

# Differential Equations

COS-MATH-231

Spring 2023

Professor: Dr. Bernard Brooks

Email: [bpbsma@rit.edu](mailto:bpbsma@rit.edu)

Office: 08 2350 in the Gosnell Building (but let's meet via zoom or email)

Zoom Room: <https://rit.zoom.us/j/3587377537>

Zoom Office hours: Tuesday and Wednesday 12-12:50

## The Course

**You must have obtained a C or better in MATH 182 to enroll in this course.**

This is a one semester course with three credit hours. The course is an introduction to the study of ordinary differential equations and their applications in the physical sciences. Some types of first order equations and the general linear second order differential equations are studied with some consideration of the theory as well as methods of solution. Also, we do Laplace transforms which are really great.

**The Text:** Fundamentals of Differential Equations.  
9<sup>th</sup> Edition

by Nagle, Saff and Snider. Pearson Publishers.

## Evaluation and Grading

Recitation Homework Quizzes worth a total 20%

**There is a quiz every Wednesday!**

Mid Term Test 1 worth a total of 20%

Mid Term Test 2 worth a total of 20%

Final Comprehensive exam worth 40%

**Once submitted, no quizzes or tests will be dropped. They will all count. If you take a quiz you may decide you don't want to hand it in. Any missing quizzes or tests will be rolled into the final exam grade. There are no makeup quizzes.**

The numeric grade will be converted to letter grades **with no exceptions** as follows:

92 – 100	<b>A</b>	78 – 79	<b>C+</b>
90 - 91	<b>A-</b>	72 – 77	<b>C</b>
88 - 89	<b>B+</b>	70 – 71	<b>C-</b>
82 – 87	<b>B</b>	60 – 69	<b>D</b>
80 – 81	<b>B-</b>	0 – 59	<b>F</b>

A **W** means that you have officially withdrawn, not just stopped going to class.

## **Homework Policy**

Completing the assigned homework is obviously a good thing. Besides the quizzes those people that do their homework do better on the other tests and the exam. Math is not a spectator sport, to quote Confucius,

**“I hear, I forget; I see, I remember; I do, I understand.”**

I expect that you will help each other out with the homework.

## **Tests and Final Exam.**

The 2 tests and the final exam will be done in class or during the exam week at the time and room assigned by the registrar.

## **Make-up Quizzes, tests, etc.**

There are no make-up tests or quizzes. If you miss a quiz or test, with a valid and verifiable reason (or maybe you just didn't want to write it), I will roll that grade into the final exam. There will be no early or late final exam. You must take the final to pass the course.

## **Attendance & Participation**

Normally I expect students to attend almost every class. I do keep track of who's there but since we are in 'uncertain times' I know not every student can be there in person. As far as participation goes, ask questions in class or during office hours to help learn the material.

## **Online Resources**

All the topics we will cover in class will be represented by videos that you can review if you missed class, or can't come to class or whatever. They are linked in lecture mycourses and are on my youtube channel:

<https://www.youtube.com/c/BernieBrooks>

They are good review even if you did make it to class and the channel has more example videos.

## **Recitations**

You will have a Wednesday recitation section in addition to the 2 weekly lectures. Each recitation will have a quiz. The quizzes account for 20% of the grade.