# Ordinary Differential Equations, Mathematics 3305, Sections 001 & 002
## Fall 2025

**Instructor:** Dr. Katie Anders

**Office:** RBN 4046

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**Course Schedule:** Section 001 meets MWF 1:25-2:20 in RBN 3038. Section 002 meets MWF 2:30-3:25 in RBN 3038.

**Course Website:** You MUST activate your Canvas account. To do so, go to `https://www.uttyler.edu/canvas/`. This is also the address to login. If you are registered in the course, you already have access to the course. All important documents will be posted on Canvas.

**Office hours:** Tuesday & Thursday 9:00-10:30 A.M. and by appointment arranged by email

**Required Text:** *Differential Equations: From Calculus to Dynamical Systems*, second edition, by Virginia W. Noonburg, ISBN # 9781470444006. This book is available to you for free through our UT Tyler Muntz Library. Go to `https://www.uttyler.edu/library/`. Click the link that says, "Library-Provided Textbooks." Then scroll down and click on the logo that says "Math."

**Course Description:** A study of ordinary differential equations, with emphasis given to equations of the first order, linear equations, and solution by series

**Course Prerequisites:** A grade of C or better in Mathematics 2414, Calculus II.

**Student Learning Outcomes:** Upon completion of this course, students should be able to do the following:

- Understand and use abstract mathematical concepts. (Critical Thinking)
- Determine order, type, and linearity of differential equations.
- Determine if 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.

**Grading:** Scores will be posted on Canvas. After the end of the semester, final course grades will be available on `my.uttyler.edu`. A final course grade of 90% is guaranteed to be at least an A, a final course grade of 80% is guaranteed to be at least a B, a final course grade of 70% is guaranteed to be at least a C, and a final course grade of 60% is guaranteed to be at least a D. All grades below D will be F. The breakdown of your final course grade into categories is given below.

Quizzes: 15%

Midterm exams: 20% each
Final exam: 25%

If you have any questions about the grading of a particular quiz or exam, you must contact me no more than one week after the day I return the graded assignment in class, whether you are present during that class or not.

**Attendance:** It is your responsibility to attend class. Attendance is mandatory. This means, among other things, coming to class on time and prepared. Before class begins, you should silence and put away cell phones and any other electronic devices. Students are responsible for all announcements made during lecture.

**Homework:** Homework will be assigned each class period. Working the homework problems thoroughly is an essential part of preparing for quizzes and exams.

**Quizzes:** There will usually be weekly quizzes given each Friday unless it is an exam week. The two lowest quiz scores will be dropped at the end of the semester. Quizzes will usually be given at the beginning of the class period. If you are tardy on the day of a quiz, you do not get extra time on the quiz.

**Exams:** There will be 3 midterm exams. A list of the test dates is given below. This list is preliminary and subject to change; at least one week advance notice of any change in test dates will be given.

Exam 1: Wednesday, September 17
Exam 2: Friday, October 17
Exam 3: Friday, November 14

**Final Exam:**. The final exam will be cumulative. For Section 001, the final exam will take place on Monday, December 8 from 12:30-2:30. For Section 002, the final exam will take place on Wednesday, December 10 from 2:45-4:45.

**Cell Phones:** Cell phones are not permitted in class. You must silence them and put them away before class begins.

**Calculators:** The use of calculators and other electronic devices, including cell phones, during exams is strictly prohibited, so study accordingly.

**Make-ups:** Make-ups for **documented** absences that are **required** as part of a UT Tyler obligation (e.g. athletes participating in an event, students participating in a debate contest, etc.) or for religious observation will be granted. For all make-ups of this type, prior notification of at least one week and documentation are required. Other make-ups are granted only in extreme cases and at the sole discretion of the instructor. Prior notification is still required. Under no circumstances will make-ups be granted without prior notification. Leaving early for a break is NOT grounds for a make-up, so please make your travel plans accordingly. In almost all cases, missed

quizzes will be assigned a 0. Keep in mind that the 2 lowest quiz scores will be dropped at the end of the semester.

**Academic Integrity:** Your work must be your own. Violations will be processed according to the established guidelines of the department, college, and university. Violations of academic integrity include, but are not limited to, cheating, fabrication, or plagiarizing. A range of academic sanctions may be taken against a student who engages in academic dishonesty. Below are ideas related to academic integrity.

Resources you are encouraged to utilize in this course include the textbook and unassigned problems, notes from class, assigned homework problems, your fellow Math 3305 students, and your instructor. E-mail is the best way to contact me. I reply to email from 9:00 A.M.-4:00 P.M. Monday-Friday.

A note about a resource NOT allowed in this course: while the internet may be a valuable resource, using it to unethically acquire answers for your work will be considered a violation of academic integrity and processed accordingly. Similarly, copying answers from other students' assignments, past or present, violates the idea that your work must be your own.

**The use of Artificial Intelligence is not permitted in this course at all.** All work submitted by a student in this course should be their own. The assignments and assessments are designed to support your learning. Doing your own work, without assistance from artificial intelligence, is an essential part of mastering course learning objectives. In this course, you are expressly forbidden from using ChatGPT or any other artificial intelligence (AI) tools for any stages of the work process, including brainstorming. Deviations from these guidelines will be considered a violation of UT Tyler's Honor Code and academic integrity policies.

**University Policies:** Monday, September 8 is this semester's Census Date, the deadline for all registrations, schedule changes, and section changes. Monday, November 3 is the last day to withdraw from one or more courses. For university policies concerning Students' Rights and Responsibilities, Grade Replacement/Forgiveness, State-Mandated Course Drop Policy, Disability Services, Student Absence due to Religious Observance, Student Absence for University-Sponsored Events and Activities, Social Security and FERPA Statement, and more, see the University Policies and Information file on this course's Canvas page.

**Contingency Plans:** If the entire university moves all classes to Zoom at any point this semester, there will be some changes to the syllabus. These are NOT options that an individual student may choose.

If face-to-face classes are suspended for a short time, tests will be moved so that they can be taken when face-to-face class resumes. In this case, there will be a Canvas announcement giving the new dates for tests.

If face-to-face classes are suspended for a long period of time in the middle of the semester, some tests may be eliminated, combined, and/or rescheduled, and the weights used to compute course averages may be adjusted.

If all university classes must migrate online at some point, then online proctoring may be utilized. For online proctoring, students will need high speed internet, access to Zoom, a webcam, and a microphone. Please note that students can use university computer labs or the university library as a place to take an assessment being proctored online.

**Tentative Schedule:**. This schedule may change as the semester unfolds.

| Week | Dates | Sections |
|------|-------|----------|
| 1 | August 25 - August 29 | 1.1, 1.2, 2.1 |
| 2 | September 1 - September 5 | 2.1 |
| 3 | September 8 - September 12 | 2.2, 2.3, 2.5 |
| 4 | September 15 - September 19 | 2.5, 2.4, 2.7 |
| 5 | September 22 - September 26 | 3.1, 3.2 |
| 6 | September 29 - October 3 | 3.2, 3.3 |
| 7 | October 6 - October 10 | 3.3, 3.4 |
| 8 | October 13 - October 17 | 3.4, 3.5 |
| 9 | October 20 - October 24 | 3.5, 3.6 |
| 10 | October 27 - October 31 | 3.6, 4.1, 4.2, 4.3 |
| 11 | November 3 - November 7 | 4.3, 4.4 |
| 12 | November 10 - November 14 | 4.4, 4.5, 6.1 |
| 13 | November 17 - November 21 | 6.1, 6.2 |
| 14 | November 24 - November 28 | NO CLASS |
| 15 | December 1 - December 5 | 6.2, 6.3, 6.4 |
| 16 | December 8 or December 10 | Final Exam |
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