



<b>Course Number</b> <b>Course Name</b>	Math 100N Fundamentals of Mathematics
<b>Credit Value</b> <b>(Breakdown of theory and lab credits)</b>	4 Theory
<b>Catalog Course Description</b>	Introduction to the mathematical method and its use in practical applications. Students will use fundamental operations with fractions, decimals and signed values; convert between fractions, decimals and percentages; apply the order of operations correctly; create algebraic expressions and equations; simplify algebraic expressions and equations; manipulate formulas; translate verbal statements into algebraic expressions and equations; solve linear equations; create tables and graphs; interpret graphs; and describe the results of problem solving orally and in writing. Grades are awarded on a CR/NC basis. Prerequisite: Adequate score on the Course Placement Exam. (4, 4T+0L)
<b>Student Learning Outcomes/Objectives /Competencies of the Course</b>	<p><b>Student Learning Outcomes:</b> At the end of this course the student will be able to:</p> <ol style="list-style-type: none"> <li>1. Add, subtract, multiply, and divide fractions</li> <li>2. Add, subtract, multiply, and divide decimals.</li> <li>3. Convert between fractions, decimals, and percents.</li> <li>4. Apply and extend previous understandings of numbers to the system of real numbers.             <ol style="list-style-type: none"> <li>a. Classify sets of numbers.</li> <li>b. Recognize that nonterminating, nonrepeating decimals are irrational numbers.</li> <li>c. Graph sets of numbers on the number line.</li> <li>d. Order and compare signed numbers.</li> <li>e. Define absolute value of numbers.</li> <li>f. Illustrate the relationships among natural numbers, whole numbers, integers, rational and irrational numbers, and real numbers.</li> </ol> </li> <li>5. Apply and extend previous understanding of arithmetic operations with real numbers (e.g. fractions, integers).             <ol style="list-style-type: none"> <li>a. Review the arithmetic of fractions.</li> <li>b. Perform arithmetic of signed numbers.</li> <li>c. Apply the order of operations to simplify numerical expressions.</li> <li>d. Evaluate simple expressions.</li> </ol> </li> <li>6. Write and interpret the structures of algebraic expressions.             <ol style="list-style-type: none"> <li>a. Identify terms and coefficients of terms.</li> <li>b. Translate English phrases into algebraic expressions.</li> </ol> </li> <li>7. Use properties of operations to generate equivalent expressions to solve problems.             <ol style="list-style-type: none"> <li>a. Evaluate algebraic expressions.</li> <li>b. Apply the properties of operations to simplify algebraic expressions (e.g. distributive property).</li> </ol> </li> <li>8. Reason about and solve linear equations and inequalities in one variable.</li> </ol>



	<ol style="list-style-type: none"><li>a. Use the fundamental properties of equality to find the solutions of equations and inequalities.</li><li>b. Apply properties of equality to solve for formulas for specified variables.</li><li>c. Graph solutions of linear equations and inequalities on a number line.</li></ol> <p>9. Approximate and interpret rates of change from an equation as well as from graphical and numerical data.</p> <ol style="list-style-type: none"><li>a. Determine the slope of a line.</li><li>b. Put a line in slope-intercept form.</li><li>c. Find the equation of a line.</li><li>d. Graph a line.</li></ol>
<b>College-Wide Student Learning Outcomes</b>	<p>Math 100N learning objectives align with the following NNMCC College Wide Goal:</p> <p><i>Critical thought:</i></p> <ul style="list-style-type: none"><li>• <i>Students are required to analyze and synthesize information and draw reasoned conclusions.</i></li></ul>