I.   CATALOG INFORMATION

A.   Discipline: MATHEMATICS

B.   Subject Code and Number: MATH M707

C.   Course Title: Bridge to College Algebra and Trigonometry (Math M07)

D.   Credit Course units:

Units: 0.5

Lecture Hours per week: 0.5

Lab Hours per week : 0

Variable Units : No

E.   Student Learning Hours:

Lecture Hours:

Classroom hours: 8.75 - 8.75

Laboratory/Activity Hours:

Laboratory/Activity Hours 0 - 0

Total Combined Hours in a 17.5 week term: 8.75 - 8.75

F.   Non-Credit Course hours per week _____

G.   May be taken a total of: [X] 1 [ ] 2 [ ] 3 [ ] 4 time(s) for credit

H.   Is the course co-designated (same as) another course: No [X] Yes [ ]
If YES, designate course Subject Code & Number: _____

I.   Course Description:

Prepares student for the prerequisite materials necessary to be successful in
Math M07. Includes factoring, equations of lines, rational, radical and quadratic
equations, and logarithms.

J.   Entrance Skills

*Prerequisite: No [X] Yes [ ] Course(s)
_____

*Corequisite: No [X] Yes [ ] Course(s)
_____

Limitation on Enrollment: No [X] Yes [ ]
_____

Recommended Preparation: No [X] Yes [ ] Course(s)
_____

Other: No [X] Yes [ ]
_____

K.   Other Catalog Information:

II.   COURSE OBJECTIVES

Upon successful completion of the course, a student will be able to:

		Methods of evaluation will be consistent with, but not limited by, the following types or examples.
1	factor polynomials including the sum and difference of cubes.	Graded work Exams
2	write the equation of a line in point-slope form, slope-intercept form, and standard form.	Graded work Exams
3	graph linear inequalities in two variables.	Graded work Exams
4	simplify rational and radical expressions.	Graded work Exams
5	solve linear and rational equations.	Graded work Exams
6	solve systems of equations in two variables.	Graded work Exams
7	solve quadratic equations.	Graded work Exams
8	solve rational equations.	Graded work Exams
9	solve radical equations.	Graded work Exams
10	solve absolute value equations.	Graded work Exams
11	solve absolute value inequalities.	Graded work Exams

12	graph quadratic functions.	Graded work Exams
13	find the value of a logarithm.	Graded work Exams
14	find the length and midpoint of a line segment.	Graded work Exams

III. COURSE CONTENT

Estimated %	Topic	Learning Outcomes
Lecture (must total 100%)		

10.00%	A. Factoring polynomials
	    1. Factoring the Greatest Common Factor
	    2. Factoring the sum and difference of cubes
	    3. Factoring by grouping
	    4. Factoring trinomials
		1

10.00%	B. Linear equations
	    1. Determine the slope of a line
	    2. Write the equation of a line in point-slope form
	    3. Write the equation of a line in slope-intercept form
	    4. Write the equation of a line in standard form
	    5. Solve linear and rational equations
		2, 5

10.00%	C. Graph in two dimensions
	    1. Graph linear inequalities in two variables
	    2. Graph quadratic functions
		3, 12

10.00%	D. Simplify expressions
	    1. Simplify rational expressions
	    2. Simplify radical expressions by adding, subtracting, multiplying and dividing
		4

40.00%	E. Solve equations and inequalities
	    1. Solve quadratic equations
	    2. Solve rational equations
	    3. Solve radical equations
	    4. Solve absolute equations and inequalities
	    5. Solve systems of equations
		6, 7, 8, 9, 10, 11

10.00%	F. Logarithms
	    1. Write an equation in its equivalent exponential form
	    2. Find the exact value of a logarithmic expression
		13

10.00%	G. Distance and midpoint formulas
	    1. Find the distance between two given points
	    2. Find the midpoint between two given points
		14

IV. TYPICAL ASSIGNMENTS
    A.   Writing assignments

Writing assignments are required. Possible assignments may include, but are not limited to:
1   problems selected from the bridge packet where answers require a written explanation

2	assignments requiring complete solutions using both written English and symbolic mathematical language, such as application problems.

B. Appropriate outside assignments

Appropriate outside assignments are required. Possible assignments may include, but are not limited to:	
1	assigned reading from bridge packet.
2	problems selected from the bridge packet where answers require a written explanation of the solution, such as graphing a quadratic function.

C. Critical thinking assignments

Critical thinking assignments are required. Possible assignments may include, but are not limited to:	
1	apply analytic techniques for solving mathematical and application problems.
2	compare and contrast methods of solution to mathematical problems.
3	describe and apply the algorithmic steps for obtaining the solution to a mathematical problem, such as solving a logarithmic equation.

V. METHODS OF INSTRUCTION

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

☐ Distance Education – When any portion of class contact hours is replaced by distance education delivery mode (Complete DE Addendum, Section XV)

[X] Lecture/Discussion

☐ Laboratory/Activity

[X] Other (Specify)
Analyze mathematical topics, provide detailed step-by-step examples, provide practice problems to develop proper mathematical skills and techniques, provide student interaction for questions and answers, using projects and/or group work to enhance student understanding of the concepts, and discuss application problems.

☐ Optional Field Trips

☐ Required Field Trips

VI. METHODS OF EVALUATION
Methods of evaluation may include, but are not limited to:

☐	Essay Exam	[X]	Classroom Discussion	[X]	Skill Demonstration
☐	Problem Solving Exam	☐	Reports/Papers/ Journals	☐	Participation
☐	Objective Exams	☐	Projects	[X]	Other (specify)

group work and board work

VII. REPRESENTATIVE TEXTS AND OTHER COURSE MATERIALS

Blitzer, Robert F. Intermediate Algebra for College Students. 7th ed. Pearson, 2017.

Martin-Gay, Elayn. Intermediate Algebra. 7th ed. Pearson, 2017.

Miller, Julie, Molly O'Neill, and Nancy Hyde. Intermediate Algebra. 5th ed. McGraw-Hill, 2017.

VIII. STUDENT MATERIALS FEES

[X] No [ ] Yes

IX. PARALLEL COURSES

College	Course Number	Course Title	Units
College of the Redwoods	MATH-303	Intermediate Algebra Review	1
Santiago Canyon College	MATH 140L	College Algebra Math Lab	0.2

X. MINIMUM QUALIFICATIONS

Courses Requiring a Masters Degree:
Master's in mathematics or applied mathematics OR Bachelor's in either of the above AND Master's in statistics, physics, or mathematics education

XI. ARTICULATION INFORMATION
    A.   Title V Course Classification:
        1. This course is designed to be taken either:

            [X] Pass/No Pass only (no letter grade possible); or
            [ ] Letter grade (P/NP possible at student option)

        2. Degree status:
           Either [X] Associate Degree Applicable; or [ ] Non-associate Degree Applicable

    B.   Moorpark College General Education:
        1. Do you recommend this course for inclusion on the Associate Degree General Education list?
           Yes: [ ] No: [X] If YES, what section(s)?

          [ ] A1 - Natural Sciences - Biological Science

          [ ] A2 - Natural Sciences - Physical Science

          [ ] B1 - Social and Behavioral Sciences - American History/Institutions

          [ ] B2 - Social and Behavioral Sciences - Other Social Behavioral Science

          [ ] C1 - Humanities - Fine or Performing Arts

          [ ] C2 - Humanities - Other Humanities

          [ ] D1 - Language and Rationality - English Composition

          [ ] D2 - Language and Rationality - Communication and Analytical Thinking

          [ ]

☐ E1 - Health/Physical Education

☐ E2 - PE or Dance

☐ F - Ethnic/Gender Studies

C. California State University(CSU) Articulation:

1. Do you recommend this course for transfer credit to CSU?   Yes: ☐ No: ☒

2. If YES do you recommend this course for inclusion on the CSU General Education list?
    Yes: ☐ No: ☒ If YES, which area(s)?

    A1 ☐   A2 ☐   A3 ☐   B1 ☐   B2 ☐   B3 ☐   B4 ☐

    C1 ☐   C2 ☐   D1 ☐   D2 ☐   D3 ☐   D4 ☐   D5 ☐

    D6 ☐   D7 ☐   D8 ☐   D9 ☐   D10 ☐   E ☐

D. University of California (UC) Articulation:

1. Do you recommend this course for transfer to the UC?   Yes: ☐ No: ☒

2. If YES do you recommend this course for the Intersegmental General Education Transfer Curriculum (IGETC)?   Yes: ☒ No: ☐

    IGETC Area 1: English Communication

    ☐ English Composition

    ☐ Critical Thinking-English Composition

    ☐ Oral Communication

    IGETC Area 2: Mathematical Concepts and Quantitative Reasoning

    ☒ Mathematical Concepts

    IGETC Area 3: Arts and Humanities

    ☐ Arts

    ☐ Humanities

    IGETC Area 4: Social and Behavioral Sciences

    ☐ Anthropology and Archaeology

    ☐ Economics

    ☐ Ethnic Studies

    ☐ Gender Studies

    ☐ Geography

    ☐ History

    ☐ Interdisciplinary, Social & Behavioral Sciences

    ☐ Political Science, Government & Legal Institutions

    ☐ Psychology

☐ Sociology & Criminology

IGETC Area 5: Physical and Biological Sciences (mark all that apply)

☐ Physical Science Lab or Physical Science Lab only (none-sequence)

☐ Physical Science Lecture only (non-sequence)

☐ Biological Science

☐ Physical Science Courses

☐ Physical Science Lab or Biological Science Lab Only (non-sequence)

☐ Biological Science Courses

☐ Biological Science Lab course

☐ First Science course in a Special sequence

☐ Second Science course in a Special Sequence

☐ Laboratory Activity

☐ Physical Sciences

IGETC Area 6: Language other than English

☐ Languages other than English (UC Requirement Only)

☐ U.S. History, Constitution, and American Ideals (CSU Requirement ONLY)

☐ U.S. History, Constitution, and American Ideals (CSU Requirement ONLY)

XII. REVIEW OF LIBRARY RESOURCES

A. What planned assignment(s) will require library resources and use?

The following assignments require library resources:
Using the Library's print and online resources to provide support material for algebraic content and real world applications. May want to make use of the math textbooks on reserve at Circulation Desk.

B. Are the currently held library resources sufficient to support the course assignment?

YES: ☒ NO: ☐

If NO, please list additional library resources needed to support this course.

XIII. PREREQUISITE AND/OR COREQUISITE JUSTIFICATION

MATH M707: Not Applicable

XIV. WORKPLACE PREPARATION

MATH M707: Not Applicable

XV. DISTANCE LEARNING COURSE OUTLINE ADDENDUM

MATH M707: Not Applicable

XVI. GENERAL EDUCATION COURSE OUTLINE ADDENDUM

MATH M707: Not Applicable

XVII.   STUDENT MATERIALS FEE ADDENDUM

MATH M707: Not Applicable

XVIII.   REPEATABILITY JUSTIFICATION TITLE 5, SECTION 55041

MATH M707: Not Applicable

XIX.   CURRICULUM APPROVAL

Course Information:
   Discipline: MATHEMATICS

   Discipline Code and Number: MATH M707

   Course Revision Category: New Course

Course Proposed By:
   Originating Faculty Cindy Reed 10/22/2017

   Faculty Peer: Rena Petrello 11/01/2017

   Curriculum Rep: Daniel Rubinstein 03/29/2018

   Department Chair: Phillip Abramoff 10/25/2017

   Division Dean: Mary Rees 11/01/2017

Approved By:
   Curriculum Chair: Jerry Mansfield 04/23/2018

   Executive Vice President: ————

   Articulation Officer: Jodi Dickey 04/17/2018

   Librarian: Mary LaBarge 04/16/2018

Implementation Term and Year: ————

Approval Dates:
   Approved by Moorpark College Curriculum Committee: 05/01/2018

   Approved by Board of Trustees (if applicable): 09/11/2018

   Approved by State (if applicable): 09/19/2018