# Math 3433-101 Differential Equations Fall 2020

## **Contact Information:**

Instructor: Dr. Guy Bernard

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Office Hours: By phone or e-mail only. If you use e-mail, please give your phone number and time that is convenient for me to call you back. If the answer to your question is short, I will give it by e-mail, if not I will phone you. I will be in my office (to receive your phone calls) MWF 9:00am-10:00am TR 2:00pm-3:00pm. If you really need to meet me face-to-face, we will arrange a time for us to meet in the Learning Center (Moffett Library, 1st floor).

Important Notices (please read carefully)

* Students must wear face coverings in class and in Bolin Hall.
* Students must observe social distancing (6 feet) at all times.
* Office hours will be conducted by phone or e-mail (see above).
* Students must choose a seat the first day of class and sit in that same seat the whole semester.
* Test No.3 will be given online with Lockdown Browser/Monitor Respondus. Please (refer to Final Exam below).
* The last week of class after Thanksgiving (Nov. 30- Dec. 4) will be given online. The method of instruction will be determined during the semester.
* Students will need to make PDF files of their homework assignments and upload them to D2L.

Final Exam

* The Final Exam will be given online through Lockdown Browser/Monitor Respondus. Students will need a desktop or laptop with a webcam (with microphone). I-Pad (Apple) will also work provided they have a webcam (with microphone). Chromebook will NOT work neither will other tablets. A broadband connection to the internet (i.e., a strong internet connection) is required.
* Students do not need to schedule their final exam with Lockdown Browser/Monitor Respondus. There is no cost to students.

## **Class Details:**

Lectures: MWF 10:00am-10:50am in Bolin 109.

Text: A First Course in Differential Equations with Modeling Applications by Dennis G. Zill, 11th edition.

Class Notes: posted on D2L

Homework Solutions: posted on D2L after being handed in.

Calculator: Any graphing calculator. (I will not make use of it in class)

Course Description: The goal of this course is to serve as an introduction to the subject of Ordinary Differential Equations. Mainly first and second-order differential equations will be considered. Methods of solving linear and non-linear D.E. will be covered. The spring-mass system will be seen with and without damping and forcing. Growth and decay as well as logistic models will be covered as applications. Also, linear systems in two dimensions will be studied briefly.

## **Course Outline: The following chapters will be covered:**

* Chapter 1 Introduction to Differential Equations (D.E.)
* Chapter 2 First-Order D.E. (except 2.6)
* Chapter 3 Modeling with First-Order D.E.
* Chapter 4 Higher-Order D.E. (except 4.5, 4.8, 4.10)
* Chapter 5 Modeling with Higher-Order D.E. (except 5.3)

## **Homework, Tests, and Final Exam:**

* **There will be 12 homework assignments during the semester.**
* **The homework assignments will cover the entire course material.**
* **Late assignments will not accepted.**
* **Solutions to homework assignments will be posted on D2L after they are handed in. They will remain there for the duration of the whole course.**
* **There will be 3 tests during the semester.**
* **Solutions to tests will not be given.**
* **The final exam will be comprehensive and compulsory.**
* **All tests and the final exam will be closed book exams.**
* **Calculators will be permitted during all exams.**
* **Make-up tests will be granted only in exceptional situations and**

**only when the student has made the request (for a make-up test) several days before the date of the class-scheduled test.**

## **Test Dates:**

* **Test No.1 Monday September 28, 2020 (subject to change)**
* **Test No.2 Monday November 2, 2020 (subject to change)**
* **Test No.3 Wednesday December 2, 2020 (subject to change)**
* **Final Exam Wednesday December 9, 2020 10:30am-12:30pm.**

## **Grading:**

The course grade for each student will be the better of the two following evaluations:

Evaluation 1

* Homework 5%
* Test No.1 20%
* Test No.2 20%
* Test No.3 20%
* Final Exam 35%

Evaluation 2

* Homework 5%
* Best Test 20%
* 2nd Best Test 20%
* Worst Test 0%
* Final Exam 55%

## **Letter Grade:**

In this course, the course letter grades will correspond to the

following course grades:

* A 85% and above
* B 75% to 84%
* C 65% to 74%
* D 55% to 64%
* F below 55%

## **Important Date:**

Last date to withdraw from the course with the grade of W:

4:00pm Friday December 4, 2020.

## **Attendance Policy:**

Students should attend all class lectures, if they are healthy. Students who cannot attend (due to the corona virus) need to contact me. In this case, they will follow the course by my online class notes (already posted on D2L). Attendance will be taken, but no penalties will be given this semester for absences.

## **Disabilities Statement:**

Students who need special accommodations should inform the

instructor and contact the Disability Support Services Office:

room 168 Clark Student Center Phone: (940) 397-4140.

## **Student Handbook:**

Students should refer to the current MSU Student Handbook and

Activities Calendar for university policies on academic dishonesty,

class attendance, student rights and activities. The Student Handbook can be found on the MSU Website at Student Life, then Dean of Students.

## **Campus Carry Statement:**

Senate Bill 11 passed by the 84th Texas Legislature allows licensed

handgun holders to carry concealed handguns on campus, effective

August 1, 2016. Areas excluded from concealed carry are

appropriately marked, in accordance with state law. For more

information regarding campus carry, please refer to the University’s

webpage at msutexas.edu/campus-carry