Los Angeles Trade-Technical College

NON-CREDIT COURSE OUTLINE

SECTION I - BASIC COURSE INFORMATION

DATE: 07/31/17

SELECT ONE: ☒ New Course ☐ Course Update ☐ Course Reinstate ☐ Outline Update

DEPARTMENT NAME: Noncredit (Academic and Workforce Connections)

SUBJECT/DISCIPLINE NAME (CB01): BSICSKL

COURSE NUMBER: 036CE

COURSE TITLE (CB02): PATHWAY MATH

Max 68 characters including punctuation and spaces

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

- Checklist:
- Course number and title
- Status (noncredit versus credit or others)
- A content/objective description, a short paragraph (course description) that provides a well-developed overview of topics covered. It should be thorough enough to establish the comparability of the course to those at other colleges and to convey the role of the course in the curriculum as well as to distinguish it from other courses at the college. It should be brief enough to encourage a quick read. To save space, many colleges use phrases rather than complete sentences. For noncredit courses that may lead to credit courses, it is a good idea to consider the catalog descriptions for the common receiving programs or institutions to promote a logical pathway for students intending this route.
- Course type (lecture, lab, activity, special topics, etc.), and contact hours
- Fulfills a certificate of completion, competency or high school graduation requirements
- Ability to articulate or prepare for credit transfer coursework

JUSTIFICATION/NEEDS & PURPOSE OF COURSE:

Basic Skills 036: Pathway Math. Non-credit

This course is designed for students working in Pathways with existing math content to reinforce math competencies required for their AA degree. Students work primarily in a lab setting on a customized curriculum. Students are taught self-assessment skills and independent learning skills utilizing mathematics technology tools. Mathematical topics in this course include objectives including but not limited to: calculations in whole numbers, integers, rational, irrational and complex numbers; solving linear, quadratic, rational, radical, exponential and logarithmic equations and inequalities; graphing functions in two variables; and their applications.

Enter a brief description of the background and rationale for the course. This might include a description of a degree or certificate for which the course is required or the relationship of this course to other courses in the same or other disciplines. Please note that a justification stating "student need" will not suffice.

Majority of students learn numerous math skills in their own pathway but cannot earn credit for math objectives obtained.

References:
CCCCO Program and Course Approval Handbook, Fifth Edition- 2013, pp 186-195
ASCCC The Course Outline of Record: A Curriculum Reference Guide, pp 42 – 58, 2008

CLASS HOURS: Under "total hours per term," indicate the total number of hours the average student will need to complete the course objectives in section II. To determine the number of standard hours per week, divide the total hours by 18.

	Total Hours per term	Standard Hours per week (total hours per term divided by 18 weeks)
Lecture hours:	18	1
Lab hours:	36	2
Total hours:	54	3

REPEATABILITY (Number of times the course can be repeated): **9**

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."

LIMITATIONS ON ENROLLMENT (see Title 5, section 58106 for policy on allowable limitations. Other appropriate statutory or regulatory requirements may also apply):

None

TOP CODE (CB03): 170100

Category/TOP Code: (* denotes a Valid Top Code that is also in alignment with the Basic Skills Initiative (BSI) definition of a basic skills course)

- English as a Second Language (ESL): 493084*, 493085*, 493086*, 493087*, 493100*
- Immigrant Education: 220120, 220500, 220700, 493090*
- Elementary and Secondary Basic Skills: 150100*, 152000*, 170100*, 170200, 493009*, 493014, 493030, 493031, 493032, 493033, 493060*
- Health & Safety: 083510, 083570, 083580, 083700, 089900, 129900
- Substantial Disabilities: ANY TOP Code
- Parenting: 130500-130590, 130800
- Home Economics: 130100-139900
- Courses for Older Adults: ANY TOP Code
- Short-Term Vocational: ANY VOCATIONAL TOP Code
- Workforce Preparation: ANY VOCATIONAL TOP Code or 493010, 493011, 493012, 493013. 493072

TRANSFER STATUS (CB05):

Other than English, writing, ESL, reading and mathematics courses, most noncredit courses are C (Not transferable)

☐ A (Transferable to both UC and CSU) ☐ B (Transferable to CSU only) ☒ C (Not transferable)

References:
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PRIOR TRANSFER LEVEL (CB21):

This element indicates course level status for English, writing, ESL, reading and mathematics courses.

- ☒ Y (Not applicable)
- ☐ A (One level below transfer)
- ☐ B (Two levels below transfer)
- ☐ C (Three levels below transfer)
- ☐ D (Four levels below transfer)
- ☐ E (Five levels below transfer)
- ☐ F (Six levels below transfer)
- ☐ G (Seven levels below transfer)
- ☐ H (Eight levels below transfer).

Student Accountability Model (SAM) Code (CB09):

- ☐ A – Apprenticeship
- ☐ B - Advanced Occupational
- ☐ C - Clearly Occupational
- ☐ D – Possibly Occupational
- ☒ E- Non-occupational

SAM Code:

- A - Apprenticeship: Courses designed for an indentured apprentice, which must have the approval of the State of California, Department of Industrial Relations, Division of Apprenticeship p Standards.
- B - Advanced Occupational: Courses taken by students in the advanced stages of their occupational programs. Courses should be offered in one specific occupational area.
- C - Clearly Occupational: Courses generally taken by students in the middle stages of their programs, which should be of 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.
- 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.
- E- Non-occupational.

BASIC SKILLS STATUS (CB08):

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)."

- ☒ Basic Skills Course
- ☐ Not a Basic Skills Course

COURSE CLASSIFICATION STATUS (CB11):

This field identifies courses eligible for enhanced funding. Noncredit courses will have a value of J or K if they are part of an approved Career Development and College Preparation (CDCP) program. Noncredit courses that are not part of an approved program will have a value of L until the program is approved.

- ☐ J -Workforce Preparation Enhanced Funding
- ☒ K - Other Noncredit Enhanced Funding
- ☐ L - Non-Enhanced Funding

NONCREDIT CATEGORY (CB22):

** Categories qualify for enhanced funding, as long as they are a part of an approved CDCP program.

- ☐ A (English as a Second Language (ESL)**
- ☐ B (Immigrant Education)
- ☒ C (Elementary and Secondary Basic Skills)**
- ☐ D (Health and Safety)
- ☐ E (Substantial Disabilities)
- ☐ F (Parenting)
- ☐ G (Home Economics)
- ☐ H (Courses for Older Adults)
- ☐ I (Short Term Vocational)**
- ☐ J (Workforce Preparation)**

References:
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PROGRAM STATUS (CB24):

☐ Program Applicable ☒ Not Program-Applicable

APPROVED SPECIAL CLASS (CB13): Title 5 section 56028.

☐ S (designated as an approved special class for disabled students) ☒ N (not a special class)

SPECIAL CHARACTERISTIC(S) (if applicable):

☐ Learning Assistance (a form of supplemental instruction)
☐ Bilingual Instruction (a system of instruction that builds upon the language skills of a pupil whose primary language is not English or derived from English)
☐ Convalescent Setting (a course taught in a convalescent home, skilled nursing facility, residential care home, day care center, or nursing home)
☐ Correctional Facility (a course taught either at or through a federal, state, or local correctional institution)
☐ Apprenticeship (a course that provides related and supplemental instruction for apprenticeship and coordination of instruction with job experience, upon agreement with the program sponsor/employer and the California Division of Apprenticeship Standards)
☐ Persons of Substantial Disabilities (a course designed to serve persons with substantial disabilities)
☐ Citizenship for Immigrants (a course designed to provide instruction and services in citizenship)

PREREQUISITES, COREQUISITES or ADVISORIES:

Select One	Subject	Number	Course Title	Units
☐ Prerequisite ☐ Corequisite ☐ Advisory				
☐ Prerequisite ☐ Corequisite ☐ Advisory				
☐ Prerequisite ☐ Corequisite ☐ Advisory				

References:
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SECTION II - COURSE CONTENT AND OBJECTIVE

COURSE CONTENT AND OBJECTIVES Outline the topics included in the lab portion of the course *(Outline reflects course description, all topics covered in class). Add more lines as needed.*

• The content element contains a complete list of all topics to be taught in the course. The list should be arranged by topic with sub-headings. Content items should be subject based.

• Objectives: (Include Total Hours for each Topic), should be stated in terms of what students will be able to do, should clearly connect to achievement of the course goals, should be concise but complete: ten objectives might be too many; one is not enough, should use verbs showing active learning, theory, principles, and concepts must be adequately covered. Skills and applications are used to reinforce and develop concepts, each objective should be broad in scope, not too detailed, narrow, or specific.

Content (Hours):	**Hrs per topic**	**Objectives:**
Place Value and Names for Whole Numbers (0-3) Rounding Whole Numbers (0-2) Comparing Whole Numbers (0-1) Adding Whole Numbers and Applications (0-4) Subtracting Whole Numbers and Applications (0-3) Estimation (0-2) Multiplying Whole Numbers and Applications (0-6) Dividing Whole Numbers and Applications (0-6) Properties of Laws and Whole Numbers (0-6) The Distributive Property (0-2) Understanding Exponents and Square Roots (0-3) Order of Operations (0-4) Introduction to Fractions and Mixed Numbers (0-2) Proper and Improper Fractions (0-3) Factors and Primes (0-4) Simplifying Fractions (0-2) Comparing Fractions (0-2) Multiplying Fractions and Mixed Numbers (0-4) Dividing Fractions and Mixed Numbers (0-5) Adding Fractions and Mixed Numbers (0-6) Subtracting Fractions and Mixed Numbers (0-4) Decimals and Fractions (0-3) Ordering and Rounding Decimals (0-4) Adding and Subtracting Decimals (0-3) Multiplying and Dividing Decimals (0-5) Estimation with Decimals (0-1) Simplifying Ratios and Rates (0-3) Understanding proportions (0-3)		• The student will be able to perform the four basic operations on rational numbers • The student will be able to apply and follow the mathematical principles and order of operations to evaluate numerical expressions involving rational number problems. • The student will be able to solve application problems by using critical-thinking skills

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Convert Percents, Decimals and Fractions (0-2) Solve Percent Problems (0-2) The Metric System (0-2) Converting within the Metric System (0-1) Using Metric Conversions to Solve Problems (0-1) Temperature Scales (0-2)		
Selected Geometry Topics (0-8) Variables and Expressions (0-2) Integers (0-3) Rational and Real Numbers (0-4) Adding Integers (0-2) Adding Real Numbers (0-4) Subtracting Real Numbers (0-3) Multiplying and Dividing Real Numbers (0-4) Associative, Commutative and Distributive Laws (0-3) Solving One-Step Equations Using Properties of Equality (0-2) Solving Multi-Step Equations (0-2) Special Cases and Applications (0-2) Formulas (0-2) Solving One-Step Inequalities (0-3)		• The student will be able to define and manipulate signed numbers and variables. • The student will be able to solve simple linear equations in one variable. • The student will be able to locate signed numbers on the number line and use a number line to add and subtract signed numbers. • The student will be able to apply a known formula to a given situation.
Multi-Step Inequalities (0-2) Equations and Inequalities and Absolute Value (0-3) Exponential Notation (0-3) Simplify by using the Product, Quotient and Power Rules (0-4) Products and Quotients Raised to Powers (0-3) Scientific Notation (0-3) Introduction to Single Variable Polynomials (0-3) Adding and Subtracting Polynomials (0-3) Multiplying Polynomials (0-4) Multiplying Special Cases (0-2) Dividing by a Monomial (0-2) Dividing by Binomials and Polynomials (0-2) Simplifying and Evaluating Polynomials with More than One Term (0-2) Operations with Polynomials (0-4) Greatest Common Factor (0-3) Factor Trinomials (0-3) Factoring: Special Cases (0-4) Solve Quadratic Equations by Factoring (0-3) The Coordinate Plane (0-2) Graphing Linear Equations (0-4) Finding the slope of a line. (0-3) Writing the Equation of a Line (0-3)		• The student will be able to define and manipulate linear expressions and polynomials. • The student will be able to solve any linear equation, factorable quadratic equations and various systems of two-variable linear equations. • The student will be able to plot points and graph linear equations on a Cartesian coordinate system. • The student will be able to set up linear equations representing situations, solve, justify, and interpret the solution in the context of the problem.

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Parallel and Perpendicular Lines (0-2) Graphing Linear Inequalities (0-2) Graphing Systems of Linear Equations (0-5) The Substitution Method (0-3) The Elimination Method (0-4)		
Compound Inequalities (0-4) Graphing Systems of Inequalities (0-3) Solving Systems of Three Variables (0-4) Introduction to Rational Expressions (0-2) Multiplying and Dividing Rational Expressions (0-2) Adding and Subtracting Rational Expressions (0-4) Complex Rational Expressions (0-2) Solving Rational Equations and Applications (0-3) Rational Formulas and Variation (0-6) Roots (0-2) Squares, Cubes and Beyond (0-3) Rational Exponents (0-4) Multiplying and Dividing Radical Expressions (0-2) Adding and Subtracting Radicals (0-2) Multiplication of Multiple Term Radicals (0-1) Rationalizing Denominators (0-2) Solving Radical Equations (0-3) Complex Numbers (0-2) Operations with Complex Numbers (0-5) Square Roots and Completing the Square (0-3) The Quadratic Formula (0-5) Identifying Functions (0-3) Evaluating functions (0-1) Graphing types of functions (0-3) Finding Domain and range (0-2) Arithmetic operations with functions (0-4) Introduction to Exponential Functions (0-2) Introduction to Logarithmic Functions (0-4) Properties of Logarithmic Functions (0-4) Introduction to Natural and Common Logarithms (0-3) Solving equations(0-2) Mathematical Modeling with Exponential and Logarithmic Functions (0-2)		• The student will be able to define and manipulate nonlinear and linear functions and relations. • The student will be able to solve a variety of nonlinear equations, e.g. logarithmic, inverse, quadratic equations, absolute value, rational. • The student will be able to create, analyze, and interpret graphs of linear and nonlinear relations. • The student will be able to apply algebraic skills to a variety of applications such as: growth and decay, logic, reasoning, geometry, optimization, quadratic applications (motion, mixture, work).
Total Lecture Hrs.	18	

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Lab Content:	Hrs per topic	Objectives:
Independent Learning Skills including • self-assessment • utilizing technology tools • time management skills • self-study skills		• The student will be able to utilize the technological tools of the computer platform independently • The student will be able to utilize "self-tests" to evaluate their own ability • The student will be able to successfully complete assessments for each unit both online multiple choice test and paper-and-pencil versions. • Students will complete a plan for maximizing time in and outside of the lab
Total Lab Hrs	36 equal	

INSTRUCTION AND EVALUATION, add more lines as needed.

• Methods of Instruction - The focus should be about describing what the students will be doing and experiencing, not only with respect to the instructor, but in some cases with respect to each other and with their environment. The methods of instruction used are appropriate to the objectives. If an objective is to "physically perform," then lecture as the sole method for learning is not enough. The assignments and methods of instruction and evaluation must be appropriate to the stated objectives.

• Methods of Evaluation - The bases for evaluating assignments are given and relate to skills and abilities in objectives. Knowledge of required material should constitute a significant portion of the evaluation as reflected in assignments and methods of evaluation. Please note that while noncredit courses do not produce grades that would be "credited" into a student record, this in no way obviates the critical need for the course design to comprehensively include student evaluation and feedback.

Methods of Instruction	Methods of Evaluation
Demonstration, lab	

LEARNING OUTCOME INFORMATION

Student Learning Outcomes: Upon successful completion of this course, the student will be able to *(Use action verbs - see Bloom's Taxonomy for 'action verbs requiring cognitive outcomes.')*: (MAXIMUM OF 3 OUTCOMES)	**How will these student learning outcomes be assessed?** *(Explain how each outcome will be assessed in this column):*

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Required Text(s):

Texts and instructional materials should be completely referenced: author, title, publisher, and date.

Instructor supplied materials.

Supplementary Readings:

Basic math skills resources on the World Wide Web. IRL materials. Materials and resources on the POWER Learning®@ website -
http:/ /www.mcgrawhill.ca/ college/feldmanPower/index.mhtml and
http://highered.mcgraw-hill.com/sites/007248070x/information center view0/

Required Writing:

Assignments and/or Other Activities:

The assignments should be presented in a manner that reflects both integration with the stated objectives and a likelihood that they will lead to students achieving those objectives. It is clear that there are student performance expectations, that these are taught in class, practiced through various assignments, and evaluated as the basis for any feedback or potential certification.

Reading required course materials. Practicing activities and/or skills related to course content. Using drill and practice exercises on websites such as http:/ /www.aaamath.com, http://www.math.com/homeworkhelp/BasicMath.html

Supplies needed:

This section should also include any required materials or other equipment such as a sports item, lab equipment, tools, art materials or anything else the student must have to participate effectively in the course.

Pencil, paper, calculator, red pen/pencil, notebook.

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SECTION III – SUPPORT NEEDED

Indicate how the college plans to support the proposed course:

Additional Staff needed:

Classroom type needed:

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

Supplies needed:

Library/Learning Resources – (List Library and Learning Resources needed, including the cost and funding source for needed resources)

SECTION IV – APPROVAL STATUS

a. ☐ New Course	Board Approval Date:	Effective Semester:
b. ☐ Course Update	College Approval Date:	Effective Semester:
c. ☐ Course Change*	College Approval Date:	Effective Semester:
d. ☐ Course Reinstate	College Approval Date:	

*Course change is based on changes to Districtwide attributes

☐ This course meets Title 5 55002(c) requirements for Noncredit Course:
The course treats subject matter and uses appropriate resource materials, teaching methods, and standards of attendance.

The course outline of record specifies the number of contact hours normally required for a student to complete the course, the catalog description, the objectives, contents in terms of a specific body of knowledge, instructional methodology, examples of assignments and/or activities, and methods of evaluation for determining whether the stated objectives have been met.

References:
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COLLEGE APPROVALS:

Tayebeh Meftagh T. Meftagh **Originator**	8/31/17 **Date**
Tayebeh Meftagh T. Meftagh **Department Chair**	8/31/17 **Date**
 Dean	9/5/2017 **Date**
Alicia Rodriquez-Estrada **Curriculum Chair**	9/5/2017 **Date**
Martin Diaz **Academic Senate President**	9/5/17 **Date**
Leticia Barajas **Vice President, Academic Affairs**	9/6/2017 **Date**

References:
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