



Los Angeles Community College District

COURSE OUTLINE

(Replaces PNCR and Course Outline)

SECTION I: BASIC COURSE INFORMATION

- 1. COLLEGE: Pierce
2. SUBJECT (DISCIPLINE) NAME (40 characters, no abbreviations): Math
3. COURSE NUMBER: 112
4. COURSE TITLE: Prealgebra
5. UNITS: 3.00
6. CATALOG COURSE DESCRIPTION -- Provide a description of the course, including an overview of the topics covered:

Discusses abstract ideas necessary for understanding algebra and reviews selected topics in arithmetic relevant to algebra. Introduces fundamental notions of algebra including signed numbers, simple equations, and modeling.

- 7. CLASS SCHEDULE COURSE DESCRIPTION -- Provide a brief description of the course, including an overview of the topics covered:

Discusses abstract ideas necessary for understanding algebra and reviews selected topics in arithmetic relevant to algebra. Introduces fundamental notions of algebra including signed numbers, simple equations, and modeling.

- 8. COLLEGE APPROVAL DATE:

- 9. UPDATES (check all applicable boxes):

- Content Last Update: Jan. 17, 2005
Objectives Last Update: Jan. 17, 2005
College Specific Course Attributes/Data Elements Last Update:
Districtwide Course Attributes/Data Elements Last Update:
Other (describe) Last Update:

Empty rectangular box for additional information.

- 10. CLASS HOURS:

Table with 4 columns: Activity, Hours per week (based on 18 weeks), Total Hours per term (hrs per week x 18), Units. Rows include Lecture, Lab/activity (w/ homework), Lab/activity (w/o homework), and Total.

1 Underlined course attributes are the same for the course throughout the LACCD; all other course attributes are college specific.

**Note:** The Carnegie Rule and Title 5, section 55002 sets forth the following minimum standards: 1 unit = 1 hour lecture per week, 2 hours homework per week; **OR** 2 hours per week of lab with homework; **OR** 3 hours of lab per week without homework. The hours per week are based on a standard 18-week calendar. Lecture also includes discussion and/or demonstration hours, laboratory includes activity and/or studio hours.

## 11. PREREQUISITES, COREQUISITES, ADVISORIES ON RECOMMENDED PREPARATION, and LIMITATION ON ENROLLMENT

**Note:** The LACCD's *Policy on Prerequisites, Corequisites and Advisories* requires that the curriculum committee take a separate action verifying that a course's prerequisite, corequisite or advisory is an "appropriate and rational measure of a student's readiness to enter the course or program" and that the prerequisite, corequisite or advisory meets the level of scrutiny delineated in the policy.

Prerequisites: **None** (If yes, complete information below)

Subject	Number	Course Title	Units	Validation Approval Date (for official use only)

Corequisite: **None** (If yes, complete information below)

Subject	Number	Course Title	Units	Validation Approval Date (for official use only)

Advisories: **None** (If yes, complete information below)

Subject	Number	Course Title	Units	Validation Approval Date (for official use only)

## 12. OTHER LIMITATIONS ON ENROLLMENT (see Title 5, section 58106 and Board Rule 6803 for policy on allowable limitations. Other appropriate statutory or regulatory requirements may also apply):

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## SECTION II: COURSE CONTENT AND OBJECTIVES

### 1. COURSE CONTENT AND OBJECTIVES:

<b>COURSE CONTENT AND SCOPE –Lecture:</b> If applicable, outline the topics included in the lecture portion of the course ( <i>Outline reflects course description, all topics covered in class</i> ).	Hours per topic	<b>COURSE OBJECTIVES - Lecture</b> ( <i>If applicable</i> ): upon successful completion of this course, the student will be able to... ( <i>Use action verbs – see Bloom’s Taxonomy below for “action verbs requiring cognitive outcomes.”</i> )
1. Basic quantitative reasoning skills 2. Signed numbers 3. Fractions, decimals and percent 4. Use of variables as unknowns and in modeling 5. Simple algebraic skills a. Order of operations and numerical evaluation b. Simplifying numerical expressions and evaluating algebraic expressions c. Combining like terms and applying the distributive law 6. Equations and inequalities 7. Modeling and problem-solving 8. Area and perimeter 9. Graphing: bar graphs, line graphs, coordinate system	4 4 4 7 8 8 8 4 7	Upon successful completion of this course the student will be able to:  1. Calculate with fractions, decimals, and percents 2. Employ rounding, approximation, and numerical evaluation to assess the reasonableness of numerical answers 3. Use basic arithmetic properties to simplify expressions 4. Compute perimeter, area, and volume of simple geometric figures 5. Perform operations with signed numbers 6. Perform computations involving positive integer exponents and square roots 7. Use the order of operations for computations with signed numbers, exponents and square roots 8. Write algebraic expressions to model variable quantities 9. Use simple formulas to solve distance, interest and mixtures problems 10. Evaluate algebraic expressions 11. Simplify algebraic expressions by combining like terms and using the distributive law 12. Perform arithmetic operations on simple algebraic fractions 13. Solve simple linear equations 14. Distinguish between an algebraic expression and an equation; recognize and verify solutions 15. Model simple problems with algebraic expressions 16. Use ratios and rates to compare quantities 17. Use proportions to solve problems 18. Plot points in the Cartesian coordinate system

		19. Read and interpret graphs and tables 20. Display information in bar graphs, line graphs, etc 21. Graph simple equations in two variables
Total lecture hours*		54

\*Total lecture and laboratory hours (which includes the final examination) must equal totals on page 1.

## 2. REQUIRED TEXTS:

Provide a representative list of textbooks and other required reading; include author, title and date of publication:

Prealgebra, Yoshiwara; 2003  
Prealgebra, Bach and Leitner; 2005

## 3. SUPPLEMENTARY READINGS:

Reading assignments may include, but are not limited to the following:

## 4. WRITING ASSIGNMENTS:

Title 5, section 55002 requires grades to be "based on demonstrated proficiency in subject matter and the ability to demonstrate that proficiency, at least in part, by means of essays or, in courses where the curriculum committee deems them to be appropriate, by problem solving exercises or skills demonstrations by students." Writing assignments in this course may include, but are not limited to the following:

Writing assignments in this course include, but are not limited to, problem solving exercises.

## 5. REPRESENTATIVE OUTSIDE ASSIGNMENTS:

Out of class assignments may include, but are not limited to the following:

Exercises from the text and written assignments as assigned by the instructor.

## 6. REPRESENTATIVE ASSIGNMENTS THAT DEMONSTRATE CRITICAL THINKING:

Title 5, section 55002(a) requires that a degree applicable course have a level of rigor that includes "critical thinking and the understanding and application of concepts determined by the curriculum committee to be at college level". Critical thinking may include, but is not limited to analysis, synthesis, and evaluation. Provide examples of assignments that demonstrate critical thinking.

1. Homework assignments by the instructor (challenging problems involving signed numbers, order of operations, etc.)  
2. In-class presentations (students working problems at the front of the classroom with class participation)  
3. Group work in or outside of the classroom  
4. Writing assignments involve problem solving and analysis. For example: "When the railroad lays a new track, they always leave a small amount of space between the ends of adjacent rails. This is because the rails expand on hot days, and without some room between rails the tracks would buckle. Suppose that a fifteen mile section of rail expands one inch, causing the track to buckle as shown in the