



**WEST LOS ANGELES COLLEGE**  
**Mathematics 110- Section -1456**  
**Fall 2014**

**Instructor : C. Raffel**

**Office Hours: Mon/Wed; 7:25AM - 7:55AM ; B-5, Room 103**

**Class time: Mondays and Wednesdays; 8:00 AM - 10: 35 AM ; Location: SC105**

**Instructor Email address:**[wijesecc@wlaac.edu](mailto:wijesecc@wlaac.edu)

**Required Text:** Pre-Algebra , Martin-Gay, 6<sup>th</sup> edition; ISBN: 9780321628862

**Prerequisite:** Mathematics 105 with a grade of 'C' or better or appropriate placement level demonstrated through math assessment process.

**Materials:**

- ◆Textbook in every class meeting
- ◆ Note book
- ◆ Graph Paper
- ◆ Stapler
- ◆ Color pen or pencils

**COURSE DESCRIPTION:** This course prepares the student for Elementary Algebra. It assumes a thorough knowledge of arithmetic. Course content includes integers, signed fractions, signed decimals, grouping symbols, the order of operations, exponents, and algebraic expressions and formulas. The emphasis is on concepts essential for success in algebra.

**COURSE OBJECTIVES: Upon completing this course, a student will be able to:**

1. Add, subtract, multiply and divide whole numbers
2. Simplify exponential expressions
3. Use grouping symbols and order of operations to simplify expressions with whole numbers
4. Use the divisibility tests
5. Prime factor whole numbers
6. Use primes and exponents for find the least common multiple
7. Use primes and exponents to find the greatest common factor
8. Use the fundamental algebraic properties

9. Add, subtract, multiply and divide integers
10. Use grouping symbols and the order of operations to simplify expressions with integers
11. Expand and reduce signed fractions
12. Convert improper signed fractions to mixed numbers and vice versa
13. Add, subtract, multiply and divide signed fractions
14. Use grouping symbols and order of operations to simplify expressions with signed fractions
15. Add, subtract, multiply and divide signed decimals
16. Find the square root of a perfect square
17. Estimate to find the square root of a perfect square
18. Determine if a square root is rational or irrational
19. Simplify expressions that include square roots
20. Use perfect square factors to reduce square roots
21. Reduce square roots using prime factorizations
22. Convert a percent to a fraction or decimal
23. Convert a fraction or decimal to percent
24. Convert between fractions, decimals and percents
25. Use zero and negative exponents
26. Simplify products with exponential expressions that have the same base
27. Simplify quotients with exponential expressions that have the same base
28. Simplify powers of powers
29. Simplify a power of a product
30. Recognize numbers written in scientific notation
31. Convert numbers written in standard notation to scientific notation and vice versa
32. Perform operations on numbers written in scientific notation

33. Be familiar with basic vocabulary related to polynomials
34. Determine the degree of a polynomial
35. Add, subtract, multiply and divide polynomials
36. Learn to substitute numeric values for variables in various types of formulas

**Student Learning Outcomes (SLOs)** Upon successful completion of the course, students will be able to:

- a. **Critical Thinking:** Analyze problems by differentiating fact from opinions, using evidence, and using sound reasoning to specify multiple solutions and their consequences.
- b. **Communication:** Effectively communicate thought in a clear, well-organized manner to persuade, inform, and convey ideas in academics, work, family and community settings.
- c. **Quantitative Reasoning:** Identify, analyze, and solve problems that are quantitative in nature.

### **Official Program SLOs**

- a. Apply quantitative thinking processes using basic mathematical operations to solve common academic, workplace, and family problems. (Theme: mathematical operations)
- b. Use mathematical tools essential for analyzing quantitative problems and for producing solutions. (Theme: mathematical tools)
- c. Select appropriate math strategies for solving and handling real life problems involving finance, economics, and family issues. (Theme: mathematical problem-solving)

### **Course Requirements**

1. We will cover chapters 1-8,&10. I strongly recommend that you read the material we will cover in class before that class!
2. **Methods of presentation:**
  - ◆ Lecture
  - ◆ Class discussions
  - ◆ Asking and answering questions
  - ◆ Interactive peer-to-peer activities, projects and group
3. **Attendance:**

I will be taking attendance on daily basis. Students are expected to attend every class. It has been my experience that student who do not attend class regularly perform poorly on the exams. Plan to attend every class meeting on time. For each class meeting during the first 5 -10 minutes will start with a review of the previous homework assignment. This will involve questions by students on specific problems and explanations by the instructor or a student. Next, new topics will be introduced. During the lecture, there will be many examples presented.

Active participation is very important. At this time, you should ask questions and volunteer answers. Individuals will be called upon in class to provide suggestions on

how to proceed with a problem. The methods of instruction in this class will be lecture, discussion, and group learning. You are expected to take an active role in this learning. You are responsible for all information covered in class. **If a students have five hours or more absences, the instructor may drop them from the course and they may receive a grade of a “W”.**

4. **Homework:** The most important part of any mathematic course is the homework. Typically in a Math class, to understand the majority of the information it is necessary to continuously practice your skills. This requires a tremendous amount of effort on the student’s part. Otherwise, it is impossible to succeed in any college level mathematics class. Do your homework as soon as you can after each class meeting. Read the material in the next lessons before class. **In this course you must expect to spend minimum of at least three hours outside of class for each hour spent in class.**
5. **Class Notes:** Students are required to copy notes from the class discussion. Please keep a separate note book for class notes.
6. **Group work:** This is also another method of instruction for this class. At the end of some of the class meetings are composed group work sessions. (Group of 3 to 4 students). For each group work session, at the end of the class all of the papers will be collected but only one paper from each group will be graded or a quiz is given from the group work problems.
7. **Required Homework/ Group Work Format:**
  - ◆ Always present neat work
  - ◆ For every assignment, if your assignment spans more than one page, staple them together
  - ◆ If your paper from a spiral bound notebook, tear off the edge.
  - ◆ Show all adequate steps for the work.
8. **In Class Quizzes and Chapter Exams:** There will be 6 quizzes and 4 chapter exams as outlined on the attached schedule. The lowest quiz grade will be dropped. Therefore you will not be allowed to make up any missing quizzes. Arriving late during a quiz/chapter exam will lead you to have less time to complete the quiz/chapter exam. Each chapter exam will be given a maximum of 100 points. No make-up exams will be given, but your final exam will replace one missed exam. Refer to your course schedule in advance for the dates of the quizzes and chapter exams. Review all the corresponding CLASS NOTES and HW problems before each quiz/chapter exam. **Missed quizzes/chapter exams will be scored as zero.**
9. **Final exam:** There will be a comprehensive departmental final exam on during the final exam week. The final exam should be taken seriously and will require a good deal of dedication on your part in terms of study time. Several weeks before the final. Must review your class notes, Chapter exams, quizzes. Homework, and class work from the semester.

### Class Expectations:

1. Full participation in the class which involves regular attendance, coming to class on time prepared with appropriate reading and writing materials , being focused and engaged in the class activities , and stay until class is over.
2. All assignments will be turned in on the due dates; work will be neat and legible.
3. You will at all times demonstrate the required respect, professionalism and integrity that is expected of a person committed to becoming successful in college.
4. You will keep the instructor informed and aware if you are having in difficulty in attaining success in any aspect of what is required of you. If you fail-I fail!!
5. That you utilize the resources made available to you in terms of tutoring, mentoring, additional support from the instructor during and after class time.

### Grading System

Assignment Category	# of Assign.	Points Per Assignment	Total Points	% of Total Grade
Quizzes	5	20	100	10%
HW	20	5	100	10%
Classwork	25	2	50 +50 EC	5% +(5% EC)
Chapter Exams	4	125	500	50%
Final Exam	1	250	250	25%
<b>Grand Total</b>		-	<b>1000</b>	<b>100%</b>
900 - 1000 = A	800 - 899 = B	700 - 799 = C	600 - 699 = D	599 and below = F

**Cellphone Policy:** Students may not use their cell phones to accept or make calls while in class(no cell phones on the desk). If cell phones and beepers are brought to class, they must be turned to silent or vibration mode. Students who do not adhere to this policy will be asked to leave the class. If it happens a second time, the student will be referred to the Vice President of Student Services, and will return to class only after the Vice President has cleared him/her to return.

**Children in class:** By directives of Academic Affairs, students are not allowed to bring their children to class. Childcare arrangements need to be made outside of class time.

**Disability Policy:** If you have a disability and might need accommodations in this class, please contact Heldman Learning Resources Center (HLRC) 121, DSP&S office. I accommodate all necessities you might need in this class upon receiving the required direction from the center. Please contact (310) 287-4450 for more information.

**Cheating Policy:** Cheating constitutes academic dishonesty and in general will be handled as part of the course grading process. The penalty may range from on credit for assignment up to and including exclusion and/or an “F” grade for the course.

**Disclaimer:** Although every effort will be made to adhere to the policies, procedures, and schedules outlined in this syllabus, the instructor reserves the right to revise any information without prior notice.

**Important Dates:**

<b>Deadlines:</b> <b>Last day to add: February 21<sup>st</sup></b> Drop classes with a refund; Sept 12 Drop classes without a "W" ; Sept 12 <b>Drop classes with a "W" ; Nov 21</b> Apply for Pass/No Pass deadline: Sept 12	<b>Holidays (Campus is closed):</b> Veteran's Day, Nov 11 Thanksgiving Nov 27 - Nov 30
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**Internet Resources:**

- West Los Angeles College ..... [www.wlac.edu](http://www.wlac.edu)
- WolframAlpha ..... <http://www.wolframalpha.com/>
- Purple Math ..... <http://www.purplemath.com/>
- Math TV ..... <http://www.mathtv.com/>
- Khan Academy ..... <http://www.khanacademy.com>

**Please write the phone number and email address of at least three of your classmates in spaces provided here. Having some contact information from your classmates will help you during the semester.**

Name: \_\_\_\_\_ Phone #: \_\_\_\_\_  
email: \_\_\_\_\_

Name: \_\_\_\_\_ Phone #: \_\_\_\_\_  
email: \_\_\_\_\_

Name: \_\_\_\_\_ Phone #: \_\_\_\_\_  
email: \_\_\_\_\_

**I, \_\_\_\_\_, read and completely understood the content of this syllabus. If there are questions or disagreement with the content, I will contact me, on or before February 21<sup>st</sup>.**

**Your Initials:** \_\_\_\_\_

**WEST LOS ANGELES COLLEGE**  
**Math 110, Fall 2014**

**Lecture OUTLINE (This schedule is tentative. It is subject to change.)**

	<b>Learning Objectives</b>	<b>Learning Objectives</b>	<b>Homework</b>
<b>Week 1</b> <b>9/2- 9/5</b> <b>Wednesday</b>	<p><b>Introduction</b>            Tips for Success in Mathematics            Learning Objectives:</p> <ol style="list-style-type: none"> <li>1. Getting ready for this course</li> <li>2. Understand some general tips for success.</li> <li>3. Understand how to use the text.</li> <li>4. Get help as soon as you need it.</li> <li>5. Learn how to prepare for and take an exam.</li> <li>6. Develop good time management.</li> </ol> <p><b>Chapter 1.1</b></p> <ol style="list-style-type: none"> <li>1. Find the place value of a digit in a whole number.</li> <li>2. Write a whole number in words and in standard form.</li> <li>3. Write a whole number in expanded form.</li> <li>4. Read tables.</li> <li>5. Key Vocabulary: whole numbers, place value, standard form, expanded form,</li> </ol>	<p><b>Chapter 1.2</b></p> <ol style="list-style-type: none"> <li>1. Add whole numbers.</li> <li>2. Subtracting whole numbers.</li> <li>3. Solve problems by adding or subtracting whole numbers.</li> <li>5. Key Vocabulary: sum, addend, perimeter, minuend, subtrahend and difference.</li> </ol>	<p><b>Assignment #1:</b></p> <p><b>Assignment # 2:</b></p> <p><b>Due:</b></p>
<b>Week 2</b> <b>9/8- 9/12</b> <b>Monday</b>	<p><b>Chapter 1.4</b></p> <ol style="list-style-type: none"> <li>1. Round whole numbers.</li> <li>2. Key Vocabulary: rounding, graph, estimating, and exact.</li> </ol> <p><b>Chapter 1.5</b></p> <ol style="list-style-type: none"> <li>1. Use the properties of multiplication.</li> <li>2. Multiply whole numbers.</li> <li>3. Solve problems by multiplying whole numbers.</li> <li>5. Key Vocabulary: factor, product, distribute, and area</li> </ol>	<p><b>Chapter 1.6</b></p> <ol style="list-style-type: none"> <li>1. Divide whole numbers</li> <li>2. Perform long division.</li> <li>3. Solve problems that require dividing by whole numbers.</li> <li>4. Key Vocabulary: dividend, divisor, quotient, and average.</li> </ol> <p><b>Chapter 1.7</b></p> <ol style="list-style-type: none"> <li>1. Write repeated factors using exponential notation.</li> <li>2. Evaluate expressions containing exponents.</li> <li>3. Use order of operations.</li> <li>4. Find the area of a square.</li> <li>5. Key Vocabulary: exponential notation, exponent, base, order of operations, and area of a square</li> </ol>	<p><b>Assignment # 3:</b></p>
<b>9/10/14</b> <b>Wednesday</b>	<p><b>Chapter 2.1; Introduction to Integers</b></p> <ol style="list-style-type: none"> <li>1. Represent real-life situations with integers.</li> <li>2. Graph integers on a number line.</li> <li>3. Compare integers.</li> <li>4. Find the absolute value of a number.</li> <li>5. Find the opposite of a number.</li> <li>6. Read bar graphs containing integers.</li> <li>7. Key Vocabulary: positive numbers, negative numbers, signed numbers, integers, is less than, is greater than, opposite, absolute value</li> </ol> <p><b>Chapter 2.2; Adding Integers</b></p> <ol style="list-style-type: none"> <li>1. Add integers.</li> </ol>	<p><b>Chapter 2.3;</b>  <b>Subtracting Integers</b></p> <ol style="list-style-type: none"> <li>1. Subtract integers.</li> <li>2. Add and subtract integers.</li> </ol> <p><b>Chapter 2.4;</b>  <b>Multiplying and Dividing Integers</b></p> <ol style="list-style-type: none"> <li>1. Multiply integers.</li> <li>2. Divide integers.</li> </ol> <p><b>Chapter 2.5;</b>  <b>Order of Operations</b></p> <ol style="list-style-type: none"> <li>1. Simplify expressions by using the order of operations.</li> <li>2. Find the average of a list of numbers.</li> <li>3. Evaluate an algebraic expression</li> </ol>	<p><b>Assignment # 4:</b></p> <p><b>Assignment #5:</b></p> <p><b>Due:</b></p>

<p><b>Week 3</b> <b>9/15- 9/19</b></p> <p><b>Monday</b></p>	<p><b>Chapter 1 quiz</b> <b>Chapter 2.6</b> <b>Solving Equations:</b> 1. Introduction to equations and solutions of equations. 2. Use the addition property of equality to solve equations. 3. Use the multiplications property of equality to solve equations. 4. Key Vocabulary: <i>equation, expression, multiplication</i> 5. <i>distributive property, and simplify</i></p>	<p><b>Review Chapters 1 &amp;2</b></p>	<p><b>Assignment # 6:</b></p> <p><b>Assignment # 7:</b></p> <p><b>Due</b></p>
<p><b>9/17/14</b> <b>Wednesday</b></p>	<p><b>Chapter 2 quiz</b> <b>Review Chapters 1 &amp;2</b></p>		<p><b>Assignment # 8:</b></p> <p><b>Assignment # 9:</b></p> <p><b>Due:</b></p>
<p><b>Week 4</b> <b>9/22- 9/26</b></p> <p><b>Monday</b></p>	<p><b>Chapter 1 &amp;2 Exam</b></p>		
<p><b>9/24/14</b> <b>Wednesday</b></p>	<p><b>Chapter 3.1</b> <b>Simplifying Algebraic Expressions</b> 1. Use properties of numbers to combine like terms. 2. Use properties of numbers to multiply expressions. 3. Simplify expressions by multiplying and then combining like terms. 4. Find the perimeter and area of figures. 5. Key Vocabulary: <i>algebraic expression, constant, variable, numerical coefficient, like terms,</i></p>	<p><b>Chapter 3.2- Chapter 3.3</b> <b>Solving Equations:</b> 1. Use the addition property or the multiplication property to solve equations. 2. Use both properties to solve equations. 3. Solve linear equations containing parentheses</p>	<p><b>Assignment # 10:</b></p> <p><b>Assignment # 11:</b></p> <p><b>Due:</b></p>
<p><b>Week 5</b> <b>9/29- 10/3</b></p> <p><b>Monday</b></p>	<p><b>Chapter 3.4;</b> Linear Equations in One Variable and Problem Solving 1. Write sentences as equations. 2. Use problem-solving steps to solve problems. 3. Translate word phrases to mathematical expressions. 4. Key Vocabulary: <i>expression, and equation</i> <i>sentence</i> <math>\square</math> <i>equation</i></p>		<p><b>Assignment # 12:</b></p> <p><b>Assignment # 13:</b></p> <p><b>Due:</b></p>

<p><b>10/1/14</b> <b>Wednesday</b></p>	<p><b>Chapter 3 Quiz</b></p>	<p><b>Chapter 4.1;</b> <b>Introduction to Fractions</b>  1. Identify the numerator and the denominator of a fraction.  2. Write a fraction to represent parts of figures or real-life data.  3. Graph Fractions on a Number Line.  4. Review division properties for 0 and 1.  5. Write mixed numbers as improper fractions.  6. Write improper fractions as mixed numbers or whole numbers.  7. Key Vocabulary: <i>fractions, numerator, denominator, proper fraction, improper fraction, mixed number.</i></p>	<p><b>Assignment # 14:</b></p> <p><b>Assignment # 15:</b></p> <p><b>Due:</b></p>
<p><b>Week 6</b> <b>10/6- 10/10</b></p> <p><b>Monday</b></p>	<p><b>Chapter 3 Exam</b></p>	<p><b>Chapter 4.2;</b>  1. Write a number as a product of prime numbers.  2. Write a fraction in simplest form.  3. Determine whether two fractions are equivalent.  4. Solve problems by writing fractions in simplest form.  Key Vocabulary: <i>factor, prime factorization, prime numbers, composite number, simplest form, lowest terms.</i></p>	<p><b>Assignment # 16:</b></p> <p><b>Assignment # 17:</b></p> <p><b>Due:</b></p>
<p><b>10/8/14</b> <b>Wednesday</b></p>	<p><b>Chapter 4.3</b> <b>Multiplying and Dividing Fractions</b>  1. Multiply fractions.  2. Evaluate exponential expressions with fractional bases.  3. Divide fractions.  4. Multiply and divide given fractional replacement values.  5. Solve applications that require multiplication of fractions.  6. Key Vocabulary: <i>reciprocal, "of".</i></p>	<p><b>Chapter 4.7</b> <b>Operations On Mixed Numbers.</b>  1. Graph positive and negative fractions and mixed numbers.  2. Multiply or divide mixed or whole numbers.  3. Add or subtract mixed numbers.  4. Solve problems containing mixed numbers.  5. Perform operations on negative mixed</p>	<p><b>Assignment # 18:</b></p> <p><b>Assignment # 19:</b></p> <p><b>Due:</b></p>
<p><b>Week 7</b> <b>10/13- 10/17</b></p> <p><b>Monday</b></p>	<p><b>Chapters 4.4 &amp; 4.5</b> <b>Adding and Subtracting Like/Unlike Fractions</b>  1. Add or subtract unlike fractions.  2. Write fractions in order.  3. Evaluate expressions given fractional replacement values.  4. Solve problems by adding or subtracting unlike fractions.  5. Key Vocabulary: <i>least common denominator (LCD).</i></p>		<p><b>Assignment # 20:</b></p> <p><b>Assignment # 21:</b></p>



	5. Solving problems that involve adding and subtracting decimals.	6. Solve problems by multiplying decimals. 7. Key Vocabulary: $\pi$ ( <i>pi</i> ), <i>perimeter</i> , <i>circumference</i> , <i>diameter</i> , <i>radius</i> .	<b>Assignment # 28:</b>  <b>Due:</b>
<b>10/29/31 Wednesday</b>	<b>Chapter 5.4 Dividing Decimals</b> 1. Divide decimals. 2. Estimate when dividing decimals. 3. Divide decimals by powers of 10. 4. Evaluate expressions with decimal replacement values. 5. Solve problems by dividing decimals.	<b>Chapter 5.5; Fractions, Decimals, and Order of Operations</b> 1. Write fractions as decimals. 2. Compare fractions and decimals. 3. Simplify expressions containing decimals and fractions using order of operations. 4. Solve area problems containing fractions and decimals. 5. Evaluate expressions given decimal replacement values.	<b>Assignment # 29:</b>  <b>Assignment # 30:</b>  <b>Due:</b>
<b>Week 10 11/3- 11/7 Monday</b>	<b>Chapter 5.6</b> Equations Containing Decimals Learning Objectives: 1. Solve Equations Containing Decimals	<b>Chapter 5.7</b> Mean, Median, and Mode <b>Learning Objectives:</b> 1. Find the mean of a list of numbers. 2. Find the median of a list of numbers. 3. Find the mode of a list of numbers. 4. Key Vocabulary: <i>measures of central tendency</i> , <i>mean</i> , <i>median</i> , <i>mode</i> , <i>grade point average</i> ( <i>GPA</i> ), <i>weighted mean</i> .	<b>Assignment # 31:</b>  <b>Assignment # 32:</b>  <b>Due:</b>
<b>11/5/14 Wednesday</b>	<b>Chapter 5 quiz</b>	<b>Catch up for Chapter 4&amp;5</b>	
<b>Week 11 11/10- 11/14 Monday</b>	<b>Chapters 4 &amp; 5 Exam</b>	<b>Chapter 6.1</b> <b>Ratio and Rates</b> 1. Write ratios as fractions. 2. Write rates as fractions. 3. Find unit rates. 4. Find unit prices. 5. Key Vocabulary: <i>ratio</i> , <i>rates</i> , <i>unit rate</i> , <i>miles per hour</i> , <i>unit price</i> .	<b>Assignment # 33:</b>

			<b>Due:</b>
<b>11/12/14 Wednesday</b>	<b>Chapter 6.2 Proportions</b> 1. Write sentences as proportions. 2. Determine whether proportions are true. 3. Finding the unknown number in a proportion. 4. Key Vocabulary: <i>proportion, cross products.</i>	<b>Chapter 6.3 Proportions and Problem Solving</b> 1. Solve problems by writing proportions	<b>Assignment # 34:</b>  <b>Assignment # 35:</b>  <b>Due:</b>
<b>Week 12 11/17- 11/21  Monday</b>	<b>Chapter 6.4 Square Roots and the Pythagorean Theorem</b> 1. Find the square root of a number. 2. Approximate square roots. 3. Use the Pythagorean Theorem. 4. Key Vocabulary: <i>square root, radical sign, positive square root, Pythagorean Theorem, leg, hypotenuse</i>	.	<b>Assignment # 36:</b>  <b>Due:</b>
<b>11/19/14 Wednesday</b>	<b>Chapter 6 Exam</b>	<b>Chapter 7.1 Percent, Decimals, and Fractions</b> 1. Understanding percent. 2. Write percent as decimals or fractions. 3. Write decimals or fractions as percent. 4. Applications with percent, decimals, and fractions. 5. Key Vocabulary: <i>percent.</i>	<b>Assignment # 37:</b>  <b>Due:</b>
<b>Week 13 11/24- 11/28  Monday</b>	<b>Chapter 7.2 Solving Percent Problems with Equations</b> 1. Write percent problems as equations. 2. Solve percent problems. 3. Key Vocabulary: <i>of, is, what number, percent equation..</i>		<b>Assignment # 38:</b>  <b>Due:</b>

