Math 31 MP: Precalculus I
Winter 2021
Math Performance Success

Instructor: Peter Ho
Contact: hopeter@fhda.edu
Days: MTWTh, 1:30 - 3:45 PM, Online
Office Hour: M-Th, 10:00 AM - 1:30 PM & 3:45 - 5:45 PM, MPS Tutoring
Textbook: Class workbook and notes to be provided through Canvas.
Required Materials: A working brain.

Suggested Textbook: Although an official textbook is not required, it is only suggested to read through *Precalculus with Limits* by Ron Larson, 4th ed. The course material will be closely following this book throughout the quarter.

Course Description

In this course, we will understand a variety of functions and techniques on solving equations. We will cover polynomial, rational, exponential, and logarithmic functions along with their graphs. Lastly, we are going to cover conic sections, systems of equations and inequalities followed by sequences and sets.

Grading Criteria

The course will have two exams, a project, and quizzes along with daily homework assignments. Grading will not be on a curve with the total to be out of 100 points. Breaking down the grading scale:

Exam 1	20 %
Exam 2	20 %
Quizzes	10 %
Homework	20 %
Project	15 %
Final	15 %
Total	100 points

Student Commitment

Precalculus in its early steps is in general a demanding and tough subject to learn. In fact, a majority of students will find that learning math in general is very unforgiving. We require that students make the commitment to attending and participating in course matters during the stated class period.

There will be new material covered each day of lecture, and with that, we require a total commitment of 10 hours per week in class. In addition to this are coursework related to lecture with readings, assignments, and a course project. Please make sure that there is the time commitment for this course. Feedback on course standing (homework, quizzes, etc.) will be provided as live a possible.

Exams

There will be two midterm exams for the rest of the quarter followed by a final exam at the end. The midterm will not be graded on a curve. Exam coverage are all previous homework and quiz topics prior to the exam. It is helpful to read through class notes as part of studying for the exam.

Quizzes

There is a total of six quizzes to be given on Thursdays at the start of the lecture portion of the class. A total of five quizzes will be counted towards the total grade with the lowest score to be dropped.

Homework

As part of student commitment to this course, homework will be assigned each day to be submitted the start of each lecture (2:30 PM). This means that for the first hour of the class there will be time to ask questions to the instructor or in-class tutor regarding homework problems.

Project

Using all the tools we have learned in class, the class project will focus on understanding how a logistic function works in modeling current Covid-19 data. Given the current number of daily cases based on CDC Covid Data and Trend the goal of this project is to determine the best fit logistical function to determine the outcome of future cases. The project will be due a week before finals with a submitted 1-page paper detailing the results along with a graph with all points and axes labeled.

Tentative Class Schedule of Topics

Week	Topics Covered	Exam/Quiz/etc.
1/4 - 1/7	Intro to Functions	Algebra Quiz
1/11 - 1/14	Quadratic Functions	Quiz 1
1/18 - 1/21	Polynomial Functions	Quiz 2
1/25 - 1/28	Rational Equations	**Exam 1**
2/1 - 2/4	Exponential Functions	Quiz 3
2/8 - 2/11	Conic Equations	Quiz 4
2/15 - 2/18	Transformations of Functions	**Exam 2**
2/22 - 2/25	Inverse of Functions	Quiz 5
3/1 - 3/4	Sequences and Sets	Quiz 6
3/8 - 3/11	Applications of Functions I	Real-world Demos
3/15 - 3/18	Applications of Functions II	Project Due
3/22 - 3/25	**Final Exam**	**Final Exam**

Tutoring Services and Office Hour Location

Here in the MPS program, free tutoring services are provided by other students as peer tutors. Some former students of MPS are actually tutors! To find the Zoom link to the meeting, please go to

denza.edu/mps → <u>Tutoring Services</u>

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.