

Math 2410 Q Syllabus – Summer Session I Section 011 2026

Excluding materials for purchase, syllabus information may be subject to change. The most up-to-date syllabus is located within the course in [HuskyCT](#).

Course and Instructor Information

Course Title: Elementary differential equations

Credits: 3

Format: Online asynchronously. Videos will be posted on [HuskyCT](#).

Prerequisites: MATH 1132, 1152 or 2142. Recommended preparation: A grade of C- or better in MATH 1132; MATH 2110 or 2130. Cannot be taken after MATH 2144, 2420, 2720, 3146, 3150, 3410, 3412, 3510, 3710. Repeat restrictions apply; see advising.uconn.edu/repeat-policy.

Professor: Xiaodong Yan

Email: xiaodong.yan@uconn.edu

Telephone: 8604863944

Office Hours/Availability: Live office hours held online via WebEx

LINK: <https://uconn-cmr.webex.com/meet/xiy07003>

Time: Monday through Thursday 9-10 am EST. Or by appointment.

Additional sessions: There will be three live online sessions. The first one is on June 1 from 9-10 to go over some important information about the course. There will also be a review session before the midterm and final exams. All three sessions will be recorded for your convenience, I strongly recommend you go to the live session so you can ask questions.

Course Materials

Required course materials should be obtained before the first day of class.

Required textbooks are available for purchase through the [UConn Bookstore](#) (or use the Purchase Textbooks tool in [HuskyCT](#)). Textbooks can be shipped ([fees apply](#)).

Required Materials:

I: This is the recommended custom bundle available for purchase at the UConn Bookstore:

- Zill "A First Course in Diff. Equations w/Modeling Applications" 12th edition.
- Student Solutions Manual
- WebAssign Custom Printed Access Code.
- \$85.00 student price
- ISBN: 9780357760345

If you have any questions regarding your WebAssign access, please contact **Cengage Tech Support at 800-354-9706** / support.cengage.com

Additional course readings and media are available within [HuskyCT](#), through either an Internet link or Library Resources

Helpful Links:

Paul's Online Notes for Differential Equations: <http://tutorial.math.lamar.edu/Classes/DE/DE.aspx>

[MIT open courses on differential equations](#)

Khan Academy Videos for Differential Equations: <https://www.khanacademy.org/math/differential-equations>

Slope Field Generator: <https://www.desmos.com/calculator/p7vd3cdmei>

Euler's Method Calculator (courtesy of David Nichols): <http://davidmathlogic.com/euler/>

Geogebra <https://www.geogebra.org/?lang=en>

Course Description

In this course, we shall learn basic qualitative, analytical, and numerical methods for solving first- and second-order single ordinary equations as well as first-order constant coefficient linear systems and some special nonlinear systems. We also introduce Laplace transform and its application to differential equations.

Course Objectives

By the end of the semester, students should be able to:

1. Solve first order ordinary differential equations (ODE) for separable equations, linear first order, exact equations or any first order ODE which can be transformed into one of those forms via substitutions.
2. Set up and solve model problems of first order ODE.
3. Solve higher order homogeneous linear ODE with constant coefficients; solve higher order nonhomogeneous linear ODE with constant coefficients using underdetermined coefficients approach, annihilator approach or variation of parameters.
4. Solve model problems of higher order ODEs.
5. Solve Euler-Cauchy equation.
6. Know how to find Laplace transform and inverse Laplace transform of given functions, using Laplace transform solving initial value problems for differential equations.
7. Solve first order linear system (homogenous and nonhomogeneous) with constant coefficients and know how to draw phase plane pictures for basic cases.

Course Requirements and Grading

Summary of Course Grading:

| Course Components | Weight |
|---------------------------|--------|
| WebAssign Assignments | 40% |
| Midterm (June 17, 2026) | 30% |
| Final Exam (July 2, 2026) | 30% |

WebAssign Assignments You need to complete weekly assignments through WebAssign, which is accessed through [HuskyCT](#) ONLY. Homework will be available each Monday at 12 am and due on the following Monday at 11:58 pm. NO extension will be granted on the homework deadline. You can view your grades in WebAssign anytime. I will post the midterm and final grades at the [HuskyCT](#) Grade Center after I finish grading.

Midterm (June 17, 2026) is administered through [HuskyCT](#). A pdf copy of the exam will be available for downloading through a link in [HuskyCT](#) between 8:00 am-11:00 pm EST on June 17, 2026. Once you start the exam, you have 2 hours to finish and upload your answers in the pdf file. This is a traditional exam where you need to write down all the steps for each question. You can either write directly on your iPad/tablet or write your answers on white paper. In

addition to your finished exam, you also need to submit a signed academic integrity form and a picture of yourself holding your student ID with the exam. The link will disappear after 11:00 p.m. So 9:00 pm is the latest time for you to start working on the exam. Leave enough time for yourself to upload all required documents. Your submission will not be accepted after the two hour limit.

Final Exam (July 2, 2026) is administered through [HuskyCT](#). Same format as midterm exam.

Grading Scale:

| Grade | Letter Grade | GPA |
|--------|--------------|-----|
| 93-100 | A | 4.0 |
| 90-92 | A- | 3.7 |
| 87-89 | B+ | 3.3 |
| 83-86 | B | 3.0 |
| 80-82 | B- | 2.7 |
| 77-79 | C+ | 2.3 |
| 73-76 | C | 2.0 |
| 70-72 | C- | 1.7 |
| 67-69 | D+ | 1.3 |
| 63-66 | D | 1.0 |
| 60-62 | D- | 0.7 |
| <60 | F | 0.0 |

Due Dates and Late Policy

Homework assignments are due on Monday nights at 11:58 pm EST starting from week 2. Deadlines are based on Eastern Time; if you are in a different time zone, please adjust your submittal times accordingly. *The instructor reserves the right to change dates accordingly as the semester progresses. All changes will be posted in [HuskyCT](#).*

Make sure to start WebAssign assignments as soon as you finish watching the videos for that section and submit your answers well in advance. **NO** extensions will be granted. **NO** late exam will be accepted. There are no makeup exams except in extenuating circumstances. If you think you will miss an exam for any reason, please contact the instructor as soon as possible and make arrangements.

Feedback and Grades

I will make every effort to provide feedback and grades in three to four days after an exam. To keep track of your performance in the course, refer to My Grades in [HuskyCT](#).

Weekly Time Commitment

You should expect to dedicate 9 to 12 hours a week to this course. This expectation is based on the various course activities, assignments, and assessments and the [University of Connecticut's policy regarding credit hours](#). (More information related to hours per week per credit can be accessed at the [Online Student website](#)).

Student Authentication and Verification

The University of Connecticut is required to verify the identity of students who participate in distance learning and online courses and to establish that students who register in an online course are the same students who participate in and complete the course activities and assessments and receive academic credit. Verification and authentication of student identity in this course will include:

1. Secure access to the learning management system using your unique UConn NetID and password.
2. A picture of yourself holding the exam and your student ID needs to be submitted together with your finished exam.

WebAssign access and Cengage resources

Student Enrollment Instructions:

- [Student Registration Video into WebAssign through HuskyCT](#)
- [Cengage page for 2410 SS1](#)

Resources:

Customer Service/Tech Support: 800-648-7450 / 800-354-9706 or support.cengage.com

Training/User Guides/Online Faculty Webinars: cengage.com/training

Catalog: cengage.com/highered

Course Guides cengage.com/course-guides

TechCheck: techcheck.cengage.com

Concerned about textbook affordability? Check out [Cengage Unlimited!](#)

Course Outline

WEEK 1:

- 1.1-1.3: Introduction: Definitions; Initial value problem; Differential equations as models.
- 2.1-2.4: First order DE: Direction fields and Autonomous first order ODE; Separable equations; Linear equations; Exact equations.

WEEK 2:

- 2.5-2.6: First order DE continued: Solution by substitution; Numerical Euler's method.
- 3.1-3.3: Modeling with first order DE: Linear models; Nonlinear models; System models.
- 4.1: Higher order DE: Introduction

WEEK 3:

- Midterm on June 16.
- 4.2-4.6, 4.7: Higher order DE continued: Reduction of order; Constant coefficients homogeneous linear equations; Undetermined coefficients-superposition and annihilator approach; Variation of parameters; Euler-Cauchy equation.

WEEK 4:

- 5.1, 5.2: Higher order DE modeling: Linear models initial value problems and boundary value problems
- 7.1-7.5: Laplace transform: Definition; Inverse Laplace transform; operational properties for Laplace and inverse Laplace transform. Dirac function

WEEK 5:

- B1-B3: Some basic knowledge about matrix
- 8.1-8.3: System of first order DE: Introduction; Homogeneous first order linear system; Nonhomogeneous linear system.
- Final exam on July 2nd.

Academic Integrity

All students shall act in accordance with the [Student Code](#) at the University of Connecticut, which states that: "Academic misconduct is dishonest or unethical academic behavior that includes, but is not limited to, misrepresenting mastery in an academic area (e.g., cheating), failing to properly credit information, research, or ideas to their rightful originators or representing such information, research, or ideas as your own (e.g., plagiarism)."

This means that any work you submit in this course should be your own. It is expected that you will struggle with various aspects of this course, and you are encouraged to seek help from me, your peers, the Q Center, and other sources in understanding the concepts and computations. **However, you are expected to turn in work that reflects your own understanding of the topics and ideas. Therefore, your work should not bear resemblance to that of any other student on the course or to any other sources used, and any ideas used for which any other party had a share in developing should be cited as such.**

For example, it is a good idea to look at examples in the text, notes, or online for problems similar to the one you are stuck on and looking for ways to adapt the ideas and methods to your current problem. **In the interest of both your learning and academic honesty, I do not recommend searching for solutions to the specific problem you are stuck on.** However, if you search for solutions to a specific assigned problem, you will need to carefully cite your source and **write up a solution that is completely in your own words and honestly reflects your own understanding of the ideas (i.e., without looking at the solution, or possibly even at any notes you took while looking at the solution).**

Consequences of academic misconduct include, but are not limited to, a zero on the assignment or exam and/or a grade of F in the course. If you are unsure that what you are doing to complete the work of this course is acceptable, contact the instructor for helpful tips and advice on how to protect your work and ensure that you are not violating the academic integrity policies of the instructor, the course, or the university.

How to Succeed in this Course

All students can succeed in this course, and I am here to help you along the way. Please do not hesitate to ask questions or attend office hours. This is a five-week intense, fast-paced course which requires a lot of work outside the classroom. Success in this course program depends heavily on your personal health and well-being. Recognize that stress is an expected part of the college experience, and it often can be compounded by unexpected setbacks or life changes outside the classroom. As your instructor, I strongly encourage you to reframe challenges as an unavoidable pathway to success. Please feel free to reach out to me about any difficulty you may be having that may impact your performance in your courses or campus life as soon as it occurs and before it becomes too overwhelming. In addition to your academic advisor, I strongly encourage you to contact the many other support services on campus that stand ready to assist you.

Here are some helpful links: [Dean of Students Office](#), [Academic Achievement Center](#), [Writing Center](#), [Quantitative Learning Center](#), [Center for Students with Disabilities](#), [Title IX Office](#), [Student Health and Wellness -- Mental Health](#).

Husky Study Groups

Are you interested in forming a study group with other students in the class? There is a study group application in Nexus that can help you get started. Please check out this [video](#) and [here](#) for more information.

Resources for Students Experiencing Distress

The University of Connecticut is committed to supporting students in their mental health, their psychological and social well-being, and their connection to their academic experience and overall wellness. The university believes that academic, personal, and professional development can flourish only when each member of our community is assured equitable access to mental health services. The university aims to make access to mental health attainable while fostering a community reflecting equity and diversity and understands that good mental health may lead to personal and professional growth, greater self-awareness, increased social engagement, enhanced academic success, and campus and community involvement.

Students who feel they may benefit from speaking with a mental health professional can find support and resources through the [Student Health and Wellness-Mental Health \(SHaW-MH\)](#) office. Through SHaW-MH, students can make an appointment with a mental health professional and engage in confidential conversations or seek recommendations or referrals for any mental health or psychological concern.

Mental health services are included as part of the university's student health insurance plan and also partially funded through university fees. If you do not have UConn's student health insurance plan, most major insurance plans are also accepted. Students can visit the **Student Health and Wellness-Mental Health located in Storrs on the main campus in the Arjona Building, 4th Floor**, or contact the office at **(860) 486-4705**, or <https://studenthealth.uconn.edu/> for services or questions.

Accommodations for Illness or Extended Absences

If illness prevents you from attending class, it is your responsibility to notify me as soon as possible. You do not need to disclose the nature of your illness, however, you will need to work with me to determine how you will complete coursework during your absence.

If life circumstances are affecting your ability to focus on courses and your UConn experience, students can email the Dean of Students at dos@uconn.edu to request support. Regional campus students should email the Student Services staff at their home campus to request support and faculty notification.

Classroom/Virtual Classroom Guidelines

Lecture videos

Lectures of the classes are recorded via WebEx. The web-based video delivery of each class in this course is for sole use of the students enrolled in this course. Any other use of these class videos or any pictures or derivatives of the class videos without the written consent of the course's professor is prohibited.

The videos created by students as part of this course are for sole use of the students enrolled in this course. Any other use of these videos or any pictures or derivatives of the videos without the written consent of the video creator is prohibited.

Statement on Copyright: *My lectures, notes, handouts, and displays are protected by state common law and federal copyright law. They are my own original expressions and I've recorded them prior or during my lecture in order to ensure that I obtain copyright protection. Students are authorized to take notes in my class; however, this authorization extends only to making one set of notes for your own personal use and no other use. I will inform you as to whether you are authorized to record my lectures at the beginning of each semester. If you are authorized to record my lectures, you may not copy this recording or any other material, provide copies of either to anyone else, or make a commercial use of them without prior permission from me.*

All posted lecture notes and videos are protected and may not be shared, uploaded, or distributed.

Student Responsibilities and Resources

As a member of the University of Connecticut student community, you are held to certain standards and academic policies. In addition, there are numerous resources available to help you succeed in your academic work. Review these important [standards, policies and resources](#), which include:

- The Student Code
 - Academic Integrity
 - Resources on Avoiding Cheating and Plagiarism
- Copyrighted Materials
- Credit Hours and Workload
- Netiquette and Communication
- Adding or Dropping a Course
- Academic Calendar
- Policy Against Discrimination, Harassment and Inappropriate Romantic Relationships
- Sexual Assault Reporting Policy

Students with Disabilities

The University of Connecticut is committed to protecting the rights of individuals with disabilities and assuring that the learning environment is accessible. Students who require accommodations should contact the Center for Students with Disabilities, Wilbur Cross Building Room 204, (860) 486-2020 or <http://csd.uconn.edu/>.

Blackboard measures and evaluates accessibility using two sets of standards: the WCAG 2.0 standards issued by the World Wide Web Consortium (W3C) and Section 508 of the Rehabilitation Act issued in the United States federal government." (Retrieved March 24, 2013 from [Blackboard's website](#))

Software/Technical Requirements (with Accessibility and Privacy Information)

The software/technical requirements for this course include:

- Equipment Recommendations (<https://remotework.uconn.edu/equipment-recommendations/>)
- WebAssign ([Cengage Accessibility Statement](#), [Cengage Privacy Policy](#))
- Adobe Acrobat Reader ([Adobe Reader Accessibility Statement](#), [Adobe Reader Privacy Policy](#))
- Google Apps ([Google Apps Accessibility](#), [Google for Education Privacy Policy](#))
- Microsoft Office (free to UConn students through uconn.onthehub.com) ([Microsoft Accessibility Statement](#), [Microsoft Privacy Statement](#))
- Dedicated access to high-speed internet with a minimum speed of 1.5 Mbps (4 Mbps or higher is recommended).

Privacy Statement: For information on managing your privacy at the University of Connecticut, visit the [University's Privacy page](#).

NOTE: This course has NOT been designed for use with mobile devices.

Help

[Technical and Academic Help](#) provides a guide to technical and academic assistance.

This course uses the learning management platform, [HuskyCT](#). If you have difficulty accessing [HuskyCT](#), you have access to the in person/live person support options available during regular business hours through the [Help Center](#). You also have [24x7 Course Support](#) including access to live chat, phone, and support documents.

Student Technology Training

Student technology training is now available in a new [HuskyCT](#) short course created by students for students. It will prepare you to use the IT systems and services that you will use throughout your time at UConn, whether learning online or on-campus. It is available at https://lms.uconn.edu/ultra/courses/_80016_1/cl/outline.

Minimum Technical Skills

To be successful in this course, you will need the following technical skills:

- Use electronic mail with attachments.
- Save files in commonly used word processing program formats.
- Copy and paste text, graphics or hyperlinks.
- Work within two or more browser windows simultaneously.
- Open and access PDF files.

Evaluation of Course Experience

Students will be given an opportunity to provide feedback on their course experience and instruction using the University's standard procedures, which are administered by the [Office of Institutional Research and Effectiveness](#) (OIRE).

The University of Connecticut is dedicated to supporting and enhancing teaching effectiveness and student learning using a variety of methods. The Student Evaluation of Teaching (SET) is just one tool used to help faculty enhance their teaching. The SET is used for both formative (self-improvement) and summative (evaluation) purposes.

Additional informal formative surveys and other feedback instruments may be administered within the course.