Los Angeles Community College District

COURSE OUTLINE
(Replaces PNCR and Course Outline)

Section I: Basic Course Information

OUTLINE STATUS: ==Course Update==, Degree Applicable, 2008-2009

1. **COLLEGE: Los Angeles Southwest College**

2. <u>**SUBJECT (DISCIPLINE) NAME**</u>[1]): Mathematics
   (40 characters, no abbreviations

3. <u>**COURSE NUMBER:**</u> 215

4. <u>**COURSE TITLE:**</u> Principles of Mathematics

5. <u>**UNITS:**</u> 3

6. **CATALOG COURSE DESCRIPTION --** Provide a description of the course, including an overview of the topics covered:

A course designed primarily for students who plan to teach in elementary school. The course covers the language of sets; elementary logic; systems of numeration; nature of numbers; fundamental operations, rational numbers and fractions: decimals, percents, and real numbers; and various algorithms used in calculations.

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

A course designed primarily for students who plan to teach in elementary school. Emphasis is placed on the "why" of mathematics rather than the "how".

8. **INITIAL COLLEGE COURSE APPROVAL DATE: Fall 2000**
   OUTLINE APPROVAL DATE: 12/16/08

9. **UPDATES, IF EXISTING COURSE:** (check all applicable boxes):

   ☒ **Content**   **Last Update:**
   ☒ **Objectives**   **Last Update:**
   ☐ **College Specific Course Attributes/Data Elements**   **Last Update:**
   ☐ **Districtwide Course Attributes/Data Elements**   **Last Update:**
   ☐ **Other** (describe)   **Last Update:**

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[1] <u>Underlined</u> course attributes are the same for the course throughout the LACCD; all other course attributes are college specific.

10. CLASS HOURS:

	Hours per week (based on 18 weeks)	Total Hours per term (hrs per week x 18)	Units
Lecture:	3	54	3
Lab/activity (w/ homework):	0	0	0
Lab/activity (w/o homework):	0	0	0
Total:	3	54	3

> **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.

ENTRY SKILLS FOR COURSES WITH PREREQUISITES (provided by MATH 125):
1.   Employ fundamental laws, exponents, radicals,   2.   Use equations (Linear, quadratic, and some of higher degree),   3.   Employ systems of equations (linear and quadratic), graphic representation.

.   Prerequisites: Yes   (If Yes, complete information below)

.

Subject	Number	Course Title	Units	Validation Approval Date (official use only)
Math	125	Intermediate Algebra	5	12/16/08 (Previously 10/11/2000)

.   Corequisite: None (If Yes, complete information below)

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

.   Advisories: None (If Yes, complete information below)

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

12. REPETITIONS -- Number of times course may be repeated for credit (three maximum): 0 (see: Section V, #9)
     None

13. 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):

None

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 *(outline reflects course description, all topics covered in class).*	Hours per topic	COURSE OBJECTIVES - **Lecture** (*If applicable)*: Upon successful completion of this course, the student will be able to… *(Use action verbs – see Bloom's Taxonomy below for "action verbs requiring cognitive outcomes.")*
1. Sets: cardinality, operations with sets, relations and functions, correspondences and Venn diagrams.	10	1. Analyze sets, compare other set operations and their properties, solve addition, subtraction, multiplication and division of whole-numbers, and examine functions.
2. Elementary Logic: true tables, negation, conjunction, disjunction, implication, inductive and deductive reasoning, equivalent statements, quantifiers, and valid and invalid arguments.	8	2. Design compound statements, distinguish deductive and inductive logic, and compare valid and invalid arguments.
3. Systems of Numeration: historical account of various numeration systems, writing numerals in these systems, e.g. Egyptian, Babylonian, Roman.	6	3. Examine numeration systems, and formulate mental mathematics and estimation for whole-number operations.
4. Nature of Numbers: number theory, divisibility, prime factorization.	9	4. Formulate the number theory, analyze divisibility, arrange prime and composite numbers and distinguish greatest common divisor and least common multiple.
5. Fundamental Operations, Rational Numbers and Fractions: illustrations, fractions and decimals, operations, properties	6	5. Evaluate the set of rational numbers, examine the operations of addition, subtraction, multiplication and division of rational numbers, value the set of rational numbers, and solve proportional reasoning.
6. Decimals, Percents, and Real Numbers: operations of decimals, mental math, estimations with percents, compound interest, square root.	7	6. Arrange decimals, solve operations on decimals, analyze no terminating decimals, calculate computing interest and evaluate advanced properties of percents and real numbers.
7. Various Algorithms Used in Calculations: operations of algorithms,	8	7. Appraise Algorithms for whole-numbers addition, subtraction, multiplication and division.
Total **Lecture** hours*	54	

COURSE CONTENT AND SCOPE -- **Laboratory:** If applicable, **outline** the topics included in the laboratory portion of the course (*outline reflects course description, all topics covered in class*).	Hours per Topic	COURSE OBJECTIVES - **Laboratory** (*If applicable*): Upon successful completion of this course, the student will be able to… (*Use action verbs – see Bloom's Taxonomy below for "action verbs requiring cognitive outcomes.")*[2]
	0	
Total **Lab** hours*	0	

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

Bloom's Taxonomy

SIMPLE SKILLS <<---------------------------------->> COMPLEX SKILLS					
			Critical Thinking		
Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
define repeat record list recall name relate underline	translate restate discuss describe recognize explain express identify locate report review tell	interpret apply employ use demonstrate dramatize practice illustrate operate schedule shop sketch	distinguish analyze differentiate appraise calculate experiment test compare contrast criticize diagram inspect debate inventory question relate solve examine categorize	compose plan propose design formulate arrange assemble collect construct create set up organize prepare	judge appraise evaluate rate compare value revise score select choose assess estimate measure

_____

[2] In general "activity" courses or portions of courses are classified "laboratory."

☒**Course**
☐**Program**
☐**Institutional**
(Check one box above)

LASC STUDENT LEARNING OUTCOMES MATRIX

Course/Program/Institutional Title: MATH 215, Principles of Mathematics I
Faculty/Staff Participants: Dr. Ed Hector, faculty; Dr. Lernik Saakian, Chair

SLO Review, 12.16.08, 12.07.08

The student will… **(outcome)**	As measured by the following method…. **(assessment strategy)**	And, if applicable, scored by the following learning rubric. (provide attachment)	Results are examined to determine if the outcome is achieved. Include planned or actual assessment date. **(results & evaluation)**	Recommendations to improve teaching and learning. **(modifications)**
1. Perform fundamental operations such as multiplication, addition or subtraction to simplify computations.	Embedded assessment on exams. Formative evaluation on chapter tests and final exam.		Plan to assess Fall 2009 (or whenever class is next taught)	

curriccommSLOcourseoutlineAddendum, Approved Curriculum Committee, 2/29/08; Approved Academic Senate, 3/11/08

2.   REQUIRED TEXTS:

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

Title	Author	Date
Mathematics for Elementary School Teachers	O'Daffer, Charles;	2008
A Problem Solving Approach to Mathematics for Elementary School Teachers	Billstein, Libeskind, Lott	2007

3.   SUPPLEMENTARY READINGS:

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

None

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:

Students write out step-by-step solutions to problems.
Sample assignment: Compute product 3.200
$$3.200 = 3. (2.10^2)$$
$$= (3.2).10^2$$
$$= 6.10^2$$
$$= 6.10^2 + 0.10^1 + 0.1$$
$$= 600$$

5. **REPRESENTATIVE OUTSIDE ASSIGNMENTS:**

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

Students do homework and exercise sets as assigned by the instructor.
Sample assignment: Solve for x:
$$3X = 6$$
$$X = 6/3$$
$$X = 2$$

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.

Sample assignment: Students are asked to explain why the standard algorithms for addition, subtraction, multiplication and division work and why they are the best algorithms for doing pencil and paper computations.

7. **METHODS OF EVALUATION:**

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." Methods of evaluation may include, but are not limited to the following (please note that evaluation should measure the outcomes detailed "Course Objectives" at the beginning of Section II):

Exams, Problem Solving Exercises

8. **METHODS OF INSTRUCTION:**

Methods of instruction may include, but are not limited to the following:

☒ Lecture
☒ Discussion
☐ Laboratory
☐ Activity
☐ Field Experience
☐ Independent Study
☐ Other (explain)

9. **SUPPLIES:**

   List the supplies the student must provide.

   None

10. **COMPUTER COMPETENCY:**

    If applicable, explain how computer competency is included in the course.

    N/A

11. **INFORMATION COMPETENCY:**

    Information competency is the ability to find, evaluate use, and communicate information in all its various formats. It combines aspects of library literacy, research methods and technological literacy. Information competency includes consideration of the ethical and legal implications and requires the application of both critical thinking and communications skills. If applicable, explain how information competency is included in the course.

    N/A

12. **DIVERSITY:**

    If applicable, explain how diversity (e.g., cultural, gender, etc.) is included in the course.

    N/A

13. **SCANS COMPETENCIES** (required for all courses with vocational TOP Codes; recommended for all courses)**:**

    SCANS (**S**ecretary's **C**ommission on **N**ecessary **S**kills) are skills the Department of Labor identified, in consultation with business and industry leaders, which reflect the skills necessary for success in the workplace. Check the appropriate boxes to indicate the areas where students will develop the following skills (please note that all SCANS competencies do not apply to all courses):

    RESOURCES

    ☐ **Managing Time:** Selecting relevant goal-related activities, ranking them in order of importance, allocating time to activities, and understanding, preparing and following schedules.

    ☐ **Managing Money:** Using or preparing budgets, including making cost and revenue forecasts; keeping detailed records to track budget performance, and making appropriate adjustments.

    ☐ **Managing Material and Facility Resources:** Acquiring, storing, allocating, and distributing materials, supplies, parts, equipment, space or final products in order to make the best use of them.

    INTERPERSONAL

    ☒ **Participating as Member of a Team:** Working cooperatively with others and contributing to group's efforts with ideas, suggestions and effort.

    ☐ **Teaching Others New Skills:** Helping others learn needed knowledge and skills.

    ☐ **Exercising Leadership:** Communicating thoughts, feelings, and ideas to justify a position, encouraging, persuading, convincing or otherwise motivating an individual or group, including responsibly challenging existing procedures, policies or authority.

☐ **Negotiating:** Working toward agreement that may involve exchanging specific resources or resolving divergent interests.

☐ **Working with Cultural Diversity:** Working well with men and women and with people from a variety of ethnic, social, or educational backgrounds.

INFORMATION

☒ **Acquiring and Evaluating Information:** Identifying a need for data, obtaining the data from existing sources or creating them, and evaluating their relevance and accuracy.

☒ **Organizing and Maintaining Information:** Organizing, processing and maintaining written or computerized records and other forms of information in a systematic fashion.

☒ **Interpreting and Communicating Information:** Selecting and analyzing information and communicating the results of others, using oral, written, graphic, pictorial, or multimedia methods.

☐ **Using Computers to Process Information:** Employing computers to acquire, organize, analyze and communicate information.

SYSTEMS

☒ **Understanding Systems:** Knowing how social, organizational and technological systems work and operating effectively with them.

☐ **Monitoring and Correcting Performance:** Distinguishing trends, predicting impacts of actions on system operations, diagnosing deviations in the functioning of a system/organization, and taking necessary steps to correct performance.

☐ **Improving or Designs Systems:** Making suggestions to modify existing systems in order to improve the quality of products or services and developing new or alternative systems.

TECHNOLOGY

☐ **Selecting Technology:** Judging which sets of procedures, tools or machines, including computers and their programs, will produce the desired results.

☐ **Applying Technology to Tasks:** Understanding overall intent and proper procedures for setting up and operating machines, including computers and their reprogramming systems.

☐ **Maintaining and Troubleshooting Equipment:** Preventing, identifying, or solving problems with equipment, including computers and other technologies.

Section III: RELATIONSHIP TO COLLEGE PROGRAMS

1. **THIS COURSE WILL BE AN <u>APPROVED REQUIREMENT</u> FOR AN APPROVED ASSOCIATE DEGREE OR CERTIFICATE PROGRAM:** <mark>Yes</mark>

   a. If yes, the course will be a restricted elective portion of the "approved program" listed on the State Chancellor's Inventory of Approved Programs (approved programs can be found on the State Chancellor's Office website at http://misweb.cccco.edu/esed/webproginv/prod/invmenu.htm

Restricted elective for AA in Liberal Studies (Program ID = 08454)

   > NOTE: In order for a course to be approved as a requirement for an associate degree or certificate program, the program must be listed on the State Chancellor's Office *Inventory of Approved Programs* AND the course must be listed in the college catalog as either a requirement or an elective for the program. If course is not part of an approved program at the college adopting the course, it will be considered to be a "stand-alone" course, and is subject to the State Chancellor's approval criteria. The college must complete and submit the Chancellor's Office "APPLICATION FOR APPROVAL OF CREDIT" form. Certain courses are granted "blanket approval" by the State Chancellor's Office and do not require separate approval. See the Chancellor's Office *Program and Course Approval Handbook* for details. LACCD Skills **Certificates are not State approved programs** and are not listed on the Chancellor's Office *Inventory of Approved Programs*.

2. **GENERAL EDUCATION REQUIREMENTS FOR THE ASSOCIATE DEGREE STATUS:**

   a. Area requested: <mark>None</mark>   <mark>Approval</mark> date:

   If applicable, provide an explanation of how the course meets the General Education parameters for one of the five general education areas – *Natural Sciences, Social and Behavioral Sciences, Humanities, Language and Rationality, Health and Physical Education* -- contained in Board Rule 6201.14 -General Education Requirements.
   http://marlin.laccd.edu/district/BoardRules_AdmRegs/boardrules.htm

   a. 2nd Area requested: <mark>None</mark>   <mark>Approval</mark> date:

   If applicable, provide an explanation of how the course meets General Education parameters for an additional general education area – *Natural Sciences, Social and Behavioral Sciences, Humanities, Language and Rationality, Health and Physical Education* -- contained in Board Rule 6201.14 - General Education Requirements. http://marlin.laccd.edu/district/BoardRules_AdmRegs/boardrules.htm

Section IV: ARTICULATION INFORMATION

(Complete in consultation with College Articulation Officer)

1. **TRANSFER STATUS:**

    a. Transferable to the University of California: **Yes**

        b. UC approval date: 2001

    c. Transferable to the California State University: **Yes**

        d. College approval date: 2000

2. **GENERAL EDUCATION FOR TRANSFER:**

IGETC Certification:

    a. Area requested: None
    b. Date requested:
    c. IGETC approval date:

If applicable, provide an explanation of how the course meets the appropriate General Education parameters, as defined in IGETC Certification Guidelines.

CSU Certification:

    a. Area requested: B-4: Mathematical & Quantitative Reasoning
    b. Date requested: 10/2000
    c. CSU approval date: Fall 2000

If applicable, provide an explanation of how the course meets the appropriate General Education parameters, as defined in CSU Certification Guidelines.

    a. 2nd Area requested: None
    b. Date requested:
    c. IGETC approval date:

If applicable, provide an explanation of how the course meets the appropriate General Education parameters, as defined in IGETC Certification Guidelines.

    a. 2nd Area requested:
    b. Date requested:
    c. CSU approval date:

If applicable, provide an explanation of how the course meets the appropriate General Education parameters, as defined in CSU Certification Guidelines.

3. **MAJOR REQUIREMENT FOR TRANSFER** – Will this course be articulated to meet lower division major requirements?   NO
    List college/university and the majors:

College/University	Major(s)

CAN NUMBER: **CAN SEQUENCE NUMBER:**

CAN Approval -- Date requested: Date approved**:**

Section V: SUPPLEMENTAL COURSE INFORMATION

1. **DEPARTMENT/DIVISION NAME: Mathematics**

2. **DEPARTMENT/DIVISON CODE: 8**

3. **SUBJECT CODE** 589

4. **SUBJECT ABBREVIATION** MATH

5. **SPC CODE**

6. **ABBREVIATION FOR TRANSCRIPTS:** MATH 215

7. **DEGREE CREDIT:** Indicate whether the course meet the "standards for approval" for degree credit course set forth in Title 5, section 55002(a)(2), which requires the course to have a degree of intensity, difficulty, and vocabulary that the curriculum committee has determined to be at the college level :
   This courses is Degree Applicable

8. **CREDIT/NO CREDIT GRADING:** Letter Grade

9. **REPETITIONS** -- Number of times course may be repeated for credit (three maximum): 0

   How does the repetition of this course meet Title 5, section 58161 requirements? A course may be repeatable when, "course content differs each time it is offered, and that the student who repeats it is gaining an expanded educational experience for one of the following reasons: (A) Skills or proficiencies are enhanced by supervised repetition and practice within class periods; or (B) Active participatory experience in individual study or group assignments is the basic means by which learning objectives are obtained."

10. **PRIOR TO TRANSFERABLE LEVEL –** This course attribute applies to *English*, *writing*, *ESL*, *reading* and *mathematics* courses ONLY. If applicable, indicate how many levels below the transferable level this course should be placed: Not applicable

11. **CREDIT BASIC SKILLS** -- Title 5, section 55502(d) defines basic skills as "courses in reading, writing, computation, and English as a Second Language, which are designated as non-degree credit courses pursuant to Title 5, section 55002(b)." No   If Yes, course must be non-degree applicable.

12. **CROSS REFERENCE** -- Is this course listed as equivalent in content to existing College/District courses in another discipline? No

    If Yes, list courses (documentation of cross-discipline agreement must be provided):

13. **COURSE SPECIFICALLY DESIGNED FOR STUDENTS WITH DISABILITIES** -- Title 5, section 56029 allows a course to be repeatble when continuing success of the students with disabililties is dependent on additional repetitions of a specific class. Is this course designated as an "approved special class" for students with disabilities? No

    If yes, provide an explanation of how this course meets the requirements of Title 5, section 56029.

14. **COOPERATIVE EDUCATION STATUS --** Title 5, section 55252 allows for two types of Cooperative Education: 1) General Work Experience Education -- i.e., supervised employment, which is intended to assist students in acquiring desirable work habits, attitudes and career awareness, which need not be related to the students' educational goals; or 2) Occupational Work Experience Education -- i.e., supervised employment, extending classroom based occupational learning at an on-the-job learning station, which is related to the students' educational or occupational goal. Is this course part of the college's approved cooperative work experience education program? No

15. **COURSE CLASSIFICATION**: **Liberal Arts and Sciences**

     Note: A course's Classification, TOP Code and SAM code must be aligned – e.g., Courses with an "Occupational" Course Classification must have an "Occupational" TOP Code **and** a SAM Code of A, B, C, or D; courses that do not have an "Occupational" Course Classification cannot have an Occupational TOP Code **and** must have an "E" SAM Code. Courses coded as "basic skills" in #11 should be coded "Adult and Secondary Basic Skills."

16. **TOP CODE – (6 digits XXXX.XX)** **1701.00**
     Course content should match discipline description in Taxonomy of Programs found at www.cccco.edu/cccco/esed/curric/curriculum.htm.

17. **SAM CODE** (**S**tudent **A**ccountability **M**odel): **E-Non-Occupational**

     SAM Codes (see CCC Chancellor's Office *Student Accountability Model Operations Manual*, 1984) should be assigned as follows:

     Priority "A" – Apprenticeship: Courses designed for an indentured apprentice must have the approval of the State of California, Department of Industrial Relations Department, Division of Apprenticeship Standards.

     Priority "B" – **Advanced Occupational:** Courses taken by students in the advanced stages of their occupational programs. Courses should be offered in one specific occupational area <u>only</u>. Priority letter "B" should be assigned sparingly; in most cases, no more than two courses in any one program should be labeled "B." "B"-level courses must have Priority "C" prerequisites in the same program area.

     Priority "C" – Clearly Occupational: Courses generally taken by students in the middle stages of their programs should have a difficulty level sufficient to detract "drop-ins." Courses may be offered in several occupational programs within a broad area. The "C" priority, however, should also be used for courses within a specific program area when the criteria for "B" classification are not met. A "C"-level course should provide the student with entry-level job skills.

     Priority "D" -- Possibly Occupational: "D" courses are those taken by students in the beginning stages of their occupational programs. The "D" priority can also be used for service (or survey) courses for other occupational programs.

     Priority "E" -- Non-occupational.

SECTION VI: APPROVAL STATUS

1. APPROVAL STATUS:

a. ☐ New Course   .Board Approval Date: .   Effective Semester:
b. ☐ Addition of Existing District   .College Approval Date: .   Effective Semester:
   Course
c. ☐ Course Change*   .College Approval Date: .   Effective Semester:
d. ☒ Outline Update   .College Approval Date: **12/16/08**

- Changes to a course require the completion of a "Course Change Request" form and approval by the college's Curriculum Committee. In some cases districtwide approval is also required; see, Administrative Regulation E-65, section 3© for details.

SECTION VII: APPROVAL INFORMATION FOR NEW OR ADDED COURSES
(complete in consultation with Department Chair and the appropriate Academic Administrator)
N/A – Existing Course

1. ORIGINATOR:

2. DEPARTMENT:

3. IF THIS IS A NEW COURSE, INDICATE HOW THE COLLEGE PLANS TO MEET THE EXPENSE OF THIS COURSE:

☐   By additional funds. Describe:

☐   By deleting courses from the college catalog and course database. List specific courses to be deleted:

☐   By deleting sections of existing courses. List courses and number of sections to be deleted:

   First year: Second year: Third year:

☐By rotating sections of existing courses. List courses and number of sections to be rotated, as well as the semesters in which they will be offered:

4. IMPACT -- Will this course directly impact other course offerings and/or associate degree or certificate programs on campus?
   No (If yes, briefly explain how)

5. METHOD OF SUPPORT -- Indicate how the college plans to support the proposed course:

   Additional staff -- List additional staff needed:

Classroom -- List classroom type needed:

Equipment -- List new equipment needed and indicate funding source for any new equipment:

Supplies- List supplies and indicate dollar value:

Library/Learning Resources- The course initiator shall consult with the College Librarian and review the college library, book, periodical, and electronic resource collections relevant to this course. List additional titles and resources to be considered for purchase as funding permits:

CONTENT REVIEW FOR PREREQUISITE VALIDATION

Target Course & Number, Title: MATH 215, Principles of Mathematics I
(Course to which pre/corequisite/advisory applies)

Check Applicable Box

☒ Prerequisite: **Course & Number, Title: MATH 125, Intermediate Algebra**

☐ Corequisite:

☐ Advisory:

A.   **Target Course Entry Skills: Course & Number, Title: MATH 215, Principles of Mathematics I**
(For prerequisites/corequisites, list specific skills and/or knowledge necessary for students to succeed in the target class. For advisories, list skills/knowledge which will enrich or deepen the student's knowledge obtained from the course but without which the student may still succeed in the course. Attach additional sheet if necessary. NUMBER EACH SKILL.)

1. Employ fundamental laws, exponents, radicals,
2. Use equations (Linear, quadratic, and some of higher degree),
3. Employ systems of equations (linear and quadratic), graphic representation,

B.   **Exit Skills Provided By Prerequisite/Corequisite/Advisory Course or Assessment:**
   Course & Number, Title: MATH 125, Intermediate Algebra
(List specific skills and/or knowledge that are the outcome of the prerequisite/corequisite/advisory course or assessment. For courses already in the curriculum, these should be present in the course objectives in the course outline. Attach additional sheet if necessary. NUMBER EACH SKILL.)

1. Set up and solve mathematical equations involving linear, quadratic, exponential, radical and logarithmic equations.
2. Set up and solve words problems involving linear, quadratic, exponential, radical and logarithmic equations.
3. Construct graphical tables and graphs of various functions.
4. Factor various linear, quadratic, exponential, radical and logarithmic equations.
5. Set up and construct graphs involving inequalities and absolute inequalities using appropriate properties of linear, quadratic, exponential, radical and logarithmic equations.

CONTENT REVIEW SKILLS MATRIX FOR PREREQUISITE VALIDATION*

*Validation requires at least one match of each entry skill with any exit skill(s).

COURSE & NUMBER: MATH 215
Course Title: Principles of Mathematics I

Entering Skills of Target Course

COURSE & NUMBER: MATH 125
Course Title: Intermediate Algebra
Exit Skills of Prerequisite Course

	1	2	3	4	5	6	7	8	9
1	X								
2	X	X	X						
3			X						
4	X								
5	X								
6									
7									
8									

Was validation achieved? _X__ YES or ___ NO

Comments:
(Include justification for assessments, health and safety, or non-course prerequisites)

PARTICIPANTS IN CONTENT REVIEW:
(Signatories should include instructors for both exit and entering skills courses.)

Name: Hector, E by L. Saakian Title: Math Professor   Initial: EH by LSDate: 12/16/2008

Name: Lernik Saakian   Title: Department Chair   Initial: LS   Date: 12/16/2008

Name: _____ Title: _____Initial: _____Date: _____

CERTIFIED BY:

E. Hector by Lernik Saakian   12/16/2008
Initiator   Date
Lernik Saakian   12/16/2008
Department Chairperson   Date
Linda Larson-Singer   12/16/2008
Curriculum Chairperson   Date

LOS ANGELES COMMUNITY COLLEGE DISTRICT
COURSE STANDARDS AND CRITERIA

Subject: **MATH**   Number: **215**   Course Title: **Principles of Mathematics I**

Using the Official Course Outline, please determine whether or not the above listed credit course meets the following standards and criteria required in Title V, Part VI of the California Administrative Code, and which has been designated as appropriate to the Associate Degree. Place a (X) in the appropriate box.

STANDARDS FOR APPROVAL Section 55002	RATING CRITERION	
	MET	NOT MET
Grading Policy: The course provides for measurement of student performance in terms of the stated course objectives and culminates in a formal, permanently recorded grade based upon uniform standards in accordance with section 55023. The grade is 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.	X	
Units: The course grants units of credit based upon a relationship specified by the governing board between the number of units assigned to the course and the number of lecture and/or laboratory hours or performance criteria specified in the course outline. The course also requires a minimum of three hours of student work per week, including class time for each unit of credit, prorated for short-term, extended term, laboratory and/or activity courses.	X	
Intensity: The course treats subject matter with a scope and intensity that requires students to study independently outside of class time.	X	
Prerequisites and Corequisites: When the college and/or district curriculum committee determines, based on a review of the course outline of record, that a student would be highly unlikely to receive a satisfactory grade unless the student has knowledge or skills not taught in the course, then the course shall require prerequisites or corequisites that are established, reviewed, and applied in accordance with the requirements of this article.	X	
Basic Skills Requirements: If success in the course is dependent upon communication or computation skills, then the course shall require, consistent with the provisions of this article, as prerequisites or corequisites eligibility for enrollment in associate degree credit courses in English and/or mathematics, respectively.	X	
Difficulty: The course work calls for critical thinking and the understanding and application of concepts determined by the curriculum committee to be at college level.	X	
Level: The course requires learning skills and a vocabulary that the curriculum committee deems appropriate for a college course.	X	
Course Outline of Record: The course is described in a course outline of record that shall be maintained in the official college files and made available to each instructor. The course outline of record shall specify the unit value, the expected number of contact hours for the course as a whole, the prerequisites, corequisites or advisories on recommended preparation (if any) for the course, the catalog description, objectives, and content in terms of a specific body of knowledge. The course outline shall also specify types or provide examples of required reading and writing assignments, other outside-of-class assignments, instructional methodology, and methods of evaluation for determining whether the stated objectives have been met by students.	X	
Conduct of Course: Each section of the course is to be taught by a qualified instructor in accordance with a set of objectives and with other specifications defined in the course outline of record.	X	
Repetition: Repeated enrollment is allowed only in accordance with provisions of sections 51002, 55040-55043 and 58161.	X	

Title5Assurances,DegreeApplicable,1007

CERTIFICATION AND RECOMMENDATION

☒ **This course meets Title 5 requirements for Associate Degree applicable college credit towards an Associate of Arts Degree.**

☐ **This course meets Title 5 requirements but does not satisfy the requirements for an Associate Degree applicable course.**

We certify that the information and answers above properly represent this course.

Hector, E. by Lermik Saakian	**12/18/2008**
Originator	Date
Lernik Saakian	**12/18/2008**
Department/Cluster Chairperson	Date
Linda Larson Singer	**12/16/2008**
Articulation Officer	Date
Shelley Werts	**12/18/2008**
Librarian	Date
Dan Walden	**12/18/2008**
Dean (if applicable)	Date
Linda Larson-Singer	**12/16/2008**
Curriculum Committee Chairperson	Date
Alfred Reed	**12/19/2008**
Academic Senate President	Date
Leige Doffoney	**01/06/2009**
Vice President, Academic Affairs	Date
Jack E. Daniels	**01/06/2009**
College President	Date