule of thumb, each quiz problem should be solved in 10-12 minutes once enough practice problems have been attempted successfully. Taking too long to solve a problem (15-20 mins) is an indication of a lack of preparation or insufficient proficiency on prerequisites.
6. Solutions to all quizzes and midterms will be posted in BlackBoard shortly after they all are turned in. It is your responsibility to compare your quiz/midterm answers with the posted solutions and make corrections when necessary, so as to not repeat any quiz mistakes on an exam.

### Online exams (midterms/final) instructions.

1. **Each midterm exam will be administered via Blackboard at the beginning of the class period (12:00 pm to 01:20 pm).** More specific instructions will be given for each exam.
2. Each online exam should be treated as an in-class exam, except that you may consult your notes/textbook. **No collaboration with anyone (me included, as well as no online help) is allowed, and no calculator/software may be used.**
3. Each midterm may contain 4-6 problems (40-60 points) and run for 1 hour and 20 minutes. The final exam may contain 6-8 problems (60-80 points) and run for 2 hours and 45 minutes.
4. Exam questions will require detailed written solutions. The solution files must be produced in PDF and uploaded to Blackboard before the end of the exam, otherwise the exam will be given a grade of 0.
5. **Late submissions of solutions may be accepted (by email) only if the lateness was due to software problems and proof of completion before the deadline is provided (in the form of a time-stamp from the software used to produce the solutions in PDF). Accepted late submissions will be deducted 10% of the total points earned for each 5 minutes or fraction elapsed after the end of the exam.**