Math 31: Precalculus I
Fall 2025, CRN 27581, Section 12
Tuesday & Thursday 11:00 am top 1:15pm
Classroom: G7

Instructor Information

Instructor:	Andrew Jianyu Yu
Email:	yuandrew@fhda.edu
Office Location:	E37
Office Hours:	Tuesday and Thursday 1:15 pm to 2:45pm in G7 Email me for additional hours.

Course Description

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

Student Learning Outcomes (SLOs)

1. Investigate, evaluate, and differentiate between algebraic and transcendental functions in their graphic, formulaic, and tabular representations.
2. Synthesize, model, and communicate real-life applications and phenomena using algebraic and transcendental functions.

Prerequisite

Intermediate algebra or equivalent or higher, or appropriate placement beyond intermediate algebra.
Advisory: ESL 272 and ESL 273, or ESL 472 and ESL 473, or eligibility for EWRT 1A or EWRT 1AH or ESL 5
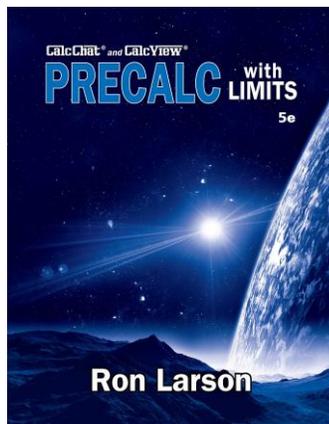
Required Textbook

Precalc with Limits 5th Edition by Ron Larson;
Publisher: Cengage Learning (January 1, 2021)
Language: English; Hardcover: 1120 pages
ISBN-10: 0357457854; ISBN-13: 978-0357457856
Item Weight: 5.55 pounds
Dimensions: 8.7 x 1.7 x 10.9 inches
Important Notes: It is not necessary to purchase a hard copy of this book because you will not be asked to solve textbook problems on paper.
The PDF of the 5th edition is on Canvas (see Files, Textbook folder).

Graphing Calculator

Graphing calculator is strongly **recommended** for the course. TI-84 Plus or Plus CE is highly recommended. This calculator is widely used in math, science, and engineering courses. You

TI-83 Plus   TI-84 Plus   TI-84 Plus CE   TI-Nspire

are required to bring a physical calculator to the exam, and sharing calculator is considered as cheating incident. Using the calculator apps on your phone is strictly prohibited on the exam. Do not purchase the TI-Nspire Graphing Calculator (around $150) because it is too advanced for this course. Instructions will not be provided for TI-Nspire.

Technical Requirements

- **Your Email:** Please check your email regularly. If possible, connect your email with an app in your smartphone. You are welcome to ask me any questions related to lecture, homework, or personal emergency through email. **Please following the format of the subject line stated below.**

  "Math 31 11am: _____"

  You write your inquiry after the colon. For example
  Math 31 11am: Request Extension for Homework 2

- **WebAssign (Work System):** Homework, quizzes, and exams will be assigned and graded on WebAssign. If an assignment is required to be completed on paper, you are required to scan your work and upload it to Canvas. WebAssign is **not free**. You must pay for your own account before the free trial period ends. Otherwise, you will not be able to complete any assignments until you make a payment. The **first module** on Canvas contains a link to register your WebAssign account and another link to access to WebAssign. Alternatively, you can login WebAssign on your web browser though the link https://www.webassign.net/.

- **Canvas (Main Learning Management System):** WebAssign has been integrated to Canvas. Each weekly **module** contains the lecture videos and the weekly assignment. The first module has 3 links – the first link for register your WebAssign account, the second link for accessing WebAssign from Canvas, and the third link for Cengage technical support. There are 2 ways to access an assignment. The first way is to

click on the assignment on Canvas, it will directs you to WebAssign. The second way is to login WebAssign using the link above. **Scores on WebAssign will automatically synchronize to the grade book on Canvas.**
At least one homework and one quiz will be assigned weekly.

WebAssign Class Key and WebAssign-Canvas Integration
Use the link in the first module to register your account. Please take the advantage of the free trial and do not pay anything yet. **All purchases are non-refundable. There is no class key** for this course because WebAssign has been integrated to Canvas. Your instructor is not an employee of WebAssign and Cengage. If you experience any technical difficulty on WebAssign, please contact them to speak to a customer representative.

Click "Cengage Technical Support" to contact a customer representative if you experience any technical or payment issues.

Canvas
There are a few places that you have to visit frequently on Canvas.

- **Modules**
  Each weekly module shows the notes and homework of that week.
- **Grades**
  Scores will be transferred from WebAssign to Canvas. Instructor will update the grade book weekly.
- **Files**
  Notes, books, and syllabus
- **Discussion**
  If we want to have a discussion regarding any topics, we will do this in the Discussion tab.
- **Announcement**
  Emergencies, date change, change of plans, and etc

Mandatory Attendance

Attendance will be taken in every meeting. Students who missed 4 or more meetings will be dropped from the course *without notice*.

Scanning Your Paperwork for Online Exams and Online Quizzes

Other than homework, you have to show your work for all online exams and for some online quizzes.. Use one of the options below to upload your work to Canvas for credits. For either option below, number the problem and the page. For example, a grader can easily tell the problem number, the content of the problem, and all the steps you wrote to reach to the final answer. If an application problem has long problem statements, or a problem provides a very complicated graph (e.g. three-dimensional image), it is not necessary to copy the problem statements or the graph.

1. If you have a scanner, scan all the pages, save them as **one PDF document**, and upload the file to Canvas.

2. If you do not have a scanner, download the free app called **Genius Scan – PDF Scanner App** (five starts over 1.2M reviews). Take a picture of each page, use the app to merge all the pictures into **one PDF documents,** and upload the file to Canvas.

NOTE: Points will be deducted if you upload multiple images.

3. If you write all your work using a note-taking apps, save it as a PDF file and upload that file to Canvas.

Homework & Discussion, 10% of the Course Grade

Problems will be assigned from each section taught in lecture. You are required to finish most of the homework on WebAssign. For written assignments, you have to scan your work, merge all the images into one PDF document, and submit to Canvas.

For in-class discussion: students will be solving problems in groups, instructor will stop by each group to answer or ask questions. Points will be awarded based on the answers and participation.

For other discussion: topics will be posted on Canvas's "Discussion", follow the directions and write your response. These free-response discussions have no right or wrong answer. To receive full credits, you must reply to one other student's discussion.

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

Quiz & Pop Quizzes, 20% of the Course Grade

In-person quizzes will be given in during a lecture. Quiz topics will be announced in advanced.

You are expected to complete online quizzes on WebAssign/Canvas. Quiz is an individual assignment. You are required to do your own work. Group-work is strictly prohibited. *For online quizzes, show all your work in a separate piece of paper, take a picture of all the pages (or use a scanner to scan all the pages), merge all the pages into 1 PDF file, submit to Canvas.* For example, "Quiz 1" is an online quiz, and "Quiz 1P" is for submitting your paper work.

To encourage consistent engagement, unannounced pop quizzes may be given. Each quiz will focus on that day's topics and must be completed in a 10-minute window. You may use your notes and a calculator. Please note that these quizzes are time-sensitive, and make-up options are not available.

The incident of falsifies information for financial aid is increasing in every school district. If you do not complete the first week's assignment or having no activities on Canvas, you will be dropped from the course.

Midterm, 40% of the Course Grade (Two Midterms)

Midterm 1 is schedule in week 4 Thursday October 16th

Midterm 2 is schedule in week 8 Thursday November 13th

You have the entire class period to take complete the exam.

Final Exam, 30% of the Course Grade

Last day of class: August 7th during the regular class period

Week #12: Tuesday December 9th from 10:30 AM to 11:30 AM

You are required to take the exam during the time mentioned below. Exams cannot be extended and cannot be rescheduled. If you are unable to take the exam during these dates and times, please take a different class.

In-person Online Exam Policies	In-person Written Exam Policies
(1) Bring one device only (either a laptop or a tablet) (2) Bring paper to show your work (3) I will either collect your work or ask you to submit your work to Canvas (4) Lockdown browser will be enforced	Exam will be typed and printed You will get a physical copy of the exam Workspace will be provided in the exam You write your work on the exam paper and turn in your work.

You are allowed to carry the following items to the exams:

(1) For midterms, you are allowed to bring 3 sheets (6 pages total, front of back) of notes. The size of the paper is 8.5 inches by 11 inches. The notes can be typed or handwritten.

(2) For the final exam, you are allowed to bring 5 sheets of notes. The other requirements are mentioned in (1).

(3) A physical graphing calculator or a scientific calculator. *Smartphone, tablet, and laptop are not physical calculators.*

Sharing calculator, tablet, or laptop is strictly prohibited and considered as cheating. All the exams are individual work. Students who cheat, plagiarize or help someone else cheat will be given a zero on the exam, and this zero is irreplaceable, meaning that it will count toward your course grade.

Last Submission Policies

- Every student can extend the due date of one homework.
- Every student can extend the due date of one quiz.
- Scores earned using additional attempts will be counted as zeros.
- The last homework and the last quiz cannot be extended.
- Your one-time extension must be redeemed within 3 days after the due date. For example, if homework 1 is due on October 1st at 11:59pm, the deadline to request an extension is October 4th at 11:59pm.
- All the written assignment cannot be extended.
- Midterm cannot be rescheduled or extended.
- Final exam cannot be rescheduled or extended.

Check Points:

- Homework & Discussion 10%, Quiz & Pop Quiz 20%, Midterm 40%, Final 30%; Zero credit to all the late and missing work, no exception.
- For in-person online exams, you must show all your work on paper and submit your work to Canvas. The score does not count toward your course grade if your work is missing.
- You are expected to check the due dates on your WebAssign account at least once a day to plan accordingly. Also, you are expected to check our Canvas page to see announcements and week module regularly.
- Comparing to homework, you will have at most 3 attempts on exams. Please solve the problems on a separate sheet of paper and double-check your work before submitting your answer to WebAssign. Additional attempts will not be granted for any reasons.

Tutoring at the Student Success Center (SSC)

The Student Success Center (SSC) provides free math tutoring services in-person and online. Please visit the following website for details and schedules. https://www.deanza.edu/studentsuccess/

Grading Rubrics

Your course grade will be assigned in the following standard:

A: 100% to 93%	A-: 92% to 90%	
B+: 89% to 86%	B: 85% to 83%	B-: 82% to 80%
C+: 79% to 75%	C: 74% to 70%	
D: 69% to 60%	F: below 60%	

All the cut-offs are not negotiable. For examples, 89.8% is not an A-minus and 69.8% is not a C. Transferring to UCs, CSUs, top-ranking universities, or scholarships are not a reason to ask for a higher grade.

Extra Credit Assignment

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

Academic Integrity

Academic dishonesty will not be tolerated. Any student attempting to defraud the instructor on a quiz, exam, final exam, or any other assessment item designated as an individual assignment will receive a zero on that assignment. This score is irreplaceable. If a cheating incident is detected on your work, the rest of your works in the course will be closely monitored and examined. All the assistant seekers and assistant providers will be reported to the college. *For example, bringing a quiz or an exam problem to a tutor is considered as cheating. Posting a quiz or an exam problem to websites such as Chegg, Course hero, or a forum is considered as cheating.*

Course Content

Chapter 1: Functions and Their Graphs
1.1: Rectangular Coordinates
1.2: Graphs of Equations
1.3: Linear Equations in Two Variables
1.4: Functions
1.5: Analyze 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

Chapter 2: Polynomial and Rational Functions
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

Chapter 3: Exponential and Logarithmic Functions
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

Chapter 7: Systems of Equations and Inequalities
7.1: Linear and Nonlinear Systems of Equations
7.2: Two-Variable Linear Systems
7.3: Multivariable Linear Systems
7.5: Systems of Inequalities

Chapter 9: Sequences, Series, and Probability
9.1: Sequences and Series
9.2: Arithmetic Sequences and Partial Sums
9.3: Geometric Sequences and Series

Chapter 10: Topics in Analytic Geometry
10.2: Introduction to Conics: Parabolas
10.3: Ellipses
10.4: Hyperbolas
10.5: Rotation of Conics

Academic Calendar:

September 22: Fall classes begin

October 5: Last day to add 12-week classes

       Last day to drop a class without a W

November 11 (Tuesday): Veterans Day holiday – no classes; offices closed

November 14: Last day to drop classes with a W

To withdraw from this class, go to portal where you register this class, change the status from "registered" with "withdraw". After you are done, please double-check your status.

Important Note: It is student's responsibility to drop or withdraw the class if that student decides not to finish the class. After the last day to withdraw is passed, student cannot withdraw from the class.

November 27-30 (Thursday-Sunday) Thanksgiving holiday – no classes; office closed

December 8-12 (Week #12): Final exams

https://www.deanza.edu/calendar/final-exams.html

For the final exam schedule, Google "De Anza College Final Exam Schedule", input the date and time of this class to see the date and time

An academic quarter has 11 weeks of instruction and 1 week of final exam.

For Instructors Only:

Grades must be submitted by Wednesday, December 17th, by midnight

The professor reserves the right to make changes to the syllabus, including project due dates and test dates (excluding the officially scheduled final examination), when unforeseen circumstances occur. These changes will be announced as early as possible so that students can adjust their schedules.

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   1:15 PM - 2:30 PM   G7