MATH 2410Q - Differential Equations
Summer 2 (5 weeks) - 2026

Instructor: Blake Jackson **Email:** blake.jackson@uconn.edu
Office: MONT 406
Office hours: By appointment
Classroom: -
Class Time: Asynchronous online
Text: *A First Course in Differential Equations with Modeling Applications*, 11th ed., Dennis G. Zill

Welcome to MATH 2410Q! The goal of this course is to arm you with techniques to help you solve ordinary differential equations. If you don't know what those are, they are just equations involving a function (of a single variable), say $y = f(x)$, and its derivatives, $y', y'', ...$ The goal is to solve the differential equation for the unknown function y. We will cover techniques to help you solve differential equations of various forms.

Prerequisites: MATH 1132Q, 1152Q, or 2142Q. If you do not have the prerequisites for this class met by the time the semester starts, you must withdraw from the course.

Text: The textbook for the course is "A First Course in Differential Equations with Modeling Applications" by Dennis G. Zill (11th edition). The textbook comes bundled with an access code for WebAssign, which we will use to complete online homework. If you have taken a Calculus course at UConn previously (1131Q, 1132Q, and/or 2110Q), then you likely already have access and don't need to do anything. If not, you can buy the bundle for $120 at the bookstore. You can also get Cengage Unlimited for $120 if you have other Cengage courses and/or don't want a physical book.

Topics covered: The topics we will cover in this course are definitions and terminology, classification of differential equations (linearity, order, ordinary/partial), solving first-order ODEs (separable equations, linear equations, exact equations), visualizing solutions with direction fields, numerical solutions to first-order ODEs, modeling with and applications of first-order ODEs, higher-order linear ODEs (theory, homogeneity, solving constant coefficient linear equations, etc.), modeling with higher-order ODEs, Laplace transforms and inverse Laplace transforms, solving initial-value problems with Laplace transforms, and solving systems of linear first-order equations using matrix methods.

Office hours: If you would like some one-on-one help, teaching assistants are assigned to this course: TBD. Here is a summary of the office hours they will be holding throughout the semester:

- TBD

If you have unavoidable conflicts with this office hour schedule, please email the TAs directly to set up a time that works.

Point Distribution:

Homework	40 percent
Three Exams	60 percent

The grading scale used will be 93%+ A, 90-92.99 A-, 87-89.99 B+, 83-86.99 B, etc.

Homework: Homework will be submitted via WebAssign, which is accessible via HuskyCT. These assignments are meant to prepare for the exams. Please take these assignments as an opportunity to learn, as test questions are similar to homework questions. Homework makes up 40% of your final grade.

Exams: You will have three exams (60% of your final grade, 20% of your grade each). The exams will be taken on 7/22, 8/3, and 8/14. You will have 2 hours to start, complete, and upload your exam to Gradescope. The exam will become available on HuskyCT at midnight (12:00 AM Connecticut time) on the morning of the test date, and the last possible time to upload your completed exam to HuskyCT is 11:59 PM (Connecticut time) that night. This gives you 24 hours to take your exam, but once you begin, you have 2 hours to complete and upload your exam (unless you have additional time through UConn CSD accommodations). This means that the latest you can begin

the exam, with the full 2 hours to complete and upload the exam, is 10:00 PM (Connecticut time) on the day of the exam (unless you have additional time through UConn CSD accommodations). The exams are not proctored, but the university's academic integrity and misconduct policies still apply.

Absences and Make-ups: Since the course is online and asynchronous, I will not give any homework extensions or make-ups. It is your responsibility to regularly check the homework software to see when homework is due. Make-up exams will not be given. Exceptions can be made in extreme circumstances (e.g., hospitalization), provided there is documentation.

Grading Appeals: It's impossible to grade everything perfectly, so grading mistakes are inevitable. If you think something was graded unfairly, please ask me about it.

Policy Against Discrimination, Harassment, and Related Interpersonal Violence: The University is committed to maintaining an environment free of discrimination or discriminatory harassment directed toward any person or group within its community–students, employees, or visitors. Academic and professional excellence can flourish only when each member of our community is assured of an atmosphere of mutual respect. All members of the University community are responsible for the maintenance of an academic and work environment in which people are free to learn and work without fear of discrimination or discriminatory harassment. In addition, inappropriate amorous relationships can undermine the University's mission when those in positions of authority abuse or appear to abuse their authority. To that end, and in accordance with federal and state law, the University prohibits discrimination and discriminatory harassment, as well as inappropriate amorous relationships, and such behavior will be met with appropriate disciplinary action, up to and including dismissal from the University. Additionally, to protect the campus community, all non-confidential University employees (including faculty) are required to report sexual assaults, intimate partner violence, and/or stalking involving a student that they witness or are told about to the Office of Institutional Equity. The University takes all reports with the utmost seriousness. Please be aware that while the information you provide will remain private, it will not be confidential and will be shared with University officials who can help. More information is available at equity.uconn.edu and titleix.uconn.edu.

Students with Disabilities: The University of Connecticut is committed to protecting the rights of individuals with disabilities and ensuring that the learning environment is accessible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, please contact the Center for Students with Disabilities (CSD) immediately: Wilbur Cross Building Room 204, (860) 486-2020 or http://csd.uconn.edu/.

Note: The instructor reserves the right to make adjustments to this course.