

MATH-31-23

Pre-calculus I: Theory of Functions

Fall 2024

TTh 1:30 -3:45 PM, Room S57(CRN 27576)

Office hours: TTh 12:30 – 1:30 pm

INSTRUCTOR: Bijan Sadeghi

EMAIL: sadeghibijan@fhda.edu

Course Description: This course in combination with MATH 32 will prepare students to take the calculus sequence. The course includes an in-depth study of polynomial, rations, exponential and logarithmic functions, graphs, solving equations.

Text: *Pre-calculus with Limits*, by Ron Larson, 5th edition, Cengage Learning (January 1, 2021).

ISBN-10: 0357457854; ISBN-13: 978-0357457856

More than ever in your past mathematics experience, *reading* your textbook will be essential. The exercise sets are written with the intent of forcing the student to approach problems graphically and numerically, as well as the traditional symbolic (algebraic) approach. There is such variety in the exercise sets, that a few lecture examples often can't illustrate every type of question in the homework. This makes the reading a crucial part of the students day-to-day work. The De Anza College Catalog advises students to do at least 2 hours of work outside the classroom for each hour spent in class.

Technology: Students must have a graphing calculator. The instructor will use a Texas Instruments TI-84 plus in lectures. Consequently, the TI-84 plus (or TI-84, TI-83+, TI-83) is recommended for the students, but any graphing calculator that has a “table” feature is acceptable. (The old TI-81 and TI-85 models do *not* have a table feature!). *Any calculator that can do symbolic mathematics such as TI-89 or HP-49 are not allowed on exams and quizzes.*

Prerequisite: Mathematics 114 or equivalent (with a grade C or better); or a satisfactory score on the College Level Math Placement test within the last calendar year.

Quizzes: There will be 5 quizzes, 10 points each.

Midterm: there will be three tests worth 100 points each. Unless otherwise indicated, the graphics calculator will be required for tests. Material from any lecture, homework assignment, or quiz is fair game on test day. Be advised that all in-class assessments are closed book and closed notes ones.

Make-up Tests: There are no make-up tests, *under any circumstances*. If a test is missed, the percentage on the final exam will replace the score of the missing exam. If a second exam is missed, the grade will be a zero.

The lowest score of 3 regular tests will be replaced by a percentage on the final exam, provided the latter is higher.

Final Exam: There will be a mandatory comprehensive two-hour final exam worth 200 points, and this exam *must* be taken during the scheduled exam time on Thursday December 10th.

Homework: TO ACCESS WEBASSIGN ONLINE HOMEWORK: <http://www.webassign.net>

Your class key is: **deanza 7891 4325**

- **Online homework system: REQUIRED** in this class.
- You are required to do homework and turn it in by the weekly due dates using Web Assign.
Homework will be graded on Web Assign.

Attendance: Attendance will be taken at each session. **You are expected to attend all classes on time.** If you miss 2 class meetings, you may be dropped from the class. However, this is your responsibility to drop the course officially if you decide not to attend any longer. The students are responsible for any material covered and any announcements made in their absence.

Final grade and grading scale: Your final grade will be determined based on the following:

Exams (3)	300 points	713 ≤ X ≤ 750 → "A+"	600 ≤ X ≤ 644 → "B"
Quizzes	50 points	675 ≤ X ≤ 712 → "A"	585 ≤ X ≤ 599 → "B-"
Homework	200 points	660 ≤ X ≤ 674 → "A-"	562 ≤ X ≤ 584 → "C+"
Final	200 points	645 ≤ X ≤ 659 → "B+"	525 ≤ X ≤ 561 → "C"
		450 ≤ X ≤ 524 → "D"	

Total points X= 750 points

Missing one of the major tests is made up through added weight on the comprehensive final exam.

Missing additional tests results in a score of zero.

A grade of "I" (incomplete) will be given at the instructor's discretions, if:

- i) A student has successfully completed at least 75% of the course work, and
- ii) Has shown acceptable evidence which justifies his/her incomplete work.

*** (N.B.: It is the student's responsibility to complete the withdrawal process. Students who stop attending class are NOT automatically dropped. A student who stops attending class and does not complete the withdrawal process receives the grade of "F").

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.

If you are a student with a disability: For information or questions about eligibility, support services or accommodation to disability (physical or learning disability) see contacts below:

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

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

Special Education Division: (408) 864-8407; www.deanza.edu/specialed.

Important dates:

Sep	A2-A6	24	A2-A6	26	Oct.1 1.1 -1.3	Oct. 3 1.4-1.6
Oct	1.4-1.6	8	1.7-1.10	10	1.7-1.10 15	1.1-1.10 17
Oct	Review/ Exam 1 (A2-A6; 1,1 -1.10)	22	2.1 -2.7	24	2.1-2.7 29	2.1-2.7 31
Nov	2.1-2.7	5	Review/ Exam2(2.1 – 2.7)	7	3.1 3.5 12	3.1-3.5 14
Nov	3.1-3.5	19	Review/ Exam3(3.1 -3.5)	21	10.2-10.4 26	Thanksgiving Holiday 28
Dec	10.2-10.4	3	10.2-10.4	5	Final Exam 10	12

October 6: Last day to add 12 week classes

October 6: Last day to drop classes without a W

November 11: Veterans Day holiday

November 15: Last day to drop classes with a W

Nov 28 – Dec 1: Thanks giving holiday

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	12:30 PM	01:30 PM	In-Person	S57
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