DeAnza College

Math 2A.47Z – Differential Equations Winter 2026
Meets: TuTh, 6:30 PM to 8:45 PM
Online classes via Zoom

Instructor: Lilit Mazmanyan, Ph.D.	
Contact: mazmanyanlilit@fhda.edu	**Office hours:** Thursday, 2:00 PM – 3:00 PM, online via Zoom (check Canvas course for instructions)

This is an online class and instructional method is **synchronous**. Lectures will be delivered online via Zoom during scheduled class times. Virtual breakouts will be used for group collaboration. Instructions on how to connect Zoom lectures can be found on **Canvas**, which are accessible to you via **MyPortal** as you are enrolled in the course. You can access Canvas via MyPortal as you are enrolled in the course or using direct link Dashboard (instructure.com) with your MyPortal login credentials.
We will communicate via Canvas Inbox, discussion board, and emails. Check periodically Canvas announcements. Information about Canvas and Online Education Orientation can be found on Canvas on the Student Resources page: Student Resources (instructure.com). The Student Online Resources hub with extensive information and tips can be found at Online Education Center.

Course Description
Topics in the course include methods of solving ordinary differential equations and selected applications.

Course Objectives
- Explore the development and classification of differential equations
- Construct differential equation models from social and natural sciences and engineering.
- Apply analytical, qualitative and numerical methods to solve first order differential equations including the existence and uniqueness theorem in the development of the methods and solutions.
- Apply analytical methods to solve second and higher order linear differential equations and some special nonlinear equations and include the existence and uniqueness theorems in the development of the methods and solutions.
- Solve systems of Linear ordinary differential equations with constant coefficients.
- Find power series solutions to linear ordinary differential equations with variable coefficients, initial value problems
- Use Laplace transforms to solve ordinary linear differential equations with constant coefficients, initial value problems.

Requisites
Prerequisite: MATH 1C or MATH 1CH (with a grade of C or better) or equivalent
Advisory: ESL 272. and ESL 273., or ESL 472. and ESL 473., or eligibility for EWRT 1A or EWRT 1AH or ESL 5.

Textbook
Zill Dennis, "**A First Course in Differential Equations with Modeling Applications**", 12th Edition, Cengage.

Calculators
- TI-83 PLUS, TI-84 or TI-84 PLUS graphing calculator is recommended for this course or the equivalent one.
- You can use online calculator via website as DESMOS (https://www.desmos.com) or GeoGebra (https://www.geogebra.org) for the homework and group activities.

Weekly course lectures and assignments, and other resources, grades and announcements will be published on our Canvas course (https://deanza.instructure.com).

Homework (HW)	• HW will be assigned each week, but they will not be collected nor graded. • Quizzes and exams will include similar problems from your homework. • Ask your homework questions before quiz and exam.
Group Work and Discussions (GWD)	• GW will be assigned randomly during our course time. • GW must be completed in groups of at least two and no more than four. • Topics and details will be discussed on Canvas. • Due date will be announced. • Group Work is graded based on group discussions, simulation analysis and problem solving. • It is your responsibility to join group discussions not to miss any point.
Quizzes (Q)	• Quiz must be completed on Canvas. • Quiz is based on classwork and homework. • NO MAKE-UP QUIZZES are given. • It is recommended to have one sheet of notes ready. • Missed quiz is graded as a zero (0). • The lowest quiz score will be dropped.
Exams & Final Exam (EX, FE)	There will be four (4) examinations and work details must be submitted on Canvas. • EX 1, 2 & 3 are one hour each and Final exam is two (2) hours. • EX 1, 2 & 3 and the FE dates are on the course schedule. • It is recommended to have one or two sheets of notes ready. • There are NO MAKE-UP examinations. • An absence from any examination earns a grade of zero (0). • You MUST take the final exam to pass the course.
Grading	Students will be graded on group work and discussions (GWD), quizzes (Q), and exams (EX1, 2 & 3, FE). Grading depends on the clarity of work, interpretations, accuracy and completeness of graphs, and explanations as well as numerical answers. **Distribution of weights for each category** Category: % Weight on Final Grade Group Work & Discussions: 10 % Quiz: 10 % Exam 1: 20 % Exam 2: 20 % Exam 3: 20 % Final Exam: 20 % **Grading Scale** A 94-100, A- 90-93 B+ 87-89, B 83-86, B- 80-82 C+ 77-79, C 70-76, D 60-69 F <60

Extra Credit

During the course you will have opportunities for extra credits. There will be extra problems included in the coursework.

Important Dates and Deadlines

Academic Calendar (deanza.edu)

Monday	**January 5**	First day of Winter Quarter 2026
Sunday	**January 18**	Last day to drop classes without a "W"
Sunday	**January 18**	Last day to add classes
Monday	**January 19**	Martin Luther King Jr. Holiday - no classes
Friday-Monday	**February 13-16**	Presidents' Holiday - no classes
Friday	**February 27**	Last day to drop classes with a "W"
Thursday	**March 26**	Final examination

Online Education Center

- Student Resources (deanza.edu): The Online Education Center is committed to providing students with the support they need to successfully access and use Canvas, our course management system.
- Staying Organized: This webpage has advice for planning and staying on top of your online coursework.
- Canvas Help: Need technical support with Canvas? This page has information on how to get help.

California Virtual Campus

- Get Ready for Online Learning: This website has videos about getting "tech ready," managing your time, communicating with instructors and more.

Student services and support

https://www.deanza.edu/online-spring/#Services

- Tutoring and Library Help
- Computers and Tech Products
- Internet Access
- Food and Financial Assistance
- Health and Psychological Services

Attendance, Drops or Withdrawals

- Regular online attendance is essential for success in the course.
- You must not miss a class in the first week of the quarter or you will be dropped.
- It is the student's responsibility to drop or withdraw from this course by the college deadlines.

Academic Honesty and Discipline Policy:

Students are expected to abide by the DeAnza College Code of Conduct and not participate in academic dishonesty.
https://www.deanza.edu/policies/academic_integrity.html

Student Success Center

http://deanza.edu/studentsuccess/mstrc/
Hours of online Zoom Tutoring Center are Monday to Thursday 9:00-6:00 PM and Friday 9:00 AM-12:30 PM. The SSC provides free tutoring services such as individual, drop-in, groups, in-class and workshops.

Disability Support Services

https://www.deanza.edu/dsps/dss/
Students with disabilities who qualify for academic accommodation must provide a notification from the Disability Support Services (DSS) and discuss their specific needs with the instructor at the beginning of the quarter.

For information or questions about eligibility, support services or accommodations to disability (physical or learning disability) please contact Disability Support Services (DSS).
Phone number: (408) 460-7681
Email: dss@deanza.edu

Tentative Schedule

- Any change in schedule is announced on Canvas. Students are responsible for keeping track of schedule changes.
- **Group Works and Discussions** are assigned on random weekdays, and they are due on given Sunday.
- **Quizzes** are scheduled for January 15 and 22, February 12 and 26, and March 5.
- **Examinations 1,2&3** are scheduled on January 29, February 19, and March 12.
- **Final Examination** is scheduled for March 26, 6:15 PM - 8:15 PM.

Course materials (syllabus, lecture presentations, quiz/exam answer keys and additional resources) are uploaded onto *Canvas*. It is accessible to you via MyPortal as you are enrolled in the course. You can also access Canvas using direct link (https://deanza.instructure.com) with your MyPortal login credentials.

Student Learning Outcome(s):

• Construct and evaluate differential equation models to solve application problems.
• Classify, solve and analyze differential equation problems by applying appropriate techniques and theory.

Office Hours:

TH	2:00 PM - 3:00 PM	Zoom