

# Math 331 – Ordinary Differential Equations – Syllabus

## Section 04 and 05 – Fall 2021

**Instructor:** Chris Elliott (pronouns: he/him)

You can reach me by e-mail at [celliot@math.umass.edu](mailto:celliot@math.umass.edu). Please feel free to call me Chris.

**Office Hours:** Wednesday 10:30am–12:30am and Thursday 10:00am–11:00am in LGRT 1124, and by appointment.

## What We'll Cover

In this course we'll learn some of the theory of *ordinary differential equations*. These are equations involving derivatives in one variable. The topics we'll cover will include the following.

- Solutions of first and second order differential equations.
- Systems of first order differential equations.
- Laplace transforms: what they are and how to use them.

## Schedule

We will meet twice a week for classes:

- Section 04: Tuesday and Thursday, 8:30am – 9:45am.
- Section 05: Tuesday and Thursday, 1:00pm – 2:15pm.

There will be TA recitations starting in the second week of the semester. I'll share their dates and times once they are announced.

There will be one midterm exams and a final. The exams will be held on the following days.

- **Midterm:** Wednesday March 9th, 7–9pm
- **Final:** In the week of May 6th–12th, to be scheduled.

The exams will be in person, and closed book. Calculators will not be allowed. Please bring your student ID to the exam.

## Makeup Exams

If you cannot make one of the exam times, please let me know as long as possible in advance and **at least two weeks beforehand**. I can arrange make-up exams for legitimate conflicts (e.g. for academic commitments, religious observances) but two weeks advance notice is necessary.

## Textbook

We'll use the textbook **Elementary Differential Equations** by Boyce, DiPrima and Meade (11th edition). We'll cover approximately the material in chapters 1, 2, 3, 6 and 7 of the textbook. An electronic copy of the textbook is integrated in the homework system Wiley-Plus that we will use for the class. When setting-up your account with Wiley plus there will be an option to purchase a hard copy of the book for an extra-fee if you want (but this is not required). Please follow the instructions in the WileyPLUS Registration link in Moodle to register for WileyPLUS at UMass's discounted price.

## Homeworks

### Online Homework (WileyPlus)

The main homework for the course is through an online system called WileyPlus. There will be a few homework problems due twice a week (Tuesday and Friday), these will usually be short calculations to test your understanding of the course material.

Make sure you keep up with the homework assignments! Practicing solving these problems is one of the main ways that you can develop understanding of the course material, and if you fall behind you'll struggle with the material we cover in class.

### Written Homework

There will also be a total of six written homework assignments due throughout the semester.

You are encouraged to work on the written homework in groups; this is often one of the best ways of learning. However, your final solution **must** be your own work; you should write up your answers on your own, without anyone else's work present (in other words, do not copy!). Please list anyone you worked with on your homework submission, so that the grader knows that there's not a problem with similar answers!

You will submit your written homework online through **Gradescope** (<https://www.gradescope.com>). You will be added to our course section on Gradescope directly by the course chair.

## Assessment Structure

- Online Homework: 30%
- Written Homework: 10%
- Midterm: 30%
- Final: 30%

The grade boundaries will be as follows.

A	A-	B+	B	B-	C+	C	C-	D+	D	F
≥ 90	87–90	83–87	79–83	75–79	71–75	67–71	63–67	59–63	55–59	< 55

Please note, there is no rounding, so e.g. a score of 89.9% is an A-, not an A.

## COVID

In order to reduce the risk of COVID-19 infection, everyone will be required to follow current university guidance on public health mandates, including the rules on masking. Please do not come to class if you are feeling unwell. Let me know if you have any concerns or questions.

## Academic Honesty

*Since the integrity of the academic enterprise of any institution of higher education requires honesty in scholarship and research, academic honesty is required of all students at the University of Massachusetts Amherst. Academic dishonesty is prohibited in all programs of the University. Academic dishonesty includes but is not limited to: cheating, fabrication, plagiarism, and facilitating dishonesty. Appropriate sanctions may be imposed on any student who has committed an act of academic dishonesty. Instructors should take reasonable steps to address academic misconduct. Any person who has reason to believe that a student has committed academic dishonesty should bring such information to the attention of the appropriate course instructor as soon as possible. Instances of academic dishonesty not related to a specific course should be brought to the attention of the appropriate department Head or Chair. The procedures outlined below are intended to provide an efficient and orderly process by which action may be taken if it appears that academic dishonesty has occurred and by which students may appeal such actions. Since students are expected to be familiar with this policy and the commonly accepted standards of academic integrity, ignorance of such standards is not normally sufficient evidence of lack of intent. For more information about what constitutes academic dishonesty, please see the Dean of Students website: [http://umass.edu/dean\\_students/codeofconduct/acadhonesty/](http://umass.edu/dean_students/codeofconduct/acadhonesty/).*

## Accommodations

*The University of Massachusetts Amherst is committed to making reasonable, effective and appropriate accommodations to meet the needs of students with disabilities and help create a barrier-free campus. If you are in need of accommodation for a documented disability, register with Disability Services to have an accommodation letter sent to your faculty. It is your responsibility to initiate these services and to communicate with faculty ahead of time to manage accommodations in a timely manner. For more information, consult the Disability Services website at <http://www.umass.edu/disability/>.*