Math 210-63: College Math Preparation Level 1: Pre-Algebra
De Anza College   Winter 2020

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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:
Monday and Wednesday   6:30 – 8:45 pm   Room L43

Office Hours:
Mondays   5:00 – 6:00 pm   Room S43 (in the tutoring lab)

Description: Use of basic arithmetic in application problems, estimation, the real number
system, variables and linear equations, graphs of linear equations and the
Cartesian coordinate system, the concept of function.

Prerequisite: Advisory: EWRT 211 and READ 211 (or LART 211), or ESL 272 and 273.

Materials
Required: - Textbook: PREALGEBRA TEXTBOOK:2012-2013 (College of the Redwoods)
****You may buy a hard copy from the bookstore if you wish, but the electronic
PDF of this book is FREE! It can be accessed through your book list or at
http://msenux2.redwoods.edu/PreAlgText/)****

- A "Basic Calculator" (also known as a 4-function or a 6-function calculator).
Some pictures are included below.

**IMPORTANT: Please make sure that your calculator includes the following
two buttons. (They will look similar on each calculator.) Many basic calculators
do not include these buttons but you will need them for this class.

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

- A few different colors of pencils/pens (you'll be grading your own quizzes and will need a second color, you may want a second color to make some of your work more clear, etc.)

-A notebook and paper to take notes in and do homework on. Some people prefer to do their homework on graphing paper to help them keep lines straight and work neat.

Attendance   Daily, on-time attendance is crucial for your success and expected in order to earn full class participation points. 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. Repeated absences will affect your participation grade. We will usually have a 5-10-minute break during each class for you to walk around, eat a snack outside the classroom, go to the restroom, answer texts, etc.

Electronics Policy

Cell phone use is *not permitted* in class. Please turn your cell phones on silent and keep them packed away in your backpack. Repeated cell phone use will hinder your ability to learn the mathematics we are discussing that day and will distract those around you. If cell phone use becomes an issue, I will have you turn off your phone and store it at the front of the class until class is over. **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.

You may use a basic calculator in this course (included on most quizzes and exams). You may *not* use a graphing or scientific calculator on quizzes or exams, so please do not rely on one when you do your homework.

Add/Drop Deadlines

The final day to add this course is January 18th, 2020.

The final day to drop this course without a "W" is January 20th, 2020. The final day to drop this course is February 28th, 2020. Students are responsible for dropping themselves from the course if desired. 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, 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

Class Participation	10%	
Homework Projects	20%	
Quizzes	5%	
Exams	15%	
Final Exam	25%	
Total	25%	
	100%	

Letter Grade scale

A:	$93\% \le score < 100\%$
A-:	$90\% \le score < 93\%$
B+:	$87\% \le score < 90\%$
B:	$83\% \le score < 87\%$
B-:	$80\% \le score < 83\%$
C+:	$77\% \le score < 80\%$
C:	$70\% \le score < 77\%$
D:	$60\% \le score < 70\%$
F:	$score < 60\%$

Grading Categories

Class Participation (10%)

> Participation in class (being in class, participating in group discussions, class discussions, focusing during individual work time, etc.) is an essential part of learning mathematics. 10% of your grade is based upon how well you are engaged in class. These points will be awarded at the instructor's discretion. Students will vary in how comfortable they are presenting in front of the class or talking in group discussions, so please discuss individual concerns with the instructor. If you are in class, are on time, work hard, and engage during individual and group work, you will earn full points.

Homework (20%)

> Homework will consist of problems from the book, additional problems provided by the instructor, and exam reviews. Homework is due at the beginning of class, the Monday after it is assigned (*unless otherwise indicated on the schedule or via email*). (When we do not have class on a Monday, homework is due the day we return to class.) Each homework assignment will be worth 10 points. 10 points will be given **for completion**—adequate work is shown and answers are provided for each problem assigned. Use the answers for selected problems given in the back of your book to check your work as you go. Late homework will only be awarded up to half credit (5 points for completion).
> **Help and Feedback:** I will give some feedback on the "additional problems" I assign but they will still only be graded upon completion/effort. If you need help on your homework or would like more feedback on returned homework assignments, you may come to my office hours. *Students who come to a session of office hours to get help or feedback will get one bonus point to apply to a homework assignment.*

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Projects (5%)

        Students must complete two projects during the term. 1) The "You *Can* Learn Mathematics" project and 2) The "Mathematics in the Media" 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. Students will be provided with additional information and instructions in class and via email.

        Mathematics in the Media, project 2: Students will choose a movie or TV show from a list provided to them and watch it sometime during the semester. They will complete a brief report (using their choice of writing, diagrams, pictures, etc.), answering questions about what they watched and learned. Students will be provided additional ideas, resources, and instructions in class and via email.

        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.

Quizzes (15%)

        There will be a quiz in class most every Wednesday (see schedule for specific dates). These quizzes will take place at the beginning of class on the days indicated in the schedule and are intended to give you and the instructor immediate feedback regarding how well you are understanding the current material. **There will be no make-up quizzes allowed**. The two lowest quiz scores will be dropped to accommodate real-life incidents that happen (e.g., traffic jam), but you should work extra time into your commute, if necessary, to make sure you can make it to class on time. Please bring a brightly colored (e.g., red, green, neon) pen or pencil to class to use to grade your quiz.

Exams (25%)

        Exams will take place in 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), 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,)

        Basic calculators will be allowed on some portions of the Exams. I will indicate where and further instructions will be given in class. *Scientific calculators and graphing calculators are not allowed.* You may not use your cell phone as a calculator. 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 place

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their phones, backpacks and other belongings at the front of the class near the teacher.

You are allowed a 3-inch x 5-inch index card (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.

Final Exam (25%)

The final for this class is on Wednesday, March 25th from 6:15-8:15 pm. **There will be no make-up opportunities.**

Basic calculators will be allowed on some portions of the Final Exam. I will indicate where and further instructions will be given in class. *Scientific calculators and graphing calculators are not allowed.* You may not use your cell phone as a calculator. Cell phone use during an exam may be grounds 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 at the front of the class near the teacher.

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.

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.

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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**. 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 in the Math, Science and Technology Resource Center (S43). (Their hours are approximately 9:00am - 6:00 pm on Mondays through Thursdays, and 9:00 am – 12:30 pm on Fridays. Check on their door for updated hours.)
- 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 ; 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 210 Class Schedule

Class	Date (2020)	Sections Covered	Topic(s)	Quizzes (start of class)
1	Mon, Jan 6	Intro/Syllabus, 1.1-1.2	Whole numbers; Addition and subtraction of whole numbers	
2	Wed, Jan 8	1.3-1.4	Multiplication and division of whole numbers; Prime factorization	
3	Mon, Jan 13	1.5-1.7	Order of operations; Solving equations	
4	Wed, Jan 15	2.1-2.3	The integers; Addition and subtraction of integers	Quiz 1
	Mon, Jan 20		*No class: Martin Luther King Jr Day*	
5	Wed, Jan 22	2.4	Multiplication and division of integers	Quiz 2
6	Mon, Jan 27	2.5-2.6	Order of operations; Solving equations	
7	Wed, Jan 29		*Exam 1: Chapters 1-2*	
8	Mon, Feb 3	3.1-3.3	Mathematical expressions; Evaluating and simplifying algebraic expressions	
9	Wed, Feb 5	3.4-3.6	Combining like terms; Solving equations involving integers; Applications	Quiz 3
10	Mon, Feb 10	4.0-4.1	Defining fractions; Equivalent fractions	
11	Wed, Feb 12	4.2-4.3	Multiplication and division of fractions	Quiz 4
	Mon, Feb 17		*No class: President's Day*	
12	Wed, Feb 19	4.4, 4.7-4.8	Addition and subtraction of fractions; order of operations with fractions; solving equations with fractions	
13	Mon, Feb 24		*Exam 2: Chapters 3-4*	
14	Wed, Feb 26	5.1-5.3	Decimals; Addition and subtraction of decimals; Multiplication of decimals	
15	Mon, Mar 2	5.3-5.5	Multiplication of decimals; Division of decimals; Fractions and decimals	
16	Wed, Mar 4	5.6-5.8	Equations with decimals; Square roots; The Pythagorean Theorem	Quiz 6
17	Mon, Mar 9	6.1-6.2 (6.3-6.5)	Ratios and rates; Proportions; Unit conversion	
18	Wed, Mar 11	7.1-7.3	Percents, decimals, and fractions; Basic percent problems; Applications of percents	Quiz 7
19	Mon, Mar 16		*Exam 3: Chapters 5-7*	
20	Wed, Mar 18	8.1-8.2, Final Review	The cartesian coordinate system; Graphing linear equations; *Review for Final Exam*	
21	**Wed, Mar 25**		**Final Exam: 6:15-8:15 pm**	

Math 210 Homework Schedule

Class	Class Date (date given)	Date Due	Sections	Topic(s)	Book Problems	Additional Problems
1	Mon, Jan 6	Mon, Jan 13	Intro/Syllabus, 1.1-1.2	Whole numbers; Addition and subtraction of whole numbers	**1.1:** 3, 11, 15, 25, 31, 37, 39, 57 **1.2:** 41, 53, 59, 75, 85, 105, 113	
2	Wed, Jan 8	Mon, Jan 13	1.3-1.4	Multiplication and division of whole numbers; Prime factorization	**1.3:** 21, 35, 43, 45, 51, 59, 63, 69, 71, 73, 87, 107, 109 **1.4:** 1, 3, 18, 71, 77, 91, 95, 107	Note: You will receive additional instructions for your 1.3 homework problems.
3	Mon, Jan 13	Wed, Jan 22	1.5-1.7	Order of operations; Solving equations	**1.5:** 31, 33, 35, 37, 45, 57, 61, 79, 93, 99 **1.6:** 5, 21, 31, 37, 47, 61, 63 **1.7:** 11, 15, 25, 35, 37, 45, 55	*Cups and Beans*
4	Wed, Jan 15	Wed, Jan 22	2.1-2.3	The integers; Addition and subtraction of integers	**2.1:** 5, 15, 25, 27, 33, 37, 44, 49, 69 **2.2:** 17, 21, 25, 31, 65, 67, 71, 81 **2.3:** 5, 11, 17, 23, 31, 43, 53, 55	*Mile High*
	Mon, Jan 20			*No class: Martin Luther King Jr Day*		*Reminder to begin Project 1*
5	Wed, Jan 22	Mon, Jan 27	2.4	Multiplication and division of integers	**2.4:** 17, 21, 25, 31, 37, 49, 61, 65, 71, 81	*Multiplication and Division with Chips*
6	Mon, Jan 27	Mon, Feb 3	2.5-2.6	Order of operations; Solving equations	**2.5:** 1, 5, 15, 25, 41, 49, 81, 83, 91 **2.6:** 1, 5, 13, 19, 25, 29, 31, 41, 53, 57, 67, 85	*Exam 1 Review*
7	Wed, Jan 29			*Exam 1: Chapters 1-2*		Reminder to begin Project 1
8	Mon, Feb 3	Mon, Feb 10	3.1-3.3	Mathematical expressions; Evaluating and simplifying algebraic expressions	**3.1:** 1, 3, 7, 13, 21 **3.2:** 3, 7, 11, 13, 19, 25, 31, 37, 49 **3.3:** 5, 11, 19, 21, 25, 31	
9	Wed, Feb 5	Mon, Feb 10	3.4-3.6	Combining like terms; Solving equations involving integers; Applications	**3.4:** 1, 7, 11, 21, 31, 35, 51, 59 **3.5:** 3, 9, 21, 27, 35, 47, 59 **3.6:** 1, 7, 13	Note: You will receive additional instructions for your 3.4 homework problems.
10	Mon, Feb 10	Wed, Feb 19	4.0-4.1	Defining fractions; Equivalent fractions	**4.1:** 19, 23, 27, 37, 41, 43, 55, 69	*Exploring Fractions*
11	Wed, Feb 12	Wed, Feb 19	4.2-4.3	Multiplication and division of fractions	**4.2:** 13, 15, 17, 27, 63, 69 **4.3:** 1, 7, 33, 37, 51, 59, 67, 75	*Sugar in Six Cans of Soda* and *How Much in One Batch?*
	Mon, Feb 17			*No class: President's Day*		*Work on Project 1 and/or 2*
12	Wed, Feb 19	Mon, Feb 24	4.4, 4.7-4.8	Addition and subtraction of fractions; order of operations with fractions; solving equations with fractions	**4.4:** 21, 27, 31, 35, 45, 65, 75, 97, 123 **4.7:** 1, 9, 21, 29 **4.8:** 1, 17, 25, 47, 81	*Dimes and Pennies* and *Exam 2 Review*
13	Mon, Feb 24			*Exam 2: Chapters 3-4*		Finish Project 1 Work on Project 2

14	Wed, Feb 26	Mon, Mar 2	5.1-5.3	Decimals; Addition and subtraction of decimals; Multiplication of decimals	**5.1:** 1, 7, 17, 23, 63, 67, 71, 73, 81, 85 **5.2:** 5, 9, 15, 19, 25, 35, 59, 65, 81 **5.3:** 1, 9, 17, 29, 37, 45, 49	
15	Mon, Mar 2	Mon, Mar 9	5.3-5.5	Multiplication of decimals; Division of decimals; Fractions and decimals	**5.3:** 59, 63, 65, 71, 73, 81, 91 **5.4:** 1, 7, 15, 21, 27, 41, 65, 69, 91 **5.5:** 49, 53	
16	Wed, Mar 4	Mon, Mar 9	5.6-5.8	Equations with decimals; Square roots; The Pythagorean Theorem	**5.6:** 5, 11, 31, 39, 53 **5.7:** 1, 3, 5, 7, 8, 9, 17, 19, 21, 23, 33, 37, 57, 61, 77 **5.8:** 3, 5, 17, 31	
17	Mon, Mar 9	Mon, Mar 16	6.1-6.2 (6.3-6.5)	Ratios and rates; Proportions; Unit conversion	**6.1:** 25, 27, 37 **6.2:** 5, 13, 15, 29, 37, 47, 51 **6.3:** 77, 81, 89, 103	*Baking Bread 2*
18	Wed, Mar 11	Mon, Mar 16	7.1-7.3	Percents, decimals, and fractions; Basic percent problems; Applications of percents	**7.1:** 5, 11, 19, 25, 37, 39, 43, 51, 55, 69 **7.2:** 1, 3, 11, 15, 31, 61 **7.3:** 1, 3, 5, 11, 25	*Shirt Sale* and *Exam 3 Review*
19	Mon, Mar 16			*Exam 3: Chapters 5-7*		Finish Project 2
20	Wed, Mar 18	Wed, Mar 25	8.1-8.2, Final Review	The cartesian coordinate system; Graphing linear equations; *Review for Final Exam*	**8.1:** 1, 5, 9, 21 **8.2:** 3, 7, 17, 29, 33, 45	*Plotting Points in the Coordinate Plane* and *Final Exam Review*
21	**Wed, Mar 25**			**Final Exam: 6:15 - 8:15 pm**		

Student Learning Outcome(s):

*Demonstrate and apply a systematic and logical approach to solving arithmetic and geometric problems.
*Demonstrate and apply the knowledge and skills required to select the correct introductory formulas, procedures, and concepts from algebra and geometry and use them to solve problems.