CORE CURRICULUM COMPONENT APPLICATION
Texarkana College

Part I: Course Information

Course Type
☒ Existing/Restructured
☐ New Course

Course Prefix & Number: Math 1350

Texas Common Course Number (TCCN): 1350

Course Title: Fundamentals of Math I

Course Catalog Description

MATH 1350 (3,3,1) Concepts of sets, functions, numeration systems, number theory, and properties of the natural numbers, integers, rational, and real number systems with an emphasis on problem solving and critical thinking. Prerequisite: College Algebra or the equivalent.

Course Prerequisites:
MATH 1314 or the equivalent
Available Online?
☐ Yes
☒ No

Part II: THECB Course Objectives

 1. Write descriptive and thorough mathematical explanations in clear, correct and coherent prose.
2. Communicate orally in clear, coherent and persuasive language.
3. Read, interpret and describe Texas Essential Knowledge and Skills (TEKS).
4. Describe/illustrate appropriate and effective uses of manipulatives in mathematical settings.
5. Describe problem solving process and solve problems using a variety of strategies.
6. Describe patterns in the real world and solve problems involving pattern recognition.
7. Apply deductive reasoning.
8. Apply basic concepts of set theory.
9. Recognize multiple models for representing basic mathematical operations.
10. Apply mental math techniques in problem solving situations.
11. Work fluently with place value situations including base ten and other base systems in concrete, pictorial and abstract settings.
12. Apply number theory concepts in problem solving situations.
13. Work fluently with concrete/pictorial representations of integers and apply integer concepts in problem solving situations.
14. Work fluently with concrete/pictorial representations of fractions, decimals, and percents and apply these concepts in problem solving situations.

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Part III: THECB Skill Objectives **1. Critical Thinking Skills:** to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information **2. Communication Skills:** to include effective development, interpretation and expression of ideas through written, oral and visual communication **3. Empirical and Quantitative Skills:** to include applications of scientific and mathematical concepts.	

Part IV: Course Student Learning Outcomes (SLO)

 1. Write descriptive and thorough mathematical explanations in clear, correct and coherent prose.
2. Communicate orally in clear, coherent and persuasive language.
3. Read, interpret and describe Texas Essential Knowledge and Skills (TEKS).
4. Describe/illustrate appropriate and effective uses of manipulatives in mathematical settings.
5. Describe problem solving process and solve problems using a variety of strategies.
6. Describe patterns in the real world and solve problems involving pattern recognition.
7. Apply deductive reasoning.
8. Apply basic concepts of set theory.
9. Recognize multiple models for representing basic mathematical operations.
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12. Apply number theory concepts in problem solving situations.
13. Work fluently with concrete/pictorial representations of integers and apply integer concepts in problem solving situations.
14. Work fluently with concrete/pictorial representations of fractions, decimals, and percents and apply these concepts in problem solving situations.

Skill Objective:	**Critical Thinking Skills:** to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
THECB Course Objective	None available
Course Student Learning Outcome	Apply number theory concepts in problem solving situations.
General Learning Activities	Students will collect data and use their critical thinking skills to determine the appropriate measure of center. They will also determine how the removal of data will change each measure of center.
Assessment	The assignment will be for students to collect data and calculate the mean, median and mode for the data set.

Must Include Assignment & Rubric	They will determine the best measure of center for the data, then eliminate outliers from the data set and analyze how the removal affects each measure of center. This will be assessed using the Critical Thinking Skills rubric.

Skill Objective:	**Communication Skills:** to include effective written, oral, and visual communication
THECB Course Objective	None available
Course Student Learning Outcome	Apply number theory concepts in problem solving situations.
General Learning Activities	Students will collect data and use their critical thinking skills to determine the appropriate measure of center. They will also determine how the removal of data will change each measure of center.
Assessment *Must Include Assignment & Rubric*	The assignment will be for students to communicate the analysis, results, and conclusion of their data collection in a written report as well as a class presentation using the media of their choice. The Communication Skills rubric will be used to assess communication skills.

Skill Objective:	**Empirical and Quantitative Skills:** to include applications of scientific and mathematical concepts.
THECB Course Objective	None available
Course Student Learning Outcome	Apply number theory concepts in problem solving situations.
General Learning Activities	Students will collect data and use their critical thinking skills to determine the appropriate measure of center. They will also determine how the removal of data will change each measure of center.
Assessment *Must Include Assignment & Rubric*	The assignment will be for students to find the mean, median and mode of the data set collected, then remove any outliers and find the mean, median and mode of the data set with the outliers removed. They will then compare the calculated measures of center of both data sets. The Empirical and Quantitative Skills rubric will be used to

	assess empirical and quantitative skills.