

# Math 114-27Z: College Math Preparation Level 3: Intermediate Algebra

De Anza College      Fall 2021

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Please contact me via **email**. Note: there are **THREE** letter “l”s in a row in my email! (Two r’s, three l’s.)

**Class Hours:**

Tuesday and Thursday      4:00 – 6:15 pm      *Online (in Zoom)*

**Office Hours:**

Monday      8:15 – 9:10 am      *Online (in Zoom)*

Wednesday      6:10 – 6:40 pm      *Online (in Zoom)*

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**Description:** Application of exponential, logarithmic, and rational functions. Emphasis on the development of models of real-world applications and interpretation of their characteristics.

**Materials**

*Required:*

- Textbook: Intermediate Algebra Student Workbook, Bambhania. (Note: This is available only through the De Anza Bookstore where it comes printed and bound in a three-ring binder. Please order this immediately since we will use it for our lecture notes every day in class, for homework, etc. If you prefer to print it yourself, please note that it is 467 pages and will be cumbersome to print. It would be very difficult to complete this class without a paper copy of this workbook unless you have an ipad or computer with a touch screen and can do your work directly on the electronic document.)
- A graphing calculator. I recommend TI-84 Plus, TI-84, or TI-83. (Note: you may borrow one from a friend or family member, but you cannot share with another person in the class since you will need it for exams. If you cannot afford to buy one, you may rent one from <http://rentcalculators.org>.)
- Access to a tablet or computer to participate in class and to use to do online quizzes and homework.
- A few different colors of pencils/pens for note taking.
- A notebook of scratch paper if you need more space to work out homework problems, work out quizzes, etc.

*I reserve the right to modify any details on this syllabus as necessary during the term.*

**Attendance** Daily, on-time attendance is crucial for your success and is. It is very difficult to catch up on missed material after missing a 2+ hour class, so please make attendance a priority. If you miss classes, you will find it difficult to pass the course since we cover so much material in each 2+ hour class session. Please do what you can to stay for the entire class each day. If you miss class, you should watch the recording of the lesson and fill out the workbook as you go. You will still be accountable for the “You Try” problems we do during class and the homework assigned to that chapter.

### **Electronics Policy**

*The following cell phone policy is for face-to-face classes. I understand that you may be attending class on your cell phone during our distance-learning class. Please consider the following, however, and be sure not to use technology in a way that will distract you from learning during class time. You may not, however, use a cell phone as a calculator during exams, so plan accordingly to get access to an appropriate calculator.*

Cell phone use is *not advised* during class. Repeated cell phone use will hinder your ability to learn the mathematics we are discussing that day and will distract you from what we are learning. **Cell phones may not be used as calculators.** If you have an emergency situation that may require your attention during class (e.g., a sick child), please speak to me at the beginning of class.

Reminder, you may use a graphing calculator in this course (included on most quizzes and exams) and cannot use a cell phone as a calculator.

### **Add/Drop Deadlines**

The final day to add this course is October 2<sup>nd</sup>, 2021. If you add the class late, you are still responsible for the quizzes and homework you missed since the content is crucial for your understanding of later chapters.

The final day to drop this course without a “W” is October 3<sup>rd</sup>, 2021. The final day to drop this course is November 12<sup>th</sup>, 2021. Students are responsible for dropping themselves from the course if desired. If you are on the roster but do not attend class *and do not contact me* for the first *two weeks* of class, I will drop you from the course. Any student on the roster at the end of the term (regardless of attendance and participation) will be assigned a grade. If a student never comes to class after the first week or two of class, I reserve the right to drop them from the course, but *ultimately, the student is responsible from ensuring he/she drops the course in order to avoid a failing grade.*

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## Grading Categories

Grading Categories		Letter Grade scale
Homework	20%	A: $93\% \leq \text{score} < 100\%$
Projects	10%	A-: $90\% \leq \text{score} < 93\%$
Quizzes	15%	B+: $87\% \leq \text{score} < 90\%$
Exams	30%	B: $83\% \leq \text{score} < 87\%$
Final Exam	25%	B-: $80\% \leq \text{score} < 83\%$
		C+: $77\% \leq \text{score} < 80\%$
		C: $70\% \leq \text{score} < 77\%$
		D: $60\% \leq \text{score} < 70\%$
		F: $\text{score} < 60$
<b>Total</b> 100%		

### Homework (20%)

Each **chapter's homework** has three (3) parts that are worth a total of 10 points.

1. **Reread that day's lesson in the workbook.** (If you wish, you may re-watch the lesson or re-watch portions of the lesson that you struggled with.) (1 point)
2. **Complete the "you try" problems in the workbook.** You will be given time to do most of these during class, but if there are any you haven't completed, that becomes part of your homework. (3 points)
3. **Do the "practice problems" for each chapter.** When a workbook chapter is divided across multiple class days, you are responsible for pacing yourself and doing the practice problems as we go. (6 points)

You will be given points for *completion* of the homework. I will not be grading individual problems.

You will turn in your homework in MyOpenMath that you can access through Canvas. Parts 1 and 2 will be "yes/no" style questions where you report your work. On part 3, you will report your work and also submit a pdf or photograph of your work. You can use any scanning app (e.g., the "scan" feature in "notes" on an iphone), an actual scanner, or well-taken photographs to create the file.

\*Bonus: In MyOpenMath, each chapter has an "Extra Practice" homework option. Each problem you correctly complete is worth 1/10 of a bonus point to be applied to your homework score. *You can only earn bonus points if you have already completed the required homework listed above.* These extra practice options are a great way to study for quizzes and exams.

**Exam review homework** has two (2) parts that are worth a total of 20 points.

1. **Complete the Chapter "Assessment"** found at the end of each chapter in the workbook.
2. **Complete the practice exam** that you will receive on canvas prior to the exam.

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Review homework is also graded for *completion* and will be submitted on MyOpenMath. You will report completion and submit a pdf or photo file of each part.

Homework is turned in chapter by chapter with the due dates listed on the class calendar. **Homework is due by 3:59 pm (before class starts)** on the due date listed on the class calendar.

Late homework will only be awarded up to half credit (5 points total) unless you have talked to me beforehand to explain your situation.

### **Projects (10%)**

Students must complete two projects during the term. 1) The “You *Can* Learn Mathematics” project and 2) The “Mathematics in Our World” project.

***You Can Learn Mathematics, project 1:*** Students will watch a selection of videos from the “youcubed” group at Stanford University. They will learn about the brain’s amazing ability to learn and grow, about new and productive ways to think about their potential as mathematics learners, and about useful strategies to optimize how well their brains learn mathematics. Students will complete a brief report (using their choice of writing, diagrams, pictures, etc.), answering questions about what they watched and learned.

***Mathematics in our World, project 2:*** Students will choose a mathematical topic we are learning about in class and do research about how it is applicable in our modern world (e.g., What profession uses that kind of math? What environmental issue is relevant for a particular topic we’re learning about?). Students will prepare a brief report (in writing, diagrams, pictures, etc.) that explains what they learned and found interesting. Students are encouraged to be creative and choose a topic that they find personally interesting based on the examples we discuss in class.

**These projects are meant to be flexible; students can be creative and discuss their ideas for how they might complete these reports with the instructor.** Students will be provided with additional information and instructions in class and on Canvas. Students will have the opportunity to submit each project early and receive feedback before they submit it for a grade.

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### Quizzes (15%)

There will be a quiz that you need to complete nearly every week (see schedule for specific dates). They will be due Monday night at 11:59 pm. These quizzes are intended to give you and the instructor quick feedback regarding how well you are understanding the current material. Each quiz is found on MyOpenMath. If you complete your quiz and aren't happy with your score, you may try one additional quiz (with different questions). You will receive your highest score. You must work on your quiz on your own (with no help from friends, the internet, etc.). But you may use your calculator and workbook as resources. ***I do not allow makeup quizzes, but I will drop your lowest two quiz scores to accommodate for a missed quiz or a bad week.***

### Exams (30%)

Exams will take place during our Zoom class on the dates indicated on the schedule. **No make-up exams will be allowed.** To accommodate for emergency circumstances (e.g., car accident, emergency doctor visit, bad illness), your final exam score can take the place of a "0" on *one* missed exam *with the instructor's approval*. (This will not be allowed if you just procrastinate studying and don't want to take an exam.)

**Graphing** calculators will be allowed on some portions of the Exams. I will indicate where and further instructions will be given in class. Cell phone use during an exam may be grounds for dismissal and a "0" on the exam. During exams, students must turn off their cell phones *and be visible on the screen* during our Zoom session (your camera must be turned on for exams).

You are allowed a 3-inch x 5-inch index card (both sides) (or 3"x5" piece of paper) of notes on each exam. Deciding how to make wise use of this note space will improve your test preparation and can be a valuable part of studying for an exam. We will discuss strategies for preparing your note card during class. You will need to take a picture of your note card and send it with your exam.

You will submit a pdf (or *very clear photos*) of your exam on Canvas for me to grade. The test must be submitted immediately after you are finished, so please plan accordingly so that you have appropriate technology available to scan/photograph your exam right away. If I cannot see your work clearly, it will be very difficult for me to give partial credit so please check your files to make sure they are clear and easy to see.

### Final Exam (25%)

The final for this class is on **Thursday, Dec 9<sup>th</sup> from 4:00-6:00 pm. There will be no make-up opportunities.**

Graphing calculators will be allowed on some portions of the Final Exam. I will indicate where and further instructions will be given in class. You may not use your cell phone as a calculator. Cell phone use during an exam may be grounds

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for dismissal and a “0” on the final exam. During the final exam, students must turn off their cell phones and place their phones, backpacks and other belongings far out of their reach and be visible on camera while they take the exam. (Your camera must be on during the final exam.)

You are allowed one 8.5-inch x 5.5-inch (half of a normal-sized sheet of printer paper) page of notes on the final exam. Deciding how to make wise use of this note space will improve your test preparation and can be a valuable part of studying for this exam. We will discuss strategies for preparing your note card during class. You will need to take a picture of your note page and submit it with the exam.

## Academic Integrity

Cheating will not be tolerated. When you work together on homework, do your own work. Do not just copy another person's work. Problem solve together, fix errors together, but *do your own work*. If you cheat on homework it will be very apparent on exams that you have not learned the material. Cheating on a quiz or exam will result in an automatic 0 on that assessment. Multiple instances of cheating is grounds for being dropped from or failing the course.

## Disruptive Behavior

Please be respectful to the instructor and to other students in class. Do not talk over other people or have side conversations during group work or whole-class instruction. Do not answer phone calls or texts during class. If you have a sick child or other issue that requires you to have your phone on, please talk to me ahead of time, turn the phone on silent, and step out of class to take emergency calls. Do not come to class intoxicated. If your behavior is impeding others' ability to participate in class and learn mathematics, you will be asked to leave. If you are respectful to yourself and those around you, we will get along fine.

## Tips to be Successful in this Class

- Come to class each time class is held. Do not be late and do not leave early.
- Participate in the activities in class. I have carefully designed the activities in each class session to give you the best opportunity to learn the mathematics. *Ask questions*.
- Make friends with other classmates and **form study groups**. *These can also be done online in Canvas, Facetime, Zoom, etc.* Share contact info. Use each other as a resource to bounce ideas as you problem solve. Use each other as a resource if you miss a class session. Work on hard homework problems together. *Explain concepts to each other*. If you can explain a concept to someone, you know you understand it well. If you try to explain something and struggle, you know what you should study and practice more!
- Use the free tutoring available from the Math, Science and Technology Resource Center (S43). Since campus is not completely open this term, go to their website to access their online tutoring services. <http://deanza.edu/studentsuccess/>
- Most of your ability to learn math is based on how hard you work; it isn't based on "natural talent". *Those who work hard learn math better*. Plan to spend up to 10 hours a week outside of class doing homework, getting help, studying for quizzes or exams, doing projects, etc. If you are willing to work hard, you may be surprised how successful you can be!
- Use the following resources to help you learn better (but be sure you can do the math without their help!): [www.wolframalpha.com](http://www.wolframalpha.com) ; [www.desmos.com/calculator](http://www.desmos.com/calculator) ; <https://www.khanacademy.org/math/algebra2>
- Come to office hours! If you would like help on your homework during my office hours, please come prepared having attempted the problem(s) for which you are requesting help. Making notes of where you are stuck is also helpful! Finding a few classmates to work with will make your homework time even more effective! Then, join me for office hours to get help where you're stuck.

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## Math 114-27Z F21 Merrill TTh 4:00-6:15 pm

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<b>Week 1</b>			Class: 1.1-1.3		Class: 1.4-1.5, 2.1		
	<i>Sept. 19</i>	<i>Sept. 20</i>	<i>Sept. 21</i>	<i>Sept. 22</i>	<i>Sept. 23</i>	<i>Sept. 24</i>	<i>Sept. 25</i>
<b>Week 2</b>		Quiz 1 due	Class: 2.2-2.4		Class: 3.1-3.2		
			Chapter 1 HW due				
	<i>Sept. 26</i>	<i>Sept. 27</i>	<i>Sept. 28</i>	<i>Sept. 29</i>	<i>Sept. 30</i>	<i>Oct. 1</i>	<i>Oct. 2</i>
<b>Week 3</b>		Quiz 2 due	Class: 4.1-4.2, 5.1		Class: 5.1-5.4		
			Chapter 2 HW due		Chapter 3 HW due		
	<i>Oct. 3</i>	<i>Oct. 4</i>	<i>Oct. 5</i>	<i>Oct. 6</i>	<i>Oct. 7</i>	<i>Oct. 8</i>	<i>Oct. 9</i>
<b>Week 4</b>			Exam 1 (Ch. 1-4)		Class: 6.1-6.2, 7.1		
			Chapter 4 HW due		Chapter 5 HW due		
			Exam Review due		Project 1 early option		
	<i>Oct. 10</i>	<i>Oct. 11</i>	<i>Oct. 12</i>	<i>Oct. 13</i>	<i>Oct. 14</i>	<i>Oct. 15</i>	<i>Oct. 16</i>
<b>Week 5</b>		Quiz 3 due	Class: 7.1-7.3		Class: 7.4-7.6		
			Chapter 6 HW due				
	<i>Oct. 17</i>	<i>Oct. 18</i>	<i>Oct. 19</i>	<i>Oct. 20</i>	<i>Oct. 21</i>	<i>Oct. 22</i>	<i>Oct. 23</i>
<b>Week 6</b>		Quiz 4 due	Class: 8.1-8.2		Class: 9.1-9.3		
			Chapter 7 HW due				
			Project 1 due				
	<i>Oct. 24</i>	<i>Oct. 25</i>	<i>Oct. 26</i>	<i>Oct. 27</i>	<i>Oct. 28</i>	<i>Oct. 29</i>	<i>Oct. 30</i>
<b>Week 7</b>			Exam 2 (Ch. 5-8)		Class: 9.4-9.6		
			Chapter 8 HW due				
			Exam Review due				
	<i>Oct. 31</i>	<i>Nov. 1</i>	<i>Nov. 2</i>	<i>Nov. 3</i>	<i>Nov. 4</i>	<i>Nov. 5</i>	<i>Nov. 6</i>



Week 8		Quiz 5 due	Class: 10.1-10.2		<i>Veteran's Day</i>		
			Chapter 9 HW due		<i>No Class</i>		
	<i>Nov. 7</i>	<i>Nov. 8</i>	<i>Nov. 9</i>	<i>Nov. 10</i>	<i>Nov. 11</i>	<i>Nov. 12</i>	<i>Nov. 13</i>
Week 9		Quiz 6 due	Class: 10.3-10.4, 11.1 Project 2 early option		Class: 11.1-11.3 Chapter 10 HW due		
	<i>Nov. 14</i>	<i>Nov. 15</i>	<i>Nov. 16</i>	<i>Nov. 17</i>	<i>Nov. 18</i>	<i>Nov. 19</i>	<i>Nov. 20</i>
Week 10			Exam 3 (Ch. 9-11)		<i>Thanksgiving</i>		
			Chapter 11 HW due		<i>No Class</i>		
			Exam Review due				
	<i>Nov. 21</i>	<i>Nov. 22</i>	<i>Nov. 23</i>	<i>Nov. 24</i>	<i>Nov. 25</i>	<i>Nov. 26</i>	<i>Nov. 27</i>
Week 11			Class: 12.1-12.3 Project 2 due		Class: 13 (Review) Chapter 12 HW due		
	<i>Nov. 28</i>	<i>Nov. 29</i>	<i>Nov. 30</i>	<i>Dec. 1</i>	<i>Dec. 2</i>	<i>Dec. 3</i>	<i>Dec. 4</i>
Week 12 (Finals)		Quiz 7 due	<i>No class</i>		Final Exam 4:00-6:00 pm		
					Chapter 13 HW due		
					Final Review due		
	<i>Dec. 5</i>	<i>Dec. 6</i>	<i>Dec. 7</i>	<i>Dec. 8</i>	<i>Dec. 9</i>	<i>Dec. 10</i>	<i>Dec. 11</i>

**Student Learning Outcome(s):**

\*Evaluate real-world situations and distinguish between and apply exponential, logarithmic, rational, and discrete function models appropriately.

\*Analyze, interpret, and communicate results of exponential, logarithmic, rational, and discrete models in a logical manner from four points of view - visual, formula, numerical, and written.