

**THE UNIVERSITY OF TEXAS AT EL PASO**  
**COLLEGE OF SCIENCE**  
DEPARTMENT OF Mathematical Sciences

Course #: Math 5311  
Course Title: Differential Equations  
Credit Hrs: 3.0  
Term: Summer 2020  
Course Meetings & Location: Online

Prerequisite Courses: C or better in Math 1411  
Course Fee: (if applicable) N/A

Instructor: Dr. Maria C. Mariani  
Office Location: Bell Hall 120

Contact Info: Phone # 915-797-5761  
E-mail address: [mcmariani@utep.edu](mailto:mcmariani@utep.edu)  
Fax # 915-747-6502 (Math Department)  
Emergency Contact: 915-747-5761 (Math Department)

Office Hrs: Will be offered in Blackboard

Textbook(s): Required:  
Recommended: Selected Material from these books will be covered:  
1. Fundamentals of Differential Equations, last edition by Kent B. Nagle, Edward B. Saff, Arthur David Snider, Addison Wesley.  
2. A textbook on ordinary differential equations, S. Ahmad and A. Ambrosetti, Springer, 2013.  
3. Stochastic Differential Equations, last edition by Bernt Oksendal, Springer.  
4. Elementary Stochastic Calculus, Thomas Mikosch, 2006.  
5. Partial Differential Equations, last edition by Fritz John, Springer.

Course Objectives (Learning Outcomes): This course is devoted to the study of ordinary, partial and stochastic differential equations in the context of modeling. Objectives: To introduce topics to practice with strong emphasis on applications. The goals are to learn basic concepts, theory, methods and applications of ordinary, partial, and stochastic differential equations with emphasis on modeling and dynamics.

Course Activities/Assignments: I will assign homework, quizzes and, and projects that students will present during Blackboard meetings.

Assessment of Course Objectives: **Exams:** One midterm exam and one final exam will be given.

Course Schedule:

**Week 1- June 8 - 14**

Homework 1 due on June 11, 2020  
Homework 2 due on June 14, 2020

**Week 2- June 15 - 21**

Homework 3 due on June 16, 2020  
**Quiz 1:** Wednesday, June 17, 2020  
Homework 4 due on June 18, 2020  
**Exam 1 :** Friday, June 19, 2020

**Week 3- June 22 - 28**

Homework 5 due on June 24, 2020  
**Course Drop Date:** Friday June 26, 2020  
Homework 6 due on June 28, 2020  
**Projects and Presentations:** June 22- 26

**Week 4- June 29 - July 5**

Homework 7 due on July 1, 2020  
**Quiz 2 :** Tuesday July 2, 2020  
**Final Exam:** Monday July 6, 2020

- Grading Policy: **Homework and quizzes 30%, presentations, projects and class participation 30%, Midterm 20%, Final exam 20%**  
The usual standard grading scale will be used (90-100% = A, 80-89% = B, 70- 79% = C, etc. ).
- Make-up Policy: Make-up exams and quizzes will be given only in extraordinary circumstances, which must be documented as early as possible. No late homework accepted. **There is no makeup final exam.**
- Attendance Policy: It is your responsibility to review the materials, watch all the videos, tutorials, and supplemental materials that will be provided online, ask questions and submit each assignment on time  
It is essential to read the textbook and work through the example problems.
- 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 <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.
- Civility Statement: All correspondence with your instructor, teaching Assistants and other students should be conducted in an appropriate manner..
- 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 or at [cass@utep.edu](mailto:cass@utep.edu), or go to Room 106 Union East Building. The student is responsible for presenting to the instructor any CASS accommodation letters and instructions.  
For additional information, please visit the CASS website <https://www.utep.edu/student-affairs/cass/>
- 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