Differential Equations
MATH D002A, Spring 2026
De Anza College

COURSE MEETINGS

Section 51Z: This is an asynchronous online course with no in-person meetings.

INSTRUCTOR

Jakob Kotas, PhD
Email: kotasjakob@fhda.edu
Office hours:
- Tue & Thur 12:00-1:00PM in S76a
- Wed 1:00PM-2:20PM on Zoom*, link: `https://fhda-edu.zoom.us/j/4478579404`

*If you join the Zoom link and find yourself in the waiting room, please be patient; I will let students in in the order they arrive.

Office hours are on a drop-in basis with no appointment needed. Please come see me if you have questions or concerns. I'm here to help.

COMMUNICATION

Receiving communication from the instructor:
- All messages sent to the whole class will be visible in the "Announcements" tab in Canvas.
- Messages sent to individual students will be sent to your Canvas inbox.
- Make sure your Canvas announcement, discussion, and conversation notifications are set to "notify immediately." Consider downloading the Canvas app if possible to receive notifications.

Sending communication to the instructor:
- Content-related questions, homework questions, etc. should be posted in the "Discussions" tab in Canvas. Both I and your peers may respond.
- Email (or Canvas inbox, both go to the same place). Expect a response within 1-2 business days. Content-related questions, homework questions, etc. will not be answered via email; those should be posted in the "Discussions" tab in Canvas. Use email for grade-related questions, personal or confidential issues, etc.

TEXTBOOK AND REQUIRED MATERIALS

Textbooks:
- Primary: Nguyen, Shukla, and Yarahmadi: *Introductory Differential Equations.* Available for free online at:
  `https://math.libretexts.org/Courses/De_Anza_College/Introductory_Differential_Equations`
- Secondary: Lebl: *Notes on Diffy Qs, Differential Equations for Engineers.* Available for free online at: `https://www.jirka.org/diffyqs/diffyqs.pdf`

We will mostly follow the order of sections in the Nguyen book. We will cover a few sections in the Lebl book at the end of the quarter that are not in the Nguyen book. Both textbooks will be used as a reference and readings will not be directly assigned. The textbook sections corresponding to each class day are clearly shown on the quarter schedule linked from Canvas. Students are encouraged to review the textbook sections covered each day on their own after class as needed to reinforce concepts.

Required materials: computer with internet to access Canvas and complete homework assignments. If you don't have a tablet you can write on a PDF with, you will need access to a printer for exams (see "exam policy" below). You also need a camera for Zoom calls (for office hours and oral exam appointments, see "exam policy" below); any laptop or phone camera is fine for this.

PREREQUISITES
MATH 1D or MATH 1DH (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

WEBPAGES
Online course materials can be found at or linked from the course webpage on Canvas: `deanza.instructure.com`

All homework assignments are viewed and completed in MyOpenMath: `www.myopenmath.com`. Directions for first login are given below in the homework policy.

LECTURE POLICY
This is an asynchronous course. Lecture videos will be posted typically on Thursdays to be watched during the course of the following week. Videos and other course materials for the week are available in the "Modules" tab in Canvas. During the videos, there are opportunities to stop the lecture and try sets of practice problems. While the solutions to the practice problems are also posted, you should try them yourself before looking at the solutions. The only way to learn mathematics is by practicing it, not by merely listening to someone talk about it. Practice problems are not graded.

Students are also encouraged to read the sections of the textbook that correspond with each lecture video. In order for the lecture videos to be of manageable length, they typically will not cover every small detail and example problem in the textbook section; rather, the videos just give an outline of the topic. By reading the textbook section after the video, students reinforce the concepts and delve more deeply into the material with further detail and more examples.

HOMEWORK POLICY
Most problems are graded for correctness. MyOpenMath will give you immediate feedback as to whether your answer is correct or incorrect. You have a limited number of tries, generally 3, for a given problem randomization. If you still haven't gotten credit, you can get a similar problem which is of a similar type but may have small differences, where you get 3 tries again. The number of tries per randomization, and number of remaining similar random problems, is displayed.

Some problems may ask you for a short written response, which are not graded for correctness. The system will automatically give you credit for anything you write. I reserve the right to go in and manually grade these problems and mark you down if an answer is missing or incorrect. I won't do this for every problem, but I also won't announce in advance which problems I will grade manually, if any.

Once all the manual grading is done and all late pass deadlines have passed, I will manually import the grades into Canvas, after which they are final. The importing step is not automatic. If you don't see a grade in Canvas yet even though the assignment due date has passed, it means I haven't imported them yet, so please be patient.

First-time login instructions: Click "Register as a new student" and create a login. Make sure first and last name match your name in your De Anza MyPortal so that I can import your grades to Canvas correctly.
Course ID: 322317
Enrollment Key: 386460

Deadlines and submission process: Homework assignments are typically due on Wednesdays at 11:59PM,

unless specified otherwise in Canvas. Assignments will become visible no less than 5 days before the due date. Your answers are submitted on the website within the browser window. Make sure to expand all menus as assignments are contained within the collapsed menus.

Suggestions for success: Keep an organized notebook for yourself where you clearly show the steps for each problem, even though you won't turn it in. It will be helpful later when studying for exams, where you will be graded based upon the clarity of your work. It's also easier to get help from others if you can show step-by-step work, so that others can pinpoint the issue.

Start the homework as soon as it becomes available and work on it a little bit each day. Don't wait until the day the homework is due to begin it. The human brain requires time for concepts to sink in. In many cases "sleeping on it" solves your problems but you rob yourself of that ability if you wait until the due date.

Collaboration: Collaboration on homeworks is encouraged, but every student must submit their own assignment consisting of their own work. Assignments are demanding, and you are encouraged to start them as early as possible.

If posting for help in a Canvas discussion, do not include your final answer or entire step-by-step solution so that other students may copy it. It's OK to include a small bit of work (a few lines) if you have a question about that specific piece of your steps. If you need to display your entire work, come to office hours.

Do not publicly post homework solutions on the internet. If you are found to have done so, this will be treated as a plagiarism incident.

AI: AI is a powerful tool that can augment your learning if used responsibly. You may use AI for general questions, not specific ones. For example, asking AI to explain a specific theorem or generate extra practice problems of a specific type is acceptable. Copy-pasting a homework question into AI and turning in its response as your own is not acceptable. If you are found to have used AI inappropriately, this will be treated as a plagiarism incident.

Point totals: Different homework assignments are worth different amounts of points as not all are the same length. At the end of the quarter, the total points across all assignments are used to calculate the grade, not an average of the grades for each assignment. In other words, longer assignments with more points are weighted more heavily than shorter assignments with fewer points.

Flexibility policy: Each student is granted two late passes. These late passes give you the ability to complete the assignment late, up to 48 hours past the original deadline, with no penalty. To use a late pass, click the button in MyOpenMath; you do not need to contact the instructor. An explanation of how to use a late pass is explained in this video:
`https://youtu.be/dpyP2_wEadI`

The instructor reserves the right to grant additional late passes due to extenuating circumstances, but you must communicate with me.

In addition to late passes, 10% of the homework score is dropped at the end of the quarter. That means that you must earn 90% of all the points on all the assignments combined to get a perfect score. If you get below 90%, the score is out of 90%; for example, a student getting 85% of homework points would get a final score of $85/90 \approx 94.44\%$. A student getting above 90% just gets 100%; there is no extra credit. The 10% drop will happen at the end of the quarter; it will not show up in Canvas during the quarter (Canvas shows raw homework scores only).

EXAM POLICY

There will be 3 midterm exams and a final exam. Exams are posted at midnight and may be started at any time throughout the day, and must be finished by 11:59PM. Once a midterm exam is opened, you have 60 minutes to complete it (120 minutes for the final exam). The dates are:

- **Midterm 1:** Friday, May 1, 2026
- **Midterm 2:** Friday, May 22, 2026
- **Midterm 3:** Friday, June 12, 2026
- **Final exam:** Monday, June 22, 2026

Exact midterm dates shown above are tentative and will be confirmed at least a week beforehand via Canvas announcements. Midterm exams are NOT cumulative; precise coverage of each exam will be given via Canvas announcements.

To complete the exam, you will need to write out your answers on the exam and reupload it as a PDF file. If you have a tablet device that you can write on, you can simply write on the PDF itself and save the annotated version. If you do not, you must have access to a printer, print the exam, write on it and then scan in your pages. You must handwrite your answers; typed responses will not be accepted.

After seeing the exam, you may not post it online, show it or discuss it with others until the 11:59PM deadline has passed.

Rescheduling exams: Exams may not be rescheduled to other days. If an unavoidable conflict or emergency should occur, contact the instructor immediately.

Rules: You may use any amount of paper or PDF note sheets/notebooks/reference materials during the exam. You don't need a calculator to complete the exam; I will keep calculations on exams simple as that is not the focus of our class. For most problems unless told otherwise, you must show your work for credit. You may not use AI, Google, or other web searches during the exam. You may not collaborate with others during the exam. You may only submit your own work. To enforce that students are submitting only their own work, I also require a subset of students to schedule oral exam appointments with me after each exam (see below).

Oral exams: After each exam but before receiving the graded exams back, I will contact a fraction of the students in the class and ask them to schedule a 10-minute Zoom appointment with me. (Zoom link: `https://fhda-edu.zoom.us/j/4478579404`) These appointments will occur approximately 2-5 days after the exam date. If you are selected for an oral exam appointment, I will send you a Canvas message directing you to a poll where you can select a time slot (first-come, first-served). During the Zoom appointment I will first ask you to show me your physical ID by holding it up to the camera (De Anza student ID, driver's license or passport with name as it appears on my roster). Then I will ask you about the responses on specific problems that you gave on the exam. You will need to explain your reasoning to me verbally, regardless of whether you got the problem right or wrong. I am not grading you on correctness during these appointments but on your ability to tell me why you wrote down what you did. If you answered the problems yourself without the assistance of others or AI, then you have nothing to worry about as you are only explaining what you yourself wrote down. Students who are unable to adequately explain the work they submitted will have a reduction of the exam grade, down to and including a possible zero. "I knew what I was doing at the time but I can't put it into words" is not considered an acceptable response.

Every student will have two oral exams during the quarter. Students will not know in advance which exam(s) they will be required to schedule an oral exam appointment for. If you are not selected for an oral exam, you don't need to do anything.

Students who are requested to make an appointment for an oral exam and do not select a time slot will earn a zero; make sure to check Canvas messages and Canvas announcements frequently. Students who make an appointment for a time slot and do not show up at that time or show up late will earn a zero. Students who do not bring their identification to show on camera will earn a zero on the respective exam. If an unavoidable conflict or emergency should occur, contact the instructor immediately.

Regrades: When a graded exam is returned, you should check over your exam and view the solutions promptly. If you believe an exam problem was graded incorrectly, please inform me as soon as possible. I may not accept regrade requests more than one week after a graded exam has been returned.

ONLINE DISCUSSION BOARD POLICY

In Canvas, there is a "Discussions" tab where you will discuss mathematics with other students in the class. There will be a thread for each topic, roughly 1-2 per week, and will appear in Canvas on Thursdays. You are encouraged to discuss anything related to that topic, such as:

- Lingering questions about lecture videos
- Asking for help with a practice problem or homework problem
- Helping other students with their questions
- Observations of how the topic connects to other topics we discussed or things outside our class
- etc.

To incentivize robust discussion, making at least one post on each thread will earn 1 point toward the online discussion board component of your grade. Students are encouraged to post more than once in each thread, but posts beyond the first in each thread will not earn additional points. Threads will be turned off after each corresponding homework assignment is due; after a thread is turned off, no more points may be earned. Students are automatically excused from 2 thread posts over the course of the quarter with no penalty to their grade. The instructor reserves the right to grant additional excused thread posts due to extenuating circumstances, but you must communicate with me.

GRADES

Component weights:
Homeworks: 10%
Midterm exams: 15% each $\times$ 3
Final exam: 20%
Oral exams: 10% each $\times$ 2
Online discussions: 5%

Letter grade thresholds:
A+: 97%
A: 93%
A–: 90%
B+: 87%
B: 83%
B–: 80%
C+: 75%
C: 70%
D: 60%
F or **FW:** below 60%
(The FW grade indicates that a student has stopped participating in a course after the last day to officially withdraw, without achieving a final passing grade, and the student has not received college authorization

to withdraw under extenuating circumstances.)

Instructor reserves the right to lower the above thresholds for each letter grade after all grades are in for the quarter (that amounts to an upward curve to the grades). Any such increase would be small if anything at all, and will be explained in a Canvas announcement after the final exam. Do not rely on this policy saving your grade!

Grade changes will only be made for clerical errors and will not be changed for any other reason.

COLLEGE POLICIES

Important dates and deadlines:
`https://www.deanza.edu/calendar/dates-and-deadlines.html`

Final exam schedule:
`https://www.deanza.edu/calendar/final-exams.html`

Tutoring:
The De Anza Student Success Center offers peer tutoring and workshops:
`https://deanza.edu/studentsuccess/`

For after-hours and weekend tutoring, more information on NetTutor can be found here:
`https://deanza.edu/studentsuccess/onlinetutoring/`

Disability accommodations:
`https://www.deanza.edu/dsps/`
Students who have been found to be eligible for accommodations by Disability Support Programs and Services (DSPS), please follow up to ensure that your accommodations have been authorized for the current quarter. Students are responsible for contacting the instructor in a timely fashion to discuss how their accommodations will be implemented in the course. If accommodations apply to exams or homework deadlines, this discussion must occur as soon as possible in the quarter and well before the relevant exam or deadline. Accommodations may not be applied retroactively.

If you are not yet registered with DSPS and need accommodations, please contact the DSPS office at the link above.

Academic integrity policy:
`https://www.deanza.edu/policies/academic-integrity.html`
Students are expected to exercise academic honesty and integrity. Violations such as cheating and plagiarism will result in disciplinary action which may include recommendation for dismissal. If you have any doubt about whether a specific action is permissible in our class under the academic integrity policy, please ask me for clarification first.

STUDENT LEARNING OUTCOMES

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

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:

S76a	T,TH	12:00 PM - 1:00 PM
Zoom	W	1:00 PM - 2:20 PM