

Math2A Differential Equations

Spring 2023, Section 30Z, CRN 46293

INSTRUCTOR INFORMATION

Instructor	MISAKO VAN DER POEL
Email	van_der_poelmisako@fhda.edu Please following the format of the subject line stated below. "Math 2A: _____" You write your inquiry after the colon.
Class Hour	Tuesday & Thursday: 6:30pm–8:45pm Zoom Link: https://fhda-edu.zoom.us/j/97937658869 Passcode: 640477
Office Hours	Tuesday & Thursday: 8:45pm–9:15pm or email me for appointments on Monday through Friday.



CLASS MODE

This class is **synchronous**.

You are expected to attend class via zoom and check our Canvas page to see announcements and week module regularly.

The due date of all the assignment follows the **U.S. Pacific Standard Time (PST)**.

For this course, **all you need to do is:**

1. **Attending** all classes via zoom, joining on time, and staying for the entire class. 
2. Using **Study Sheet posted in Canvas:** 
3. Completing **Homework assignments** in WebAssign. 
4. Taking **Quizzes** in WebAssign. 
5. Taking **Midterms** and **Final Exam** in WebAssign and **proctored by the instructor via Zoom.**

PREREQUISITES

MATH 1D or MATH 1DH (with a grade of C or better).

MATERIALS

- A First Course in Differential Equations with Modelling Applications, 11th edition, by Zill, published by Cengage Learning (**Optional**)
- Use of **WebAssign is required** to complete homework, quizzes and exams.
- Please take the advantage of the free trial for the first two-weeks and do not pay anything yet.
- You will need to purchase online access to use WebAssign. The special price for De Anza students is **\$63.18**.

WebAssign + eBook (single term): A First Course in Differential Equations with Modeling Applications, 11e By Zill
ISBN: PAC: 9781337652469 IAC: 9781337879774
Price: \$63.18

[Tech Support](#) Tel:800-354-9706
Student office hours link: https://www.cengage.com/coursepages/Office_Sl

WEBASSIGN

- 1) You must self enroll.
- 2) Got to <http://www.webassign.net>, click on “I Have a Class Key,” enter the class key:

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and follow instructions on the screen.

- 3) Take the advantage of the free trial for the first two-weeks and do not pay anything yet.
- 4) All the purchases are non-refundable.
- 5) You will need to purchase “Access Code” to use WebAssign.

OTHER REQUIRED MATERIAL

- **Two electronics devices (Laptop, desktop, tablet, smartphone, webcam, etc.)** are needed for taking Midterm and Final Exams.
- **All handouts** are posted in CANVAS.

De Anza College CompTechS: lets students borrow a refurbished desktop or laptop for coursework, https://www.deanza.edu/oti/computer_scholar.html

CANVAS

You are expected to check our Canvas page to see announcements, assignments, and week module regularly.

Modules:

- A new module will be created every week.
- All the lectures and the assignments will be listed in each module.
- **Study Sheet** and **PowerPoint presentations** are posted for each section.

Files:

Study Sheets, Lecture notes, Student Contract, Score Sheet, Formula Sheets, Tables, or any documents will be posted on the Files tab.

HOMEWORK

Homework, quizzes, and exams will be assigned and graded on WebAssign.

(In WebAssign, you can access **eBook**, so please read each section before the topics come up or in the homework.)

- Homework will be assigned in [WebAssign](#) weekly and **no late work** will be accepted.
- **No extensions** will be granted.
- **Five submissions** are allowed for each question.
- Each homework assignment is worth **5 points** and **five lowest scores will be dropped**.
- Submissions are due at **11:59pm** on each due date.

QUIZZES

Quizzes will be assigned in [WebAssign](#) and **no late quiz** will be accepted.

For each quiz:

- **No extensions** will be granted.
- **One submission** is allowed for each question.
- **LockDown Browser** is required.
- Use any materials including textbook, notes, and calculator.
- Submissions are due at **11:59pm** on each due date.
- Each quiz is worth **12 points**.
- **Two lowest scores will be dropped** at the end of the course.

EXAMS

- There will be **two** exams (90 min-exams) in [WebAssign](#).
- Each exam is worth **100 points**.
- **One submission** is allowed for each question.
- **LockDown Browser** is required.
- All the exams are **closed-book**.
- You may use **one 8.5 X 11 inch sheet of handwritten notes (one side)**.
- **NO calculator, phones, and other aids** are allowed.
- **Two electronics devices are required**.(Laptop, desktop, tablet, smartphone, webcam, etc..)
- **Your exam will be proctored via Zoom**.
- There are **no dropped exams**.
- If the percentage of the lowest of your exam scores is lower than that of your final exam score, then the percentage of the lowest exam will be replaced by that of your final exam.
(Note that the final exam score will NOT be replaced in this manner).

Missed Exam: There are **no make-up exams**, regardless of why you missed it. If you are unable to take the exam at the scheduled time due to illness or an emergency, I will then use your percentage from the final exam to compute your score for the missed exam. If a second exam is missed, you will get a zero.

FINAL EXAMS

- There will be a mandatory comprehensive final exam worth **200 points**.
- Final exam must be taken on June 29 at 6:15pm-8:15pm.
- The final will cover all the material discussed during the quarter.
- Missing the final will result in a grade of "F" for the course.
- **LockDown Browser** is required.
- It is **closed book**.
- You may use **one 8.5 X 11 inch sheet of handwritten notes (both sides)**.
- **No calculator** is allowed.
- **Two electronics devices are required**.(Laptop, desktop, tablet, smartphone, webcam, etc..)
- **Your final exam will be proctored via Zoom**.
- There are **no make-up final exams**, regardless of why you missed it.

CALCULATORS

The TI-83, TI-83 plus, TI-84, or TI-84 plus are recommended for the students.

Download: TI-SmartView™ Emulator Software for the TI-84 Plus Family

<https://education.ti.com/en/software/details/en/FFEA90EE7F9B4C24A6EC427622C77D09/sda-ti-smartview-ti-84-plus>

TI Emulator Apps For iPhone: GraphNCalc83 (free) For Android: Wabbit EMU (free)

Free online graphing tool such as <https://www.desmos.com/> or <https://www.wolframalpha.com/> .

TUTORIAL HELP

- **SSC tutoring links and schedules:** go to the [SSC homepage](#) and click on the yellow link to add yourself to [SSC Resources Canvas](#). Once there, click on Modules then the SSC area for your course. <https://www.deanza.edu/studentsuccess/>
- **Support for online learning:** If you'd like to speak with someone about motivation and organization strategies for online classes, we encourage you to talk with a peer tutor or SSC staff member. We get it and are going through the same things, so let's support each other!
- **Need after-hours or weekend tutoring?** See the [Online Tutoring](#) page for information about NetTutor (via Canvas) or Smarthinking (via MyPortal).

GRADES

Your grade will be based upon the total points earned, according to the following:

Homework-WebAssign (5 pts each) Five lowest scores will be dropped.	140 pts
Quizzes - WebAssign (12 pts each) Two lowest scores will be dropped.	60 pts
Midterms-WebAssign (100 pts each)	200 pts
Final Exam-WebAssign	200 pts
Total	600 pts

550 – 600 points	A
530 – 549 points	A-
510 – 529 points	B+
490 – 509 points	B
470 – 489 points	B-
450 – 469 points	C+
420 – 449 points	C
360 – 419 points	D
Below 360 points	F

The De Anza College catalog advises students to do at least 2 hours of work outside the classroom for each hour spent in class. So you are required to spend at least 15 hours per week (or more) to learn the material in this course.

NO Extra Credit Assignment

There are no extra credit assignments in this course to improve your grade. Please do not ask for any.

STUDENT RESPONSIBILITIES

1. It is your responsibility to keep up with the material even if you miss class.

Note: I will not answer any Math questions over email.

2. Students are responsible for any material covered and any announcements made in their Absence. It is your responsibility to find and use the all materials posted in CANVAS.
3. You are expected to attend all classes via zoom. If you miss class, please send me an email explaining the reason.
4. It is your responsibility to submit all assignments on time.

Note: There are no make-ups and no extensions will be granted.

5. If you plan on dropping the class, it is your responsibility to use “MyPortal” online, or contact Admissions and Records office.
6. It is your responsibility to record all the scores you have earned, using a “Score Sheet.”

ACADEMIC MISCONDUCT

Academic dishonesty will not be tolerated. If a student is found cheating on an exam, plagiarizing on writing assignments, or violating other codes of academic integrity, he or she will receive a failing grade for the course and may be reported to the college for an appropriate action. See section on Academic integrity in your current schedule of classes catalog.

Please refer to https://www.deanza.edu/policies/academic_integrity.html

DISABILITY SUPPORT SERVICES

For information or questions about eligibility, support services or accommodations to disability (physical or learning disability) see contacts below:

Disability Support Service (DSS): Student Services Building (408) 864-8753; TTY (408) 864-8748

Educational Diagnostic Center (EDC): Learning Center West 110; (408) 864-8839

Special Education Division: 864-8407; www.deanza.edu/specialed

The application process can be found here: <https://www.deanza.edu/dsps/dss/applnow.html>

IMPORTANT DAYS TO REMEMBER

Saturday, April 22	Last day to add quarter-length classes
Sunday, April 13	Last day to drop for a full refund or credit.
Friday, Jun 2	Last day to drop with a "W"

Spring 2023

Math 2A Course Schedule

Assignments Due at **11:59pm**

Week 1 (Apr 11 & 13)	Introduction Section 1.1: Definitions and Terminology 2 Section 1.2: Initial-Value Problems 13 Section 1.3: Differential Equations as Mathematical Models 20	Fake Quiz - Apr 13
Week 2 (Apr 18 & 20)	Section 2.1: Solution Curves Without a Solution 36 Section 2.2: Separable Equations 46 Section 2.3: Linear Equations 54 Section 2.4: Exact Equations 63	HW 1.1 – 1.3 - Apr 20
Week 3 (Apr 25 & 27)	Section 2.5: Solutions by Substitutions 71 Section 2.6: A Numerical Method 75 Section 3.1: Linear Models 84 Section 3.2: Nonlinear Models 95	Quiz No.1 - Apr 24 HW 2.1 – 2.4 - Apr 27
Week 4 (May 2 & 4)	Section 3.3: Modeling with Systems of First-Order DEs 106 Review for Exam 1 Exam 1 (Ch 1, 2 & 3) due on May 4 (6:30pm)	Quiz No.2 - May 1 HW 2.5-2.6 & 3.1-3.2 - May 4
Week 5 (May 9 & 11)	Section 4.1: Preliminary Theory—Linear Equations 117 Section 4.2: Reduction of Order 129 Section 4.3: Homogeneous Linear Equations with Constant Coefficient 132 Section 4.4: Undetermined Coefficients—Superposition Approach 139	Quiz No.3 - May 8 HW 3.3 - May 8
Week 6 (May 16 & 18)	Section 4.4: Undetermined Coefficients—Superposition Approach 139 Section 4.5: Undetermined Coefficients—Annihilator Approach 149 Section 4.6: Variation of Parameters 156 Section 4.7: Cauchy-Euler Equation 162	HW 4.1 –4.3 - May 18
Week 7 (May 23 & 25)	Section 4.8: Green's Functions 169 Section 4.9: Solving Systems of Linear DEs by Elimination 180 Section 4.10: Nonlinear Differential Equations 185 Section 5.1: Linear Models: Initial-Value Problems 193	HW 4.4 – 4.7- May 25
Week 8 (May 30& Jun1)	Section 5.2: Linear Models: Boundary-Value Problems 210 Section 5.3: Nonlinear Models 218 Review for Exam 2 Exam 2 (Ch 4&5) due on Jun 1	Quiz No.4 - May 29 HW 4.8-4.10 & 5.1 - Jun 1
Week 9 (Jun 6 & 8)	Section 6.1: Review of Power Series 232 Section 6.2: Solutions About Ordinary Points 238 Section 6.3: Solutions About Singular Points 247 Section 7.1: Definition of the Laplace Transform 274	Quiz No.5 - Jun 5 HW 5.2–5.3 - Jun 5
Week 10 (Jun 13 & 15)	Section 7.2: Inverse Transforms and Transforms of Derivatives 281 Section 7.3: Operational Properties I 289 Section 7.4: Operational Properties II 301	Quiz No.6 - Jun 12 HW 6.1 – 6.3 & 7.1 - Jun 15
Week 11 (Jun 20 & 22)	Section 7.5: The Dirac Delta Function 312 Review for Final	HW 7.2 – 7.4 - Jun 22
Week 12 (Jun 29)	Final Exam between June 29 at 6:15pm – 8:15pm	Quiz No.7 - Jun 26 HW 7.5 – Jun 26

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:

T,TH 08:45 PM 09:15 PM Zoom