MATH A004N: MATH JAM BASIC MATH COMPUTATIONAL SKILLS NONCREDIT

Item	Value
Curriculum Committee Approval Date	12/02/2020
Top Code	170200 - Mathematics Skills
Units	0 Total Units
Hours	45 Total Hours (Lecture Hours 45)
Total Outside of Class Hours	0
Course Credit Status	Noncredit: Support Course (U)
Material Fee	No
Basic Skills	Basic Skills (B)
Repeatable	Yes; Repeat Limit 99
Grading Policy	P/NP/SP Non-Credit (D)

Course Description

This is a course focusing on mastering key arithmetic topics. These topics include operations with whole numbers, operations with decimals, introduction to percents, introduction to integers, introduction to fractions, introduction to ratios and proportions, introduction to statistics and an introduction to measurement and basic geometry. Noncredit. NOT DEGREE APPLICABLE. Not Transferable.

Course Level Student Learning Outcome(s)

1. Basic operations with fractions
2. Order of operations with real numbers
3. Solve applied problems

Course Objectives

- 1. Perform operations with real numbers.
- 2. Convert between decimals, percents and fractions.
- 3. Perform operations with ratios, rates and proportions.
- 4. Have a basic understanding of measurement.
- 5. Read and interpret circle, bar and line graphs.
- 6. Solve applied problems

Lecture Content

A. Whole Numbers 1. Understanding of whole numbers 2. Operations with whole numbers 3. Exponents 4. Order of operations 5. Rounding and estimation 6. Applied problems B. Decimals and Percents 1. Decimal notation 2. Ordering and rounding of decimal numbers 3. Operations with decimal numbers 4. Converting between decimals and percents 5. Applied problems C. Introduction to Integers 1. Operations with signed numbers 2. Order of operations D. Introduction to Fractions 1. Understanding fractions 2. Simplifying fractions 3. Converting between improper fractions and mixed numbers 4. Multiplying and dividing fractions 5. Adding and subtracting fractions E. Introduction to Ratios and Proportions 1. Understanding ratios and rates 2. Understanding proportions 3. Solving applied proportion problems F. Introduction to Statistics 1. Understanding circle, line and bar graphs 2. Drawing histograms 3. Calculating the mean , median and mode G. Introduction to Measurement and Basic Geometry 1. Using American units 2. Using metric units 3. Solving applied measurement problems 4. Formulas for basic geometric shapes, including rectangles and triangles

Method(s) of Instruction

- Enhanced NC Lect (NC1)
- Online Enhanced NC Lect (NC5)
- Live Online Enhanced NC Lect (NC9)
- DE Delayed Enhanced NC Lect (NCD)
- Self-Paced (SP)

Instructional Techniques

Instructional techniques will be decided upon by the instructor and can include: Lecture and discussion Collarborative learning Technology based instruction Demonstration, repetition/practice

Reading Assignments

No reading assignments

Writing Assignments

No writing assignments

Out-of-class Assignments

At least 5 hours per week of assignments to master the concepts and related applied problems

Demonstration of Critical Thinking

Quizzes, written tests and/or comprehensive final exam

Required Writing, Problem Solving, Skills Demonstration

Group work, quizzes, written tests, and/or comprehensive final exam

Eligible Disciplines

Mathematics: Masters degree in mathematics or applied mathematics OR bachelors degree in either of the above AND masters degree in statistics, physics, or mathematics education OR the equivalent. Masters degree required.

Textbooks Resources

1. Required Tobey, Slater, Blair, Crawford. Basic College Mathematics, ed. Pearson, 2016

Other Resources

1. Appropriate textbook chosen by fulltime faculty 2. Instructors may choose to use software such as MyMathLab, ALEKS or Webassign.