

Math 3433-201 Differential Equations Spring 2022

Contact Information:

Instructor: Dr. Guy Bernard

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Office Hours: Monday, Wednesday, Friday 11:00am-12:00pm

Tuesday, Thursday 2:00pm-3:00pm. Students will need to wear face masks in my office (or students will need to make an appointment with me to meet in the Learning Center in Moffett Library).

Important Notices (please read carefully)

- Students do not have to wear face coverings in class but are strongly encouraged to do so.
- Students must sit in the same seat the whole semester.
- Students will be asked to observe social distancing in the classroom (approximately six feet).
- Should the university need to switch to online teaching during the semester (due to a severe worsening of the pandemic), students will need to read the lecture notes posted on D2L. Testing then will be performed online. Specific details will be given in time should this unlikely event occur.
- Students who think they may have the Covid-19 virus or have been exposed to an infected person with this virus need to follow the university's rules and procedures which can be found by clicking on COVID-19 UPDATES located on the upper left-hand corner of the MSU webpage.
- Students must inform the university if they have acquired the Covid-19 virus or have been exposed to a person with this virus. Refer to COVID-19 UPDATES for phone numbers.
- Should a student need to quarantine because of Covid-19 or the exposure to an infected person with this virus, he or she will have to follow the lectures by reading the online class notes. If such a student misses a test or a quiz, arrangements will be made on a case-by-case basis. In some cases, the final exam will be substituted for a missed test (please refer to Evaluation 2 in Grading)

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 11 homework assignments during the semester.
- The homework assignments will cover the entire course material.
- Late assignments will not be accepted.
- Solutions to homework assignments will be posted on D2L after they are handed in. They will remain there for the remainder of the semester.
- 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 February 14, 2022 (subject to change)
- Test No.2 Monday March 28, 2022 (subject to change)
- Test No.3 Monday April 25, 2022 (subject to change)
- Final Exam Wednesday May 4, 2022 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 6%
- Best Test 22%
- 2nd Best Test 22%
- Worst Test 0%
- Final Exam 50%

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 Monday March 21, 2022.

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 (as well as the university). In this case, they will follow the course by my online class notes (posted on D2L). Attendance will be taken but, due to the pandemic, no penalties will be imposed 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.

Academic Dishonesty:

The sanction for academic dishonesty on quizzes, tests, or the final exam will be the assignment of the grade of ZERO on the given test where the dishonesty has occurred. This may lead to the failing of the course should the students' course grade fall below the passing grade.

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, Dean of the Students. [Student Handbook 2021-2022](#)

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

Additional Student Resources:

[Click here](#)