



<b>Course Number</b> <b>Course Name</b>	Math 102N Basic Algebra
<b>Credit Value</b> <b>(Breakdown of theory and lab credits)</b>	4 Theory
<b>Catalog Course Description</b>	First complete course in algebra for those not prepared for college level algebra. Students will learn ratio and proportion, solutions of linear equations and systems of linear equations, exponents, radicals, graphs, factoring, quadratic equations, rational expressions, polynomials, inequalities and applications. Grades are awarded on a CR/NC basis. Prerequisite: MATH 100N or adequate score on Course Placement Evaluation. (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. Work with integer exponents                         <ol style="list-style-type: none"> <li>a. Use the definition of exponents to develop rules for simplifying expressions that contain exponents.</li> <li>b. Express very large or small numbers in scientific and/or in standard notation.</li> <li>c. Apply the rules for exponents in evaluating products or quotients of very large or small numbers expressed in scientific notation.</li> </ol> </li> <li>2. Solve two equations and two unknowns using graphing, substitution, and elimination.</li> <li>3. Interpret the structures of algebraic expressions (polynomials).                         <ol style="list-style-type: none"> <li>a. Interpret parts of an expression, such as terms, factors, coefficients, and degrees.</li> <li>b. Evaluate expressions.</li> </ol> </li> <li>4. Perform arithmetic operations on polynomials.                         <ol style="list-style-type: none"> <li>a. Add polynomials.</li> <li>b. Subtract polynomials.</li> <li>c. Apply the distributive property to multiply polynomials.</li> <li>d. Divide polynomials.</li> </ol> </li> <li>5. Write polynomials in equivalent forms to solve problems (factoring).                         <ol style="list-style-type: none"> <li>a. Express a polynomial as a product of two (or more) polynomials.</li> <li>b. Select the appropriate factoring method to use in a randomly chosen polynomial.</li> <li>c. Apply the factoring techniques to solve word problems.</li> <li>d. Solve quadratic equations by factoring.</li> </ol> </li> <li>6. Perform arithmetic operations on rational expressions.                         <ol style="list-style-type: none"> <li>a. Define rational expressions.</li> <li>b. Evaluate rational expressions.</li> </ol> </li> </ol>



	<ul style="list-style-type: none"> <li>c. Use factoring methods to simplify rational expressions.</li> <li>d. Extend the rules for multiplying and dividing fractions to problems involving multiplication and division of rational expressions.</li> <li>e. Extend the rules for addition/subtraction of fractions to problems involving addition and subtraction of rational expressions.</li> <li>f. Simplify complex fractions.</li> </ul> <p>7. Write and solve rational equations.</p> <ul style="list-style-type: none"> <li>a. Extend the fraction clearing strategy to solve rational equations.</li> <li>b. Solve word problems involving rational equations.</li> </ul>
<p><b>College-Wide Student Learning Outcomes</b></p>	<p>Math 102N learning objectives align with the following NNMC 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>