

MATH D031.Q08 47293

Precalculus I (31) and Algebra Support for Precalculus I (231)

Spring 2023

On **Monday, Tuesday, and Thursday 04:00 PM-06:15 PM**

there will be live sessions which are recorded and posted to canvas

**Instructor:** Fatemeh Yarahmadi

**E-mail:** [yarahmadifatemeh@fhda.edu](mailto:yarahmadifatemeh@fhda.edu)

### **Course Description**

This course covers polynomial, rational, exponential and logarithmic functions, graphs, solving equations, conic sections, systems of equations and inequalities, sequences and series.

### **Textbook & Required Materials:**

**Text:** *Precalculus with Limits* by Ron Larson, 5th edition

**Graphing Calculator:** TI-83/TI-83+/TI-84/TI-84+

**Computer/smartphone** to complete online homework assignments, submit activities on Canvas, and attend required live class meetings.

You should keep a **notebook** where you take notes and work the problems for reference.

### **Prerequisite(s)**

Intermediate Algebra MATH 109, MATH 114 or MATH 130 or equivalent

### **Advisory(ies)**

EWRT 211 and READ 211, or ESL 272 and ESL 273

### **Attendance:**

Because this is an online class, there are no on-campus meetings. However, this does not mean that you will be able to move through the class at your own speed. A major part of the class involves participation, discussing assignments and problems with your classmates.

Thus, everyone needs to be doing the same work at approximately the same time. You are expected to meet all deadlines for homework, quizzes, and discussions. We are learning a lot of different concepts that build on one another and it is very difficult to catch up if you fall behind.

Time management is critical in an online course. You will be considered present if there is evidence of your participation in required course activities including, but not limited to, submitting an assignment, participating in an online discussion, and working in a group.

### **Instructor Communication:**

I am looking forward to working closely with you this term, and you can expect me to play an active role in our course. I will hold live lectures, post announcements every week, join you in breakout rooms and class discussions to help you understand course concepts, and provide detailed feedback on assignments within one week of submission. I will also answer questions throughout the term in the Q&A Discussion in Piazza and in our weekly discussions. Please let me know when you need help—that's why I'm here!

### **Canvas:**

All class content, assignments and announcements will be on Canvas, which you can access through MyPortal. The course will be divided into weekly modules in Canvas.

### **Group Activity:**

There will be required group activities. Even though the problems will be discussed in group, write up your own solutions independently.

- **Every member** of the group will be taking a role.
- Groupwork are done in Google doc.
- Your name and your role should be written at the top of the first page.
- Work must be NEAT and ORGANIZED. Do problems IN ORDER.
- It is important for you to SHOW YOUR WORK! You are graded on the work you show to get the final answer, not just the final answer. Be sure to show your “scratch work” that goes with the problem.

**Discussions:** There will be discussion topics posted throughout the term. The deadline for responding to the topic will be indicated when the assignment is posted. You may not respond to the discussion once the deadline has passed.

### **Homework:**

Written sets for submission: During the term, I will send out homework and group activities sets to be discussed, written up, and submitted on Canvas. Homework and group activities is essential in any math class. You cannot expect to pass the class without putting consistent effort into homework and group activities. Show all work and explain any reasoning. You may not submit your assignments once the deadline has passed.

### **HW Guidelines:**

The process of solving homework problems reflected in step-by-step solutions. The following are some specific criteria:

Guidelines for homework:

- Your name, class, and section number should be written at the top of the first page.
- Work must be NEAT and ORGANIZED. Write the questions (problems) IN ORDER.
- It is important for you to SHOW YOUR WORK! You are graded on the work you show to get the final answer, not just the final answer. Be sure to show your “scratch work” that goes with the problem.
- Do your work underneath the assigned problem then circle your final answer.
- At the end of each homework assignment, write a brief “Chat” paragraph
  - A key component in learning is thinking about how and what you are learning. What are you doing that is working? What areas could you improve upon? What comes easily for you? Is there a pattern in your homework? At the end of each homework assignment, write a very brief paragraph about what you learned, what you feel you need to review, and any thoughts or feelings you have about the math you’re doing. This is also a great opportunity for you to communicate with your instructor! There are no “right” answers. Be honest and use this as a learning process.
- Submit pdf file of your homework on Canvas

**Projects:** Projects will be assigned throughout the term. Project due dates are indicated on Canvas. You may not submit your assignments once the deadline has passed.

**Exam Reviews:** There will be an exam review assigned before each exam. The purpose of the review is to aid the student in studying for the exams. You may not submit your assignments once the deadline has passed.

**Midterm Exams:** There will be three midterm exams. Each exam includes handwritten portion which you will upload to Canvas. Each midterm exam will focus the material covered since the previous exam. More details on exam dates and procedures can be found in Canvas. You may not submit your assignments once the deadline has passed.

**Final Exam:** The final exam will cover all material from throughout the term. More details on the final exam will be available on Canvas.

Exams will be Zoom proctored. Absolutely no makeup tests. If you were to miss an exam or quiz you must inform me of your emergency within 48 hours and provide me with the documentation relevant to your situation. If I don't consider your reasoning as an emergency or if you don't provide me with appropriate documentation in a timely manner, you will receive a zero for that test. Regardless, you will get zero for any other missed tests, emergency or not. Final is also a Zoom proctored exam. No makeups for the final can be provided. The final grade cannot be dropped.

**Grading Policy:**

Homework, Group Activities, and Discussion	200 pts (25%)
Projects and Presentation	100 pts (12.5%)
Midterm Reviews/ Midterms	300 pts (37.5%)
Final	200 pts (25%)
<b>Total</b>	<b>800 pts</b>

A	100%	to 94.5%
A-	< 94.5%	to 89.5%
B+	< 89.5%	to 86.5%
B	< 86.5%	to 83.5%
B-	< 83.5%	to 79.5%
C+	< 79.5%	to 74.5%
C	< 74.5%	to 69.5%
D+	< 69.5%	to 66.5%
D	< 66.5%	to 63.5%
D-	< 63.5%	to 59.5%
F	< 59.5%	to 0%

**Important Dates and Deadlines:** <http://www.deanza.edu/calendar/dates-and-deadlines.html>

**De Anza Final exams schedule:** <https://www.deanza.edu/calendar/final-exams.html>

**For detailed information on Homework, Quizzes, Projects, Discussion please log into your Canvas course page.**

**Academic Integrity:**

All students are expected to exercise high levels of academic integrity throughout the quarter. You are encouraged to work together but you are expected to write up your answers independently. Any instances of cheating or plagiarism will result in disciplinary action, including getting a '0' on the assignment and report to the PSME dean, which may lead to dismissal from the class or the college

**Student Honesty Policy:**

"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."

**Disabled Services:**

Students who have been found to be eligible for accommodations by Disability Support Services (DSS), please follow up to ensure that your accommodations have been authorized for the current quarter. If you are not registered with DSS and need accommodations, please go to <http://www.deanza.edu/dss>.

This syllabus is subject to change at the instructor's discretion. Changes will be announced in class and on Canvas.

**Recipe for Success:**

- If you ever have any questions, Email me! You are welcome to send email to me whenever you need help!
- Visit the Online Tutoring Center.
- Form an online study group.
- Watch all lectures, participate in every discussion, and complete every homework assignment.
- Read the sections to be discussed in class prior to the lecture

## Course Contents

- 1.1, 1.2 Rectangular Coordinates and Graphs
- 1.3 Linear Equations in Two Variables
- 1.4 Functions
- 1.5 Analyzing Graphs of Functions
- 1.6 A Library of Parent Functions
- 1.7 Transformations of Functions
- 1.8 Combinations of Functions: Composite Functions
- 1.9 Inverse Functions
- 1.10 Mathematical Modeling and Variation
- 2.1 Quadratic Functions and Models
- 2.2 Polynomial Functions of Higher Degree
- 2.3 Polynomial and Synthetic Division
- 2.4 Complex Numbers
- 2.5 Zeros of Polynomial Functions
- 2.6 Rational Functions
- 2.7 Nonlinear Inequalities
- 3.1 Exponential Functions and Their Graphs
- 3.2 Logarithmic Functions and Their Graphs
- 3.3 Properties of Logarithms
- 3.4 Exponential and Logarithmic Equations
- 3.5 Exponential and Logarithmic Models
- 7.1 Linear and Nonlinear Systems of Equations
- 7.2 Two-Variable Linear Systems
- 7.3 Multivariable Linear Systems
- 7.4 Partial Fractions
- 7.5 Systems of Inequalities
- 9.1 Sequences and Series
- 9.2 Arithmetic Sequences and Partial Sums
- 9.3 Geometric Sequences and Series
- 10.1 Lines
- 10.2 Introduction to Conics: Parabolas
- 10.3 Ellipses
- 10.4 Hyperbolas
- 10.5 Rotation of Conics

	<b>Sunday</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	<b>Saturday</b>	<b>Week</b>
<b>April</b>	9	10 Ch 1	11 Ch 1	12	13 Ch 1	14	15	1
	16	17 Ch 2	18 Ch 2	19	20 Quiz 1	21	22 Last Day to Add Classes	2
	23 Last Day to Drop W/out "W"	24 Census Day Ch 2	25 Exam 1 Review	26	27 Exam 1	28	29	3
<b>May</b>	30	1 Ch 2	2 Ch 2	3	4 Ch 2	5	6	4
	7	8 Ch 3	9 Ch 3	10	11 Quiz 2	12	13	5
	14	15 Ch 3	16 Exam 2 Review	17	18 Exam 2	19	20	6
	21	22 Ch 7	23 Ch 7	24	25 Ch 7	26	27	7
	28	29 Memorial Day -No classes- Offices closed	30 Ch 9	31 Ch 9	1 Ch 9	2 Last Day to Drop With "W"	3	8
<b>June</b>	4	5 Ch 9	6 Exam 3 Review	7	8 Exam 3	9	10	9
	11	12 Ch 10	13 Ch 10	14	15 Project Presentation	16	17	10
	18	19 Juneteenth Holiday -No classes- Offices closed	20 Final Review	21	22 Final Review	23	24	11
	25	26	27	28	29	Graduation!	1	12

**Final Exam Time: Wednesday from 4:00 PM to 6:00 PM**

**Student Learning Outcome(s):**

\* Investigate, evaluate, and differentiate between algebraic and transcendental functions in their graphic, formulaic, and tabular representations.

\* Synthesize, model, and communicate real-life applications and phenomena using algebraic and transcendental functions.

**Office Hours:**

T,TH	12:00 PM	02:00 PM	Zoom,Canvas,In-Person,Email	s33N or PSME
------	----------	----------	-----------------------------	--------------

Village