SYLLABUS

DATE OF LAST REVIEW: 01/2014

CIP CODE: 24.0101

SEMESTER: Departmental Syllabus

COURSE TITLE: Math Essentials

COURSE NUMBER: MATH0097

CREDIT HOURS: 4

INSTRUCTOR: Departmental Syllabus

OFFICE LOCATION: Departmental Syllabus

OFFICE HOURS: Departmental Syllabus

TELEPHONE: Departmental Syllabus

EMAIL: Departmental Syllabus

KCKCC-issued email accounts are the official means for electronically communicating with our students.

PREREQUISITE(S): 1) COMPASS Pre-Algebra Test score 0 – 45 and 2) COMPASS Reading Test score of 35 or higher

REQUIRED TEXT AND MATERIALS: Please check with the KCKCC bookstore, http://www.kckccbookstore.com for the required text for your particular class.

COURSE DESCRIPTION: Math Essentials emphasizes skill building in the operations of basic addition, subtraction, multiplication, and division as they relate to whole numbers, fractions, and decimals. These basic skills are then applied to the areas of ratio and proportion, percents, measurement, basic geometric concepts, and statistics. Algebra is introduced with the study of signed numbers, algebraic expressions, and basic equations. Students will be expected to use appropriate technology as one tool to achieve competency in Math Essentials.

METHOD OF INSTRUCTION: A variety of instructional methods may be used depending on content area. These include, but are not limited to, lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, and panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.
COURSE OUTLINE:

I. Arithmetic calculations
   A. Whole numbers
   B. Fractions
   C. Decimals
   B. Divisibility rules
   C. Exponential notation
   D. Order of operations
   E. Equivalent fractions
   F. Conversion among fractions, decimals, and percents

II. Number System Skills
   A. Reading and writing numbers
   B. Rounding and estimating
   C. Types of fractions
   D. Ratios

III. Applications
   A. Whole numbers, fractions, and decimals
   B. Rates and ratios
   C. Proportions
   D. Percent

IV. Measurement and Geometric Formulas
   A. American units of measure
   B. Metric units of measure
   C. Perimeter/circumference
   D. Area
   E. Volume
   F. Pythagorean theorem

V. Statistical Data
   A. Mean, median, and mode
   B. Grade point average
   C. Tables and pictographs
   D. Bar, line and circle graphs

VI. Signed Numbers
   A. Addition, subtraction, multiplication, and division
   B. Order of operation

VII. Linear Equations
   A. Algebraic expressions
   B. Distributive property
   C. Solutions of linear equations
EXPECTED LEARNER OUTCOMES:
A. The student will be able to perform arithmetic calculations.
B. The student will be able to demonstrate skills using the number system.
C. The student will be able to solve applications.
D. The student will be able to use measurements and geometric formulas.
E. The student will be able to calculate and analyze statistical data.
F. The student will be able to calculate using signed numbers.
G. The student will be able solve basic linear equations.

COURSE COMPETENCIES:
Upon successful completion of this course:

The student will be able to perform arithmetic calculations.
1. The student will be able to add, subtract, multiply, and divide whole numbers.
2. The student will be able to add, subtract, multiply, and divide fractions.
3. The student will be able to add, subtract, multiply, and divide decimals.
4. The student will be able to use exponential notation.
5. The student will be able to apply order of operations.
6. The student will be able to convert among fractions, decimals, and percents.

The student will be able to demonstrate skills using the number system.
7. The student will be able to read and write numbers.
8. The student will be able to round and estimate numbers
9. The student will be able to use ratio notation and recognize equivalent ratios.

The student will be able to solve applications.
10. The student will be able to solve application problems involving whole numbers, fractions, and decimals.
11. The student will be able to solve rate and ratio problems.
12. The student will be able to solve proportions including similar triangle applications.
13. The student will be able to solve percent applications.

The student will be able to use measurements and geometric formulas.
14. The student will be able to convert and use American measures.
15. The student will be able to convert and use metric measures.
16. The student will be able to convert between American and metric measures.
17. The student will be able to calculate the perimeter and circumference of various geometric figures.
18. The student will be able to calculate the area of various geometric figures.
19. The student will be able to calculate the volume of various geometric figures.
20. The student will be able to apply the Pythagorean Theorem.

The student will be able calculate and analyze statistical data.
21. The student will be able to determine statistical measures of mean, median, and mode.
22. The student will be able to calculate grade point average (GPA).
23. The student will be able to interpret tables and pictographs.
24. The student will be able to interpret bar, line, and circle graphs.

   The student will be able to calculate using signed numbers.

25. The student will be able to add, subtract, multiply, and divide signed numbers.

26. The student will be able to apply order of operations.

   The student will be able to solve basic linear equations.

27. The student will be able to simplify algebraic expressions.

28. The student will be able to apply the distributive property.

29. The student will be able to solve a linear equation of the form \( ax + b = c \).

ASSESSMENT OF LEARNER OUTCOMES:
Student progress is evaluated by means that include, but are not limited to, exams, written assignments, and class participation.

The course grade is determined by this grading scale:
- A = 90% and above
- B = 80 - 89%
- C = 70 – 79%
- F = 69% and below

There is no grade of D in Math Essentials.

A comprehensive final exam will be given in all sections of Math Essentials. This final exam will count a minimum of 25% of each student’s course grade.

SPECIAL NOTES:
Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student’s progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome any time.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty, and staff that is free of bigotry and discrimination. Kansas City Kansas Community College is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

Kansas City Kansas Community College offers equal educational opportunity to all students as well as serving as an equal opportunity employer for all personnel. Various laws, including Title IX of the Educational Amendments of 1972, require the college’s policy on non-discrimination be administered without regard to race, color, age, sex, religion, national origin, physical handicap, or veteran status and that such policy be made known.
Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact the Director of the Academic Resource Center, in Room 3354 or call: 913-288-7670.