DeAnza College

Math 2A.47Z – Differential Equations Winter 2025
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, 11:00 AM – 12:00 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 also access Canvas using direct link (https://deanza.instructure.com) with your MyPortal login credentials.
We will communicate via Canvas Inbox, discussion board, WebAssign, and emails. Check periodically Canvas announcements. Instructions to access WebAssign for online assignments can be found on our Canvas course. Information about Canvas, Zoom, and Online Education Orientation can be found in Canvas on the Student Resources page: https://deanza.instructure.com/courses/3382.

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**", bundled with WebAssign Access Code, 12th Edition, Cengage.

You can choose to buy only the **WebAssign Access Code** and have access to the **e-book** and online assignments.

Homework and tests must be completed online using WebAssign software.
You need a Class Key and Access Code for WebAssign.

- **CLASS KEY** to register on WebAssign **WILL BE SENT TO YOU BY EMAIL.** You must self-register at http://www.webassign.net to use the WebAssign.
- **ACCESS CODE** can be purchased online after signing in WebAssign or through De Anza College bookstore.
- WebAssign is FREE for the first two (2) weeks of the quarter only.

Follow the link for additional information on Cengage/WebAssign.

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)	• Homework must be completed online through WebAssign. • Most homework assignments are due on Sunday. There will be some homework due on scheduled weekday. Follow the Canvas and WebAssign for deadlines. • After the due date/time, HW cannot be submitted for credit. • Answer key is available online after the deadline. • You are allowed to request three homework extensions for the quarter. The answer key must not be followed if you choose to request an extension. • The lowest homework score will be dropped. • You can ask your HW questions during our office hours or anytime through "ask my teacher" on WebAssign or through Canvas Inbox.
Group Work (GW)	• 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 is online through WebAssign and work details must be submitted on Canvas. • Quiz is based on classwork and homework. • NO MAKE-UP QUIZZES are given. • It is recommended to have one or two sheets 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 through WebAssign 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 homework (HW), group works (GW), quizzes (Q), and exams (EX1, 2 & 3, FE).

Distribution of weights for each category

Category	% Weight on Final Grade
Homework	10 %
Group Work	10 %
Quiz	15 %
Exam 1	15 %
Exam 2	15 %
Exam 3	15 %
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 6**	First day of Winter Quarter 2025
Friday	**January 19**	Last day to drop classes without a "W"
Saturday	**January 19**	Last day to add classes
Monday	**January 20**	Martin Luther King Jr. Holiday - no classes
Friday-Monday	**February 14-17**	Presidents' Holiday - no classes
Friday	**February 28**	Last day to drop classes with a "W"
Thursday	**March 27**	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.
- Online Learning Student Resource Hub (deanza.edu): The Hub will provide resources for students who are learning online at De Anza.
- 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.
- The **due dates for HW** assignments can be found on WebAssign. They are announced on Canvas in Weekly module sections as well. Most homework assignments are due on Sunday. There will be some homework due on scheduled weekday. Follow the Canvas and WebAssign for deadlines.
- **Group Works** will be assigned on random weekdays, and they are due given Sunday.
- **Quizzes** are scheduled for January 16 and 23, February 13 and 27, and March 6.
- **Examinations 1,2&3** are scheduled on January 30, February 20, and March 13.
- **Final Examination** is scheduled for March 27.

Course materials (syllabus, lecture presentations, quiz/exam answer keys through WebAssign 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	10:00 AM	12:00 PM	Zoom	
T	12:15 PM	01:15 PM	In-Person	Baldwin Winery
TH	10:00 AM	12:00 PM	Zoom	