

**THE UNIVERSITY OF TEXAS AT EL PASO**  
**COLLEGE OF SCIENCE**  
DEPARTMENT OF MATHEMATICAL SCIENCES

Course #: Math 2326, CRN 21386  
Course Title: Differential Equations  
Credit Hrs: 3  
Term: Spring 2022  
Course Meetings &  
Location: None – course is entirely online via Blackboard and Microsoft Teams.  
Prerequisite Courses: Math 1312 with a grade of at least C (or S for Fall 2020) or appropriate placement scores.  
Instructor: Francisco Avila  
Office Location: Online Only  
Contact Info: Instructor: [favila2@utep.edu](mailto:favila2@utep.edu)  
Math Department: [mathdept@utep.edu](mailto:mathdept@utep.edu)  
Live Sessions: TR 10:30am – 11:50am on Blackboard.  
Virtual Office Hrs: TR 8:00 – 8:50am on Blackboard.

Office hours are only held during normal university scheduling. Please allow one business day for the return of emails. Evening and weekend emails will be attended to during regular business hours. Other times at the discretion of the instructor.

During off-scheduling (Finals week) or condensed scheduling (late start, closed university) hours will be adjusted appropriately.

Textbook(s), Materials:

- Blanchard, Devaney and Hall, *Differential Equations*, 4<sup>th</sup> Edition.
- Boyce and DiPrima, *Elementary Differential Equations and Boundary Value Problems* – 10<sup>th</sup> Edition.

Required: Basic Scientific Calculator (a calculator without graphing, derivative or integration capabilities)

Course Objectives (Learning Outcomes): **Contents:** This course is devoted to the study of ordinary differential equations in the context of dynamical systems. Modeling, separation of variables, qualitative and numerical methods, equilibria and bifurcations, linear systems, driven oscillations, real and complex solutions.

**Objectives:** To introduce topics to practice with strong emphasis on applications. The goals are to learn basic concepts, theory, methods and applications of ordinary differential equations with emphasis on modeling and dynamics.

Activities/Assignments: Reading and homework assignments will be given every day. You will find all assignments online. These assignments are to be completed as scheduled. Late work is generally not accepted. However, assignments may be rescheduled for a limited number of emergency situations if you discuss your situation with me before (not on and especially not after) the scheduled due date. Students must watch the material posted on blackboard and read the material posted on Microsoft Teams and textbook sections before completing the homework assignments. After a few sections of homework, a quiz will be assigned. If you have questions about the topics and/or homework assignments, connect to the online office hours sessions with the instructor and/or during the TA's office hours.

Online Platform: **To be announced.**

Class Activities & Policies: **Homework** - All homework will be completed online with due dates as listed on the course calendar.

**Quizzes** – After a few sections of homework, you will have a 60-minute timed quiz over that material. Each question has 3 attempts.

**Exams** – There will be 2 partial exams. To review for each exam, an exam review will be available. The exam review is considered a homework score, so be sure to complete the assignment. The exams will be available for a 24-hour period on the date specified by the course calendar. The exam itself is timed at 120 minutes (two hours) and will have an accessible scientific calculator. You have two attempts at each problem. You will be asked to submit your operations/procedures on Microsoft Teams and your score might be changed once your work is reviewed.

**Final Exam** – The final exam will be available for two days during final exam week, see course calendar. This exam is a comprehensive exam and is required for all students. You may not opt out of the final exam. The final exam is timed at 165 minutes (2hr45min). You will be asked to submit your operations/procedures on Microsoft Teams and your score might be changed once your work is reviewed.

For all timed assignments, the clock begins once you open then assignment. This clock will not stop for any reason, not even if you log out. For this reason, it is important to check for any updates on your computer prior to beginning the timed assignments. NO EXTRA CREDIT OR CURVES ON EXAMS. NO REPLACEMENT OF EXAM WITH FINAL EXAM.

Course Schedule: A comprehensive course schedule is available as a separate document. Semester highlights include:

- January 18<sup>th</sup>, 2022 first day of classes
- February 2<sup>nd</sup>, 2022 Spring census day
- April 1<sup>st</sup>, 2022 Spring Drop/Withdrawal deadline
- May 6<sup>th</sup>, 2022 Dead Day

Grading Policy: Your grade will be calculated as follows:

Homework	10%
Quizzes	10%
Exam 1	25%
Exam 2	25%
Comprehensive Final	30%

The grading scale for this course is:

90 – 100 = A

80 – 89 = B

70 – 79 = C

60 – 69 = D

0 – 59 = F.

Drop Policy: **The Drop Date for this semester is Friday April 1<sup>st</sup>, 2022 before 5:00 PM. No drops will be approved after this date or time.**

Students who decide to drop the course must process a drop form, by emailing [records@utep.edu](mailto:records@utep.edu) by April 1<sup>st</sup>. Please note that the College of Science will remain aligned with the University and **will not approve any drop requests after that date.**

Make-up Policy: No makeup exams/quizzes will be allowed except with proper documentation, i.e. doctor's note, hospital's note, or UTEP excused absence document.

If you feel like you have some extraordinary circumstance or have an excused absence that will keep you from completing the assignment or quiz in a timely manner, please contact me right away and be prepared to show supporting documentation.

University Sponsored Events: (conferences, student athletes, etc...)  
The student needs to inform me of any traveling conflicts before they leave and make adequate arrangements to make up the missed material with one week of returning. Failure to do so, will result in the forfeiture of points.

Attendance Policy: If you do not submit any assignments by Thursday, Jan 27<sup>th</sup> at 11:59 PM, then you may be dropped from this class for lack of effort. You are expected to work toward completion of the course assignment daily. If you do not submit any assignments for two consecutive weeks, then you may be dropped from this class due to lack of effort. You are expected to check Blackboard, Microsoft Teams and your miners email regularly for announcements.

Civility Statement: All correspondence with your instructor, TA, and other students should be conducted in an appropriate manner.

Military Statement: If you are a military student with the potential of being called to military service and /or training during the course of the semester, you must contact me as soon as possible before you leave.

Disability Statement: If you need accommodations for your success, please contact The Center for Accommodations and Support Services (CASS) at 747-5148, or by email at [cass@utep.edu](mailto:cass@utep.edu), or visit their office located in the UTEP Union East, Room 106. For additional information, please visit the CASS website <https://www.utep.edu/student-affairs/cass/>

The student is responsible for informing me of the accommodations needed and will be responsible for proactive actions in regards to having accommodations met.

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. For the official policies on academic integrity and scholastic dishonesty, please refer to <https://admin.utep.edu/Default.aspx?alias=admin.utep.edu/hoop>

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 <https://www.utsystem.edu/offices/board-regents/regents-rules-and-regulations>.

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.

Course Schedule: See separate calendar.