SYLLABUS

Precalculus I, Winter 2026, Math 31, CRN 38526

Classroom: Monday & Wednesday, 1:30 – 3:45PM in Room E32

Instructor: Rani Fischer, fischerrani@fhda.edu, though I prefer to be emailed via Canvas

Office Hours: **Monday - Thursday 11:30 – 12:30pm in MLC270**

Student Learning Outcomes:

- 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.

Course Content:

1. Graph functions and relations in rectangular coordinates

2. Formulate results from the graphs and/or equations of functions and relations.

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

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

5. Solve and apply equations including linear, quadratic, absolute value and radical equations

6. Solve and apply equations and inequalities involving rational, polynomial, exponential, and logarithmic functions

7. Solve systems of equations and inequalities.

8. Apply functions to model real world applications

Tips for Success

1. **Log into our course in Canvas every day.** Check calendar for upcoming deadlines and make sure you are aware of them.

2. **Turn everything in.** Don't miss any quizzes or exams.

3. **Prepare for quizzes and exams as if they were closed-notes assessments.** That is, prepare as if you were allowed only paper, pencil and calculator. Preparing this way for quizzes will help you retain the material for exams. Preparing this way for exams will help you retain this material for when you need it for the next math or physics class(es).

4. **Come to every class.** Allowing yourself to occasionally miss class is a slippery slope, and can easily turn into a bad habit that can cost you the grade you want in this class.

5. **Come to class prepared and ready to contribute.** Be sure to have worked through some problems in order to bring in questions.

6. **Don't wait to ask for help.** I cannot know what you don't tell me. If you're dealing with an unusual or an unexpected challenge, please let me know if I can do something to help keep the class manageable for you.

Textbook and Calculator:

 Your textbook for this class is available for **free** online!

[*Precalculus* from OpenStax](#)
ISBN 1-947172-06-9

You will need a scientific calculator for this class which can be borrowed from MPS or purchased at a drug store, Target, or Staples. You may also use an online app, such as the one at https://www.desmos.com/scientific.

No graphing calculators or cell-phone calculators allowed on quizzes and tests.

SCHEDULE

Week 1: Sec 1.1 - 1.3

Week 2: Sec 1.4- 1.6

Week 3: Sec 1.7 - 2.2

Week 4: Sec 2.3 - 3.1, Exam 1 on Thursday, January 30, on Ch 1 & Sec 2.1 - 2.2

Week 5: Sec 3.2 - 3.5

Week 6: Sec 3.6 - 3.9

Week 7: Sec 4.1 - 4.3, Exam 2 on Thursday, February 20, on Sec 2.3, Ch 3

Week 8: Sec 4.4 - 4.6

Week 9: Sec 4.7, 9.1, 9.2

Week 10: Sec 9.3, 10.1, Exam 3 on Thursday, March 13, on Ch 4, 9.1 & 9.2

Week 11: Sec 10.2, 10.3

Online Homework & in-class Problem Sets

The best way to succeed in any math class is doing all of the assigned work correctly and in a timely manner, making sure you really understand what you are doing. Focus on how to think mathematically about problems, not just on following a procedure or learning a skill. Time spent on the homework and in-class group work on problem sets will directly benefit you on quizzes and exams.

Online Homework: You will have online homework for each section we cover. The homework will be embedded within Canvas, and will be graded for correctness. The links and due dates are within the modules.

In-class Problem Sets: Each week, we will have a problem set that you will work on. These problems will be posted as a PDF in the Canvas modules. You are to start work on them in groups, work them out on YOUR OWN paper, and submit them individually when you walk into class MONDAY morning. We will start them in class, but will need to finish them up on your own. These sets include problem-solving and critical-thinking exercises that rely on your conceptual understanding of the material and related skills. *I will not accept late work, though I will drop your two lowest problem sets.*

Quizzes:

We will have eight 20-minute quizzes each on a Thursday. *There will be NO MAKEUPS for any of the quizzes. However, your lowest two quiz scores will be dropped.*

Exams:

We will have three midterm exams, and a cumulative final exam on **Monday, March 23, from 1:45 – 3:45 PM**. YOU MUST SCORE AT LEAST 60% ON THE FINAL EXAM IN ORDER TO PASS THE COURSE. Exams must be taken at the scheduled time, so pay careful attention to their dates and times.

IMPORTANT: In case of an unforeseen emergency or illness due to which you cannot take an exam, please get in touch with me immediately, and I can work with you to find a solution. If this happens for the final exam, that may result in an 'Incomplete' (provided that you supply me with a sufficient proof).

Evaluation:

Your final grade will be computed as follows:

Online Homework		10%
In-class Problem Sets	Top 9	18%
Quizzes	Top 6	18%
Exams	3 @ 12% each	36%
Final Exam	$\geq$ 60% TO PASS COURSE	18%
TOTAL		100%

Letter Grade based on overall percentage

Overall percentage	Your grade will be at least
97 % or greater	A+
92% to less than 97%	A
89% to less than 92%	A-
87% to less than 89%	B+
82% to less than 87%	B
79% to less than 82%	B-
75% to less than 79%	C+
70% to less than 75%	C
55% to less than 70%	D
less than 55%	F

Help:

1. Your classmates are a great resource. Ask for help and provide help. Get the phone #s of a couple of people you like or email them via Canvas.

2. Ask me question through Canvas or attend office hours on Tu & Th mornings 9-10am in S55.

3. Get help from the MPS tutoring center in S54.

4. Get help from De Anza's Math Student Success Center.

5. Use NetTutor for help through Canvas on the left-hand column.

6. If you need any technical help with MyPortal, Zoom, Canvas, etc., visit https://www.deanza.edu/online-winter/#Learning

7. At 'Student Services and Support', you will find help with food, financial assistance, health services, resources for undocumented students, etc.

Academic Integrity:

All students are expected to exercise academic integrity throughout the term. Any instances of cheating or plagiarism will result in disciplinary action, which may include recommendation for dismissal. You are encouraged to work together on homework but simply copying down from someone else's work is

wrong! Also, that activity will be of no help to you later. Cheating on a quiz or an exam will result in getting a 0 on it, an 'F' in the course or dismissal from the class. Also, each incident of cheating will be reported to the Dean of the Physical Science, Mathematics and Engineering Division. Please see https://www.deanza.edu/policies/academic_integrity

Disability Notice:

If you feel that you may need an accommodation based on the impact of a disability, please contact me privately to discuss your specific needs. Also, please contact Disability Support Programs & Services through https://www.deanza.edu/dsps/ for information or questions about eligibility, services and accommodations for physical, psychological or learning disabilities.

Additional Tips for Success:

In any math class, and especially this one, your goal should be to get **ownership** of the material. This means that you understand the concepts, can demonstrate the skills, and explain the concepts and skills to someone that doesn't have them. When I teach Calculus, I find that the students are the weakest in their trigonometry background. Those with weak trigonometric backgrounds (and generally, precalculus background) often don't do well in Calculus because of lack of prerequisite skills. So, this is not a "learn and forget" class. Rather, it's a "learn well so you remember" class. Here are some tips to help you succeed.

1. **Stay on schedule**. While the video lectures can be watched any time, you should stick to the schedule I have recommended on the calendar. Don't fall behind! Be disciplined about this to stay on top of the class. When you watch the videos, take careful notes in the prepared lecture notes. Writing aids memory so you are more likely to retain the material you watched.

2. To succeed in any math class you must **do your work (homework and problems sets) diligently**. I am aware that there are many sources that can provide you the answers and even the worked solutions to homework problems; however, such resources will be only be of so much use if you don't understand what you're doing. **Productive struggle** is essential in learning most things, especially mathematics. To learn and retain the material, you must sweat through the problems, especially ones that challenge you.

3. **Form a study group**. Exchange your contact information with at least 3 other people in the class. This will come in handy if you miss a class, or if you want to work with someone on homework, or while studying for an exam. **This is an essential college skill, especially for STEM students.**

4. **Read the textbook.** Simply watching the lectures is not enough to give you a complete idea of the material. I expect you to be familiar with the examples in the textbook in addition to in-class examples. I will cover different examples in the lecture videos than those in the textbook. The reason for this is to give you a richer set of examples to learn from.

5. **Review your notes** regularly and keep them complete! Ask questions about anything that's unclear in a timely manner to avoid losing points on quizzes and exams.

6. **Ask questions.** Whether it's to your classmates, me or a tutor, get your questions answered in a timely manner.

7. Make **summary review sheets** of important concepts for yourself throughout the term to make sure you have the key concepts, facts and skills organized in your head. This will help you prepare better for exams, but more importantly, it will come in handy when you truly need this material in Calculus and beyond.

8. **The quarter passes by faster than expected** – especially if you're new to the quarter system – and it's almost impossible to catch up, so plan accordingly.

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Office Hours:

M,T,W,TH   11:30 AM - 12:30 PM   MLC270