

### Course Outline

**COURSE:** MATH 219      **DIVISION:** 10      **ALSO LISTED AS:**

**TERM EFFECTIVE:** Summer 2020      **CURRICULUM APPROVAL DATE:** 05/12/2020

**SHORT TITLE:** PREP FOR CALCULUS BOOTCAMP

**LONG TITLE:** Preparation for Calculus Bootcamp

<u>Units</u>	<u>Number of Weeks</u>	<u>Type</u>	<u>Contact Hours/Week</u>	<u>Total Contact Hours</u>
1 TO 2	18	Lecture:	1 TO 2	18 TO 36
		Lab:	0	0
		Other:	0	0
		Total:	1 TO 2	18 TO 36

#### **COURSE DESCRIPTION:**

This is a course for students who wish to refresh or re-learn fundamental algebraic or pre-calculus concepts. The focus is on polynomial, trigonometric, exponential and logarithmic functions and equations and the graphs of these functions. This class is preparation for Math 8B, Math 1A, or Math 1B. This is a Pass/No Pass course.

**PREREQUISITES:**

**COREQUISITES:**

**CREDIT STATUS:** C - Credit - Degree Non Applicable

**GRADING MODES**

P - Pass/No Pass

**REPEATABILITY:** N - Course may not be repeated

**SCHEDULE TYPES:**

02 - Lecture and/or discussion

05 - Hybrid

72 - Dist. Ed Internet Delayed

**STUDENT LEARNING OUTCOMES:**

1. Students will be able to solve polynomial equations and applications of polynomial functions.

Measure of assessment: Final Exam

Semester/Year assessed, or planned Semester/Year of assessment: Spring 2020

2. Students will be able to prove trigonometric identities and solve trigonometric equations.

Measure of assessment: Final Exam

Semester/Year assessed, or planned Semester/Year of assessment: Spring 2020

3. Students will be able to graph and transform trigonometric functions.

Measure of assessment: Final Exam

4. Students will be able to solve exponential and logarithmic equations and apply exponential and logarithmic functions to real life problems.

Measure of assessment: Final Exam

**CONTENT, STUDENT PERFORMANCE OBJECTIVES, OUT-OF-CLASS ASSIGNMENTS**

Curriculum Approval Date: 05/12/2020

Hours: 3

Graphing polynomial functions

Performance Objectives: Students will be able to graph and transform polynomial functions.

Hours: 3

Solving polynomial equations and studying their applications

Performance Objectives: Students will be able to solve polynomial equations and apply them to real life applications

Hours: 2

Graphing rational functions

Performance Objectives: Students will be able to graph and transform rational functions.

Hours: 3

Solving rational equations and studying their applications

Performance Objectives: Students will be able to solve rational equations and apply them to real life applications

Hours: 3

Proving trigonometric identities

Performance Objectives: Students will be able to prove trig identities

Hours: 3

Unit circle and trigonometric equations

Performance Objectives: Students will be able to use unit circle for trigonometric operations and solve trigonometric equations

Hours: 1

Final exam

2 Unit includes material of 1 Unit course plus:

Hours: 2

Inverse functions and graphs

Performance Objectives: Students will be able to graph and transform inverse functions.

Hours: 2

Exponential functions and graphs

Performance Objectives: Students will be able to graph and transform exponential functions.

Hours: 3

Logarithmic functions and graphs

Performance Objectives: Students will be able to graph and transform logarithmic functions.

Hours: 1

Properties of logarithmic functions

Performance Objectives: Students will be able to use properties of logarithms.

Hours: 4

Solving logarithmic and exponential equations

Performance Objectives: Students will be able to solve logarithmic and exponential equations.

Hours: 3

Applications of logarithmic and exponential functions to real life problems

Performance Objectives: Students will be able to apply logarithmic and exponential equations to real life problems.

Hours: 2

Decomposition of fractions and systems of equations

Performance Objectives: Students will be able to use partial fraction decomposition and solve systems of linear and nonlinear equations.

Hours: 1

Final exam

#### METHODS OF INSTRUCTION:

Lecture, Group work, Discussion

#### **OUT OF CLASS ASSIGNMENTS:**

Required Outside Hours:

Assignment Description: 1. Analyze and study pertinent textbook material, solved examples and lecture notes.

Required Outside Hours:

Assignment Description:

2. Apply principles and skills covered in class by solving regularly-assigned homework problems.

Required Outside Hours:

Assignment Description: 3. Regularly synthesize course materials in preparation for exams.

Required Outside Hours:

Assignment Description: 4. Implement projects to apply concepts learned in class.

#### METHODS OF EVALUATION

Objective examinations

Percent of total grade: 100.00 %

In-class written exams.

#### **REPRESENTATIVE TEXTBOOKS:**

Sullivan & Sullivan. Precalculus: Concepts Through Functions, A Unit Circle Approach to Trigonometry. Pearson, 2015.

ISBN: ISBN-10:0321930347 ISBN-13:9780321930347

Reading Level of Text, Grade: 12 Verified by: Ken Wagman

**ARTICULATION and CERTIFICATE INFORMATION**

Associate Degree:

CSU GE:

IGETC:

CSU TRANSFER:

Not Transferable

UC TRANSFER:

Not Transferable

**SUPPLEMENTAL DATA:**

Basic Skills: N

Classification: Y

Noncredit Category: Y

Cooperative Education: N

Program Status: 1 Program Applicable

Special Class Status: N

CAN:

CAN Sequence:

CSU Crosswalk Course Department:

CSU Crosswalk Course Number:

Prior to College Level: Y

Non Credit Enhanced Funding: N

Funding Agency Code: Y

In-Service: N

Occupational Course: E

Maximum Hours:

Minimum Hours:

Course Control Number: CCC000609332

Sports/Physical Education Course: N

Taxonomy of Program: 170100