

**Eastern WV Community & Technical College  
Master Course Record**

<b>Course Prefix and Number:</b> MTH 100
<b>Course Title:</b> Transitional Math Level A
<b>Recommended Transcript Title</b> (if over 40 characters) Transitional Math Level A
<b>Date Approved/Revised</b> 11/13/14
<b>Credit Hours:</b> 3 <b>Contact hours per week (Based on 15 week term):</b> <b>Lecture:</b> 3 <b>Lab:</b>
<b>Prerequisite:</b> <b>Corequisite:</b> <b>Pre/Corequisite:</b>
<b>Grading Mode:</b> A, B, C, or NC. Students may test out of this course by passing a challenge test at 80% or better prior to starting the course. A challenge fee applies.
<b>Catalog Description:</b> This course is designed to allow students to improve basic arithmetic skills. Topics include performing operations on whole numbers, fractions, decimals, and integers; solving problems involving percentages and proportions; and reading, writing, and evaluating algebraic expressions. This course <i>does not</i> satisfy the general education requirements of a college-level math course.
<b>Course Outcomes:</b> <ol style="list-style-type: none"> <li>1. Perform operations with whole numbers</li> <li>2. Perform operations with fractions and mixed numbers</li> <li>3. Perform operations with decimal numbers</li> <li>4. Solve problems involving proportions and percents</li> <li>5. Perform operations with real numbers</li> </ol>
<b>Implementation Cycle:</b> Fall and Spring semesters
<b>Role in College Curriculum: (Check all that apply)</b> <input type="checkbox"/> <b>General Education Core (Specify category)</b> <input type="checkbox"/> <b>Technical Core (Specify Program)</b> <input type="checkbox"/> <b>Restricted Elective (Specify Program)</b> <input type="checkbox"/> <b>General Elective</b> <input type="checkbox"/> <b>Workforce Education</b> <input checked="" type="checkbox"/> <b>Other (Please specify)</b> Transitional Course
<b>Course Fee:</b>
<b>Instructor's Qualifications:</b> Bachelor's Degree with relevant teaching experience.
<b>Expanded Course Description</b> This course will feature instructor-led classes emphasizing student participation, collaborative learning and hands-on activities, plus a lab with computer-assisted tutorials that students can access outside of regular class time.  Expanded course outcomes: <ol style="list-style-type: none"> <li>1. Perform operations with whole numbers <ol style="list-style-type: none"> <li>a. Find the place value of a digit in a whole number</li> </ol> </li> </ol>

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- b. Write a whole number in words and/or numerals
  - c. Round whole numbers to a specified place value
  - d. Add, subtract, multiply and divide whole numbers
  - e. Find the perimeter of a polygon
  - f. Find the area of a rectangle
  - g. Translate and solve whole number application problems (to include checking results and stating solution units, if applicable)
  - h. Estimate solutions to whole number problems by appropriate rounding
  - i. Write and evaluate exponential expressions
  - j. Evaluate square roots of perfect squares
  - k. Apply the order of operations to simplify whole number expressions
  - l. Compute the average of a list of whole numbers
2. Perform operations with fractions and mixed numbers
    - a. Convert between mixed numbers and improper fractions
    - b. Write the prime factorization of a whole number, applying divisibility tests and a times table as needed
    - c. State a fraction in its simplest form
    - d. Find the least common multiple of a list of numbers
    - e. Add, subtract, multiply, and divide fractions
    - f. Add, subtract, multiply, and divide mixed numbers and fractions
    - g. Apply a natural number exponent to a fraction
    - h. Apply order of operations to simplify expressions containing fractions or mixed numbers
    - i. Compare fractions
    - j. Round fractions and mixed numbers to whole numbers
    - k. Solve application problems involving fractions and mixed numbers
    - l. Compute the average of a list of fractions
  3. Perform operations with decimal numbers
    - a. Read and write quantities with decimal places
    - b. Write decimals as simplified fractions
    - c. Round decimals to specified place value
    - d. Write fractions as decimals with specified rounding as needed
    - e. Place a list of decimals and/or fractions in order from smallest to largest
    - f. Plot decimal quantities on a number line
    - g. Add, subtract, multiply, and divide decimals
    - h. Solve application problems involving decimals, including circle circumferences
    - i. Apply order of operations rules to expressions containing decimals
  4. Solve problems involving proportions and percents
    - a. Represent a ratio or rate as a fraction with units when appropriate
    - b. Solve a proportion equation
    - c. Solve proportion applications
    - d. Use unit rate to convert between units of measure (time, linear measures, etc.)
    - e. Write percents as decimals and decimals as percents
    - f. Write fractions as percents and percents as fractions
    - g. Write and solve percent problems using an equation or a proportion

- h. Apply percent skills to solve application problems, including percent increase or decrease, sales tax, commission, discount, and simple interest computation
- i. Solve percent problems presented as circle graphs
- 5. Perform operations with real numbers
  - a. Plot real numbers on a number line
  - b. Add, subtract, multiply, and divide signed numbers
  - c. Find the absolute value of a number
  - d. Apply the order of operations to evaluate numerical expressions
  - e. Classify numbers as belonging to common subsets of real numbers (e.g., natural, integer, rational, real)
  - f. Evaluate algebraic expressions containing variables when given specific values for the variable(s)
  - g. Determine whether a number is a solution to a given equation
  - h. Translate verbal phrases into algebraic expressions

Prepared by: Andrea Williams, Mathematics Instructor

11/13/14

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Name, Title

Date

Approved Per LOT Minutes

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Dean, Academic and Student Services

Date