

**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 I 2018

Course Meetings & Location: MTWRF 16:20pm-18:30pm

Prerequisite Courses:

Course Fee: (if applicable) N/A

Instructor: Dr. Maria Christina Mariani

Office Location: Bell Hall 120

Contact Info:

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Emergency Contact: 915-747-5761 (Math Department)

Office Hrs: Monday 11:50am-12:40pm - Thursday 11:50am-12:40pm, or by appointment.

Textbook(s), Materials:

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, sixth edition by Bernt Oksendal, Springer, 2007.
4. Elementary Stochastic Calculus, Thomas Mikosch, 2006.
5. Partial Differential Equations, last edition by Fritz John, Springer.

Course Objectives **Contents:**

(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 in class.

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

Objectives:

Course Schedule:

**Exam #1: Friday, 6/22**

**The Drop Date is Friday June 29, 2018.**

**Final Exam: Monday, July 9, 7:00pm-9:45pm**

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 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 the student's responsibility to attend every class, if you miss a class, you will miss a lot of information. If you try to go from one class to another without studying, you will most likely be completely lost during the next class. Students are expected to arrive for class on time and to remain for the class entire period. It is essential to pay attention in class and take legible notes. It is essential to read the textbook and work through the example problems given in the book and class. Failure to accomplish the above, as a minimum almost invariably ensures a less than satisfactory grade for this course.

**The Drop Date is Friday June 29, 2018.**

**There is not make-up final exam.**

**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.

**Civility Statement:** Calculators may not be shared during quizzes and exams. Please do not use cell phones, pagers, iPods, MP3 players, blue tooth devices, etc. during class. Cell phones and pagers should be set to silent or vibrate, and any calls should be taken outside of class. Please do not wear headsets or blue tooth devices during class. Please don't talk in class. Cell phone calculators may not be used on quizzes or exams. Active participation in class is expected, teamwork in class will be implemented.

**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> or go to Room 106 Union East Building. The student is responsible for presenting to the instructor any CASS accommodation letters and instructions.

**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