



Los Angeles Community College District

COURSE OUTLINE

SECTION I: BASIC COURSE INFORMATION

- 1. COLLEGE: Pierce
2. SUBJECT (DISCIPLINE) NAME (40 characters, no abbreviations): Math
3. COURSE NUMBER: 260
4. COURSE TITLE: Precalculus
5. UNITS: 5.00
6. CATALOG COURSE DESCRIPTION -- Provide a description of the course, including an overview of the topics covered:

Develops properties of the elementary functions, including exponential, logarithmic and trigonometric functions. Graphing is stressed. Elements of analytic geometry including conic sections and sequences and series are developed.

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

Develops properties of the elementary functions, including exponential, logarithmic and trigonometric functions. Graphing is stressed. Elements of analytic geometry including conic sections and sequences and series are developed.

- 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:

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- 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: **Yes** (If yes, complete information below)

Subject	Number	Course Title	Units	Validation Approval Date (for official use only)
Math	240	Trigonometry	3	
Intermediate Algebra placement test				

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:

COURSE CONTENT AND SCOPE – Lecture: 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	COURSE OBJECTIVES - Lecture (<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. Fundamentals, such as absolute value and distance; inequalities; lines and circles 2. Functions including definition, notation, domain and range 3. Modeling with functions 4. Graphs of standard functions and piecewise defined functions 5. Graphing techniques: translation, reflection and compression; symmetry 6. Linear, quadratic, and power functions and their applications 7. Polynomial and rational functions and their applications 8. Composition of functions and inverse functions 9. Exponential and logarithmic functions including properties of logarithms, graphs, equations and applications, such as exponential growth and decay 10. Trigonometric functions including graphs, identities, equations and inverse trigonometric functions 11. Conic sections 12. Polar coordinates, including graphing 13. Sequences and series, including sigma notation This course may also include 1. Parametric equations 2. Rational root theorem and theory of equations 3. Binomial theorem 4. Numerical evaluation of limits	7 3 8 7 4 7 7 4 12 13 6 6 6	Upon successful completion of this course, the student will be able to: 1. Define and graph functions 2. Read and interpret function values from a graph 3. Analyze global properties of a graph 4. Choose a graph to model a situation 5. Employ graphing techniques to translate, reflect and compress graphs of functions 6. Formulate equations for transformations of graphs 7. Use functions to model practical problems 8. Compose and decompose functions 9. Formulate an equation for the inverse of a function; sketch its graph and interpret in context 10. Use the properties of exponential and logarithmic functions to solve equations and applications 11. Use trigonometric identities to simplify expressions and solve trigonometric equations 12. Identify and graph conic sections 13. Formulate equations of conic sections from verbal descriptions 14. Convert between polar and Cartesian coordinates 15. Graph using polar coordinates 16. Evaluate arithmetic and geometric sequences 17. Employ sigma notation to represent series
Total lecture hours*	90	

2. REQUIRED TEXTS:

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

Functions Modeling Change, Connally
 Precalculus, Cohen
 Precalculus with Unit Circle Trig, Cohen