MATH 31 **PRECALCULUS I: Theory of Functions** **Winter 2021**

Math 31-MP1 **CRN: 36857** **Instructors** **NADIA BENSIDI**

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Office Hours : **Monday: 12:30-1:20pm, Thursday: 9:30-10:20am**

Class hours: Monday, Tuesday, Wednesday, Thursday ,10:30 am-12:20 pm **Online**(synchronous) via **Zoom** on CANVAS. You need a computer or laptop.

Textbook: Precalculus with limits, 4th edition by Larson (NOT REQUIRED).
You will be provided with Webassign access code. This will allow you to access the e-book.

Requisites: Prerequisite: MATH 109, MATH 114, MATH 130 or equivalent placement
Advisory: EWRT 211 and READ 211 (or LART 211), or ESL 272 and 273.

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

Course Objectives

A. Graph functions and relations in rectangular coordinates

B. Synthesize results from the graphs and/or equations of functions and relations.

C. Apply transformations to the graphs of functions and relations.

D. Recognize the relationship between functions and their inverses graphically and algebraically

E. Solve and apply equations including linear, absolute value, radical, and solve linear and absolute value equations

F. Solve and apply equations including rational, polynomial, exponential, and logarithmic, and solve nonlinear inequalities

G. Solve systems of equations and inequalities.

H. Apply functions to model real world applications I. Develop and use sequences and series

Student Commitment:

• This is a demanding but rewarding class. This class expects students to attend all classes and have a minimum of 10 hours of study each week outside of class.

• Math 31 covers a lot of material and moves at a rapid pace. At De Anza College (and all colleges) each at least 2 hours of study outside of class are expected for each hour in class, for a total of 15 hours weekly.

• If you don't have time for studying outside of class or can't commit to attending each class, then you should plan to take this class in a quarter when you can commit the necessary time to succeed.

• This is also a collaborative class. You will be expected to work in cooperation with your classmates (No exceptions). You will be expected to discuss ideas, questions and strategies with your group. Share your thoughts as often one idea will spark another and so on. Working in groups does not mean that students sit together quietly working alone and not talking with each other!

Related Materials: Graphing calculator, TI 83+ or TI 84+ recommended but not required.

Quizzes: There are six quizzes each worth 10 points. Quizzes are similar to Homework problems. The lowest score will be dropped. NO MAKE UP .

Homework: The Homework is mandatory. The Homework will be available and graded online using WebAssign (http://webassign.net). The lowest score will be dropped.

The Class Key is: **deanza 6204 3125**

Labs: Labs are group work. You will be working in group of 3 to 4 students. You will turn in one paper per group and share the grade.

Exams: Three one-hour exams will be given each worth 50 points.

Final Exam: A two-hour comprehensive exam will be given. The final worth 100points. If you miss the Final Exam you will receive an F for the course. At the end of the quarter half the final or the lowest exam score (whichever is lower) will be dropped.

Attendance: You are expected to attend all classes (Please email me if you are going to be absent). If you miss five classes, you must drop the course. It is your responsibility to drop the course if necessary. Please inform me by email if you do so

Grade:

Exams (3@ 50pts)	150 pts.	A+: 96 – 100%	A: 90-95%	A –: 88-89%
Final Exam	100 pts	B+: 85-87%	B: 78-84%	
Homework	30pts	C+: 74-77%	C: 68-73%	
Quizzes (6@ 10pts)	50 pts	D: 60-67%		
Labs (5 @ 10pts)	50pts	F: below 60%		
TOTAL	**330Pts**			

Notes: ***Your grade is based on points not on curve.***

Free Tutoring: I strongly encourage you to utilize this resource. More information can be found here: http://www.deanza.edu/studentsuccess/mstrc/

Supplemental Resources: I encourage you to poke around the library and web to see what other supplemental resources exist. One great resource is the following link: http://tutorial.math.lamar.edu/Classes/Alg/Alg.aspx

Disability Support Services: If you need to contact the Disability Support Services, then please contact them as soon as possible. More information can be found here: https://www.deanza.edu/dsps/

Academic Integrity: This is pretty straightforward: Do not cheat on quizzes, exams, or directly copy other student's work. It is not worth getting caught and suffering the consequences. For more information about De Anza College's policy on academic integrity: https://www.deanza.edu/policies/academic_integrity.html

Student Services: This web site leads you to information about financial aid, child care, counseling, academic support, disability support, student activities, and other services that are here for you. The physical location for most of these services is in the Student Community Services Building. http://www.deanza.edu/studentservices/

Last day to add: 01/16/2021

Last day to drop without W: 1/17/2021

Last day to request pass/no pass: 1/29/2021

Last day to drop with W: 02/26/2021

Final week: March 2-25, 2021

TENTATIVE SCHEDULE

	Monday	Tuesday	Wednesday	Thursday	Friday
January	A2 4	A3 5	A5 6	A6 **Quiz1** 7	
January	1.2 11	1.3 12	1.4 13	1.5 **LAB1** 14	
January	MLK No Class 18	1.6 19	1.7 20	1.8 **Quiz**2 21	
January	1.9 25	1.9/1.10 26	1.10 Review Ch1 27	2.1 **Exam1** 28	
February	2.1/2.2 1	2.2/2.3 2	2.4 3	**2.5** **Quiz3** 4	
February	2.6 8	2.7 **LAB 2** 9	Review Ch2 10	**Exam2** 11	
February	President day No Class 15	3.1 16	3.2 17	**3.3** **Quiz4** 18	
February	3.4 22	3.5 **LAB 3** 23	**7.1** 24	**7.2** **LAB 4** 25	
March	7.3 1	7.5 2	ReviewCh3,7 **Exam 3** 3	9.1 4	
March	9.2 8	9.3 **LAB 5** 9	10.2 10	**10.2** **Quiz5** 11	
March	10.3 15	10.4 16	10.5 17	10.5 **Quiz6** 18	
March	 22	 23	 24	**Final Exam** **9:15-11:15 am** 25	

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.