LS R016A: FUNDAMENTALS OF MATHEMATICS I

Originator
ptrujillo

College
Oxnard College

Discipline (CB01A)
LS - Learning Skills

Course Number (CB01B)
R016A

Course Title (CB02)
Fundamentals of Mathematics I

Banner/Short Title
Fundamentals of Mathematics I

Credit Type
Credit

Start Term
Fall 2022

Catalog Course Description
This course is designed to assist students who have difficulty understanding and applying mathematical concepts. The course will cover basic operations with whole numbers, order of operations, fractions, decimals, and word problems. This course will also include test taking, mnemonic and memory strategies for learning and recalling mathematical operations.

Taxonomy of Programs (TOP) Code (CB03)
4930.32 - Learning Skills, Learning Disabled

Course Credit Status (CB04)
C (Credit - Not Degree Applicable)

Course Transfer Status (CB05) (select one only)
C (Not transferable)

Course Basic Skills Status (CB08)
N - The Course is Not a Basic Skills Course

SAM Priority Code (CB09)
E - Non-Occupational

Course Cooperative Work Experience Education Status (CB10)
N - Is Not Part of a Cooperative Work Experience Education Program

Course Classification Status (CB11)
Y - Credit Course

Educational Assistance Class Instruction (Approved Special Class) (CB13)
S - The Course is an Approved Special Class

Course Prior to Transfer Level (CB21)
Y - Not Applicable

Course Noncredit Category (CB22)
Y - Credit Course

Funding Agency Category (CB23)
Y - Not Applicable (Funding Not Used)

Course Program Status (CB24)
2 - Not Program Applicable

General Education Status (CB25)
Y - Not Applicable

Support Course Status (CB26)
N - Course is not a support course

Field trips
Will not be required

Grading method
(L) Letter Graded

Alternate grading methods
(O) Student Option- Letter/Pass
(P) Pass/No Pass Grading

Does this course require an instructional materials fee?
No

Repeatable for Credit
No

Is this course part of a family?
No

Units and Hours

Carnegie Unit Override
No

In-Class

Lecture
Minimum Contact/In-Class Lecture Hours
70
Maximum Contact/In-Class Lecture Hours
70

Activity

Laboratory

Total in-Class

Total in-Class
Total Minimum Contact/In-Class Hours
70
Total Maximum Contact/In-Class Hours
70

Outside-of-Class

Internship/Cooperative Work Experience

Paid

Unpaid

Total Outside-of-Class

Total Outside-of-Class
Minimum Outside-of-Class Hours
140
Maximum Outside-of-Class Hours
140

Total Student Learning

Total Student Learning
Total Minimum Student Learning Hours
210
Total Maximum Student Learning Hours
210

Minimum Units (CB07)
4
Maximum Units (CB06)
4

Advisories on Recommended Preparation
ACT R016

Requisite Justification
Requisite Type
Advisory

Requisite
ACT R016

Requisite Description
Other (specify)

Specify Other Requisite Description
Support knowledge with learning mathematics

Level of Scrutiny/Justification
Content review

Student Learning Outcomes (CSLOs)	
	Upon satisfactory completion of the course, students will be able to:
1	Demonstrate the use of basic math skills to solve problems involving addition, subtraction, multiplication, division, fractions, place value, rounding numbers, use of whole numbers, averages, exponents, order of operation, factors, multiples, divisibility tests, and all operations with decimals.
2	Demonstrate the correct use of strategies for solving word problems

Course Objectives	
	Upon satisfactory completion of the course, students will be able to:
1	Read whole numbers
2	Round off numbers
3	Addition facts

4	Add whole numbers
5	Multiply whole numbers
6	Subtract whole numbers
7	Divide whole numbers
8	Use order of operations to successfully complete a math problem
9	Add, subtract, divide, and multiply fractions
10	Solve a two-step word problem
11	Solve problems with decimals
12	Solve problems with both decimals and fractions

Course Content

Lecture/Course Content
1. Whole Numbers: Addition, Multiplication, Powers, and Square Roots
   a. Reading whole numbers
   b. Round off numbers
   c. Addition facts
   d. Adding whole numbers
   e. Multiplication facts
   f. Multiplying by one digit numbers
   g. Multiplying by numbers having more than one digit
   h. Powers, representing numbers, square roots, and comparing numbers
   i. Using whole numbers to solve two-step word problems
2. Whole Numbers: Subtraction, Division, and the Order of Operations
   a. Subtraction facts
   b. Subtracting whole numbers
   c. Division facts
   d. Remainders dividing by zero
   e. Dividing by one digit numbers
   f. Dividing by numbers having more than one digit
   g. Zeros in the quotient
   h. The order of operations
   i. Primes, divisibility, and factor trees
   j. Using order of operations to solve word problems
3. Fractions
   a. Equivalent fractions
   b. Mixed numbers
   c. Multiplying fractions
   d. Dividing fractions
   e. Multiplying and dividing mixed numbers
   f. Fractional parts of numbers
   g. Adding and subtraction like fractions
   h. Adding and subtracting unlike fractions
   i. Finding the least common denominator
   j. Adding and subtracting mixed numbers
   k. Complex fractions
   l. Comparing fractions
   m. Using fractions to solve word problem
4. Decimals
   a. Reading and Writing Decimals
   b. Rounding Off Decimals
   c. Adding Decimals
   d. Subtracting Decimals
   e. Multiplying Decimals
   f. Dividing Decimals

g. Dividing Decimals-Rounding off Answers
h. Multiplying and Dividing by Numbers That End in Zero's
i. Converting Fractions and Decimals
j. Comparing Decimals
k. Operating with Both Fractions and Decimals
l. Applications Involving Decimals

Laboratory or Activity Content
None

Methods of Evaluation

Which of these methods will students use to demonstrate proficiency in the subject matter of this course? (Check all that apply):
Problem solving exercises

Methods of Evaluation may include, but are not limited to, the following typical classroom assessment techniques/required assignments (check as many as are deemed appropriate):
Group projects
Mathematical proofs
Objective exams
Problem-solving exams
Quizzes
Skills demonstrations
Skills tests or practical examinations
Problem-Solving Assignments

Instructional Methodology

Specify the methods of instruction that may be employed in this course
Audio-visual presentations
Class activities
Class discussions
Collaborative group work
Computer-aided presentations
Demonstrations
Distance Education
Group discussions
Instructor-guided interpretation and analysis
Instructor-guided use of technology
Lecture
Small group activities

Describe specific examples of the methods the instructor will use:
A. Professor will lecture new content using flashcards and multiple color markers to express steps of solving equations
B. Students will work in groups at the white board solving problems collaboratively

Representative Course Assignments

Writing Assignments
1. Write out numbers in word form

Reading Assignments
1. Students read the math text for their homework problems and extra instruction.

Skills Demonstrations
1. Students will solve problems at the white board

Other assignments (if applicable)
1. Specific lessons generated from the text to be completed at home
2. Answer word problems using learned mathematical exercises

Outside Assignments

Representative Outside Assignments
1. Students will be completing sectional homework from their textbook for review and study hours

Articulation

Comparable Courses within the VCCCD
LS M07A - Basic Math Skills I
LS V07 - Learning Skills: Fundamentals of Math

Textbooks and Lab Manuals

Resource Type
Textbook

Description
Staszkow Kendall, R. (2008). *Math Skills* (7th). (Latest edition) Hunt Publishing Company.

Resource Type
Textbook

Description
Tussy, Alan. Basic Mathematics with Early Integers. Boston. Cengage. 2018. Print.

Library Resources

Sufficient Library Resources exist
Yes

Distance Education Addendum

Definitions

Distance Education Modalities
Hybrid (1%–50% online)
Hybrid (51%–99% online)
100% online

Faculty Certifications

Faculty assigned to teach Hybrid or Fully Online sections of this course will receive training in how to satisfy the Federal and state regulations governing regular effective/substantive contact for distance education. The training will include common elements in the district-supported learning management system (LMS), online teaching methods, regular effective/substantive contact, and best practices.
Yes

Faculty assigned to teach Hybrid or Fully Online sections of this course will meet with the EAC Alternate Media Specialist to ensure that the course content meets the required Federal and state accessibility standards for access by students with disabilities. Common areas for discussion include accessibility of PDF files, images, captioning of videos, Power Point presentations, math and scientific notation, and ensuring the use of style mark-up in Word documents.
Yes

Regular Effective/Substantive Contact

Hybrid (1%–50% online) Modality:

Method of Instruction	Document typical activities or assignments for each method of instruction
Asynchronous Dialog (e.g., discussion board)	Discussion board online for students to respond to questions/prompts and to reply to classmates.
Synchronous Dialog (e.g., online chat)	Online classes held on LMS, and also recorded for future use.
E-mail	Sending out of reminders and communication. Students may contact instructor for help or questions.
Other DE (e.g., recorded lectures)	Lectures may be recorded and included in the LMS for instruction of new material. Recorded lectures for tips and strategies to assist in various mathematical functions.
Telephone	Instructor may call students to assist and to keep in contact.

Hybrid (51%–99% online) Modality:

Method of Instruction	Document typical activities or assignments for each method of instruction
Asynchronous Dialog (e.g., discussion board)	Discussion board online for students to respond to questions/prompts and to reply to classmates.
Synchronous Dialog (e.g., online chat)	Online classes held on LMS, and also recorded for future use.
E-mail	Sending out of reminders and communication. Students may contact instructor for help or questions.
Telephone	Instructor may call students to assist and to keep in contact.
Video Conferencing	Instructor may use video conferencing to gov over work, to provide assistance, and to hold small study groups. Students may use this means to meet with one another to work on assignments.
Other DE (e.g., recorded lectures)	Lectures may be recorded and included in the LMS for instruction of new material. Recorded lectures for tips and strategies to assist in various mathematical functions.

100% online Modality:

Method of Instruction	Document typical activities or assignments for each method of instruction
Asynchronous Dialog (e.g., discussion board)	Discussion board online for students to respond to questions/prompts and to reply to classmates.
Synchronous Dialog (e.g., online chat)	Online classes held on LMS, and also recorded for future use.
E-mail	Sending out of reminders and communication. Students may contact instructor for help or questions.
Telephone	Instructor may call students to assist and to keep in contact.
Video Conferencing	Instructor may use video conferencing to gov over work, to provide assistance, and to hold small study groups. Students may use this means to meet with one another to work on assignments.
Other DE (e.g., recorded lectures)	Lectures may be recorded and included in the LMS for instruction of new material. Recorded lectures for tips and strategies to assist in various mathematical functions.

Examinations

Hybrid (1%–50% online) Modality
On campus
Online

Hybrid (51%–99% online) Modality
On campus

Online

Primary Minimum Qualification
LEARNING DISABILITIES, DSPS

Review and Approval Dates

Department Chair
12/02/2020

Dean
12/02/2020

Technical Review
12/09/2020

Curriculum Committee
12/09/2020

DTRW-I
MM/DD/YYYY

Curriculum Committee
MM/DD/YYYY

Board
MM/DD/YYYY

CCCCO
01/12/2021

Control Number
CCC000584491

DOE/accreditation approval date
MM/DD/YYYY