Math 3305.001 - Ordinary Differential Equations

Spring 2026

TuTh 11:00 am - 12:20 pm in RBN 4027

Instructor:	Dr. Maddie Dawsey
Office:	RBN 4048
Office Hours:	Tu 8:15 - 9:15 am, Tu 3:30 - 4:30 pm, We 10:10 am - 12:10 pm, or by appointment
Email:	mdawsey@uttyler.edu
Website:	All course materials will be posted on Canvas

Textbook

Differential Equations: From Calculus to Dynamical Systems, 2nd edition, by Virginia W. Noonburg.
ISBN: 978-1-4704-4400-6.

Course Description

A study of ordinary differential equations with emphasis on first order equations, linear equations, and solution by series.

Course Learning Objectives

By the end of this course, students should be able to do the following:

- Determine order, type, and linearity of differential equations
- Determine whether a particular function is a solution to a differential equation
- Find general solutions to first order differential equations
- Find general solutions to linear differential equations with constant coefficients
- Use the Laplace transform to solve differential equations
- Solve systems of differential equations
- Model a variety of physical situations using differential equations
- Accurately interpret solutions to differential equations in the context of physical applications

Important Dates

January 19	Martin Luther King, Jr. Holiday
January 26	Census Date
March 9-13	Spring Break
March 30	Withdrawal Deadline
April 27-May 1	Final Exams

Grading Scheme

Your final letter grade will be determined by the following grading scheme:

Homework	**10%**
Applications	**10%**
Midterm Exams	**60% (20% each)**
Cumulative Final Exam	**20%**

definitely an A	90 - 100
at least a B	80 - 89.99
at least a C	70 - 79.99
at least a D	60 - 69.99
definitely an F	0 - 59.99

Attendance

Students are expected to attend every class and are responsible for any announcements made during class.

Homework (10%)
Homework from the textbook will be posted on Canvas after each class. Homework assignments are designed to prepare you for applications and exams, so please take them seriously! Each week's homework problems will be due on Canvas by the beginning of class the following Tuesday.

Homework submitted more than two hours late will not be graded and will receive a grade of zero. Your lowest homework grade will be dropped at the end of the semester.

Applications (10%)
One application worksheet will be assigned and posted on Canvas for each unit of material. Applications include real-world scenarios in which differential equations are useful and a series of challenging problems to solve using the material from the corresponding unit. Each application will be due one week after the exam for the corresponding unit.

Applications submitted more than two hours late will not be graded and will receive a grade of zero. No application grades will be dropped.

Exams
There will be three in-class midterm exams during the semester, each worth 20% of the final course grade, and a cumulative final exam worth 20% of the final course grade. The tentative schedule is:

Exam 1	**Thursday, February 12**
Exam 2	**Thursday, March 19**
Exam 3	**Thursday, April 16**
Final Exam	**Tuesday, April 28 at 11:00 am - 1:00 pm**

Make-up exams for documented absences that are required as part of a UT Tyler obligation or for religious observation will be granted. For all make-ups of this type, prior notification and documentation are required. Other make-ups will be granted only in extreme cases and at the discretion of the professor. A missed exam from an excused absence must be made up within one week. Any missed exam that is not made up will be replaced with the final exam grade (which is usually at least one letter grade lower than a midterm exam grade).

Technology
Students must have a device capable of internet access and access to Canvas, as well as either a PDF scanning app (iPhone Notes, Microsoft OneDrive, CamScanner, etc.) or access to a physical scanner. Use of AI is not permitted on any assignments in this class. No laptops, cell phones, calculators, smart watches, headphones, or other devices will be permitted on exams.

Student Resources
The Mathematics Learning Center, RBN 4021, is an open access computer lab for math students. There are tutors on duty during the fall and spring semesters to assist students who are enrolled in early-career courses. More information, including a current schedule, can be found here: https://www.uttyler.edu/math/math-learning-center.

The PASS Tutoring Center also offers free tutoring for early-career courses and has walk-in hours. More information, including a current schedule and instructions for making tutoring appointments, can be found here: https://www.uttyler.edu/tutoring.

Other resources that are readily available to you include:

- Your textbook
- Your professor (via office hours or email)
- Acceptable[1] online resources, such as YouTube videos or free online tutorials

[1]The use of artificial intelligence (AI), online Q&A blogs like Math Stack Exchange, and online solution manuals like Chegg is not permitted in this course. Please refrain from using AI tools and online solutions.

University Policies

For university policies concerning Students' Rights and Responsibilities, Grade Replacement/Forgiveness, State-Mandated Drop Policy, Disability Services, Student Absence due to Religious Observance, Student Absence for University-Sponsored Events and Activities, Campus Carry, Social Security and FERPA Statement, please see the University Information module on the course Canvas page.

Tentative Schedule

WEEK	DAY	PLANNED MATERIAL
Week 1 1/12–1/16	Tuesday	Section 1.1
	Thursday	Section 1.2
Week 2 1/19–1/23	Tuesday	Section 2.1
	Thursday	Section 2.2
Week 3 1/26–1/30	Tuesday	Section 2.3
	Thursday	Section 2.4
Week 4 2/2–2/6	Tuesday	Section 2.5
	Thursday	Section 2.7
Week 5 2/9–2/13	Tuesday	Finish Chapters 1-2
	Thursday	EXAM 1 (Chapters 1-2) and Introduce Chapter 3
Week 6 2/16–2/20	Tuesday	Section 3.1
	Thursday	Section 3.2 and Application 1 Due
Week 7 2/23–2/27	Tuesday	Section 3.3
	Thursday	Section 3.4
Week 8 3/2–3/6	Tuesday	Section 3.5
	Thursday	Section 3.6
Break 3/9–3/13	Tuesday	*Spring Break*
	Thursday	*Spring Break*
Week 9 3/16–3/20	Tuesday	Section 4.1
	Thursday	EXAM 2 (Chapter 3) and Section 4.2
Week 10 3/23–3/27	Tuesday	Section 4.3
	Thursday	Section 4.4 and Application 2 Due
Week 11 3/30–4/3	Tuesday	Section 6.1
	Thursday	Section 6.2
Week 12 4/6–4/10	Tuesday	Section 6.3
	Thursday	Section 6.4
Week 13 4/13–4/17	Tuesday	More Chapter 6 Practice
	Thursday	EXAM 3 (Chapter 4 and Sections 6.1-6.4) and Section 6.5
Week 14 4/20–4/24	Tuesday	Chapter 6 Examples
	Thursday	Chapter 6 Examples and Application 3 Due
Week 15	Tuesday	FINAL EXAM (Chapters 1-4 and 6)