

## MATH1114 - College Algebra

Credits:	4 (4/0/0)
Description:	Meets MnTC Goal Areas 2 and 4. This course includes rational, polynomial, exponential, logarithmic, inverse and quadratic functions. The course also includes equations, inequalities, complex numbers and systems of linear equations. Additional topics may include matrices and determinants.
Prerequisites:	<ul style="list-style-type: none"> <li>• MATH1020</li> <li>OR</li> <li>• Placement Exam</li> </ul>
Corequisites:	
Pre/Corequisites*:	<ul style="list-style-type: none"> <li>• MATH 0095 with a grade of C or higher</li> <li>• MATH0098</li> </ul>
Competencies:	<ol style="list-style-type: none"> <li>1. Analyze characteristics of linear functions and their graphs.</li> <li>2. Analyze characteristics of the inverses of linear functions and their graphs.</li> <li>3. Analyze characteristics of quadratic functions and their graphs.</li> <li>4. Analyze characteristics of the inverses of quadratic functions (on an appropriate domain) and their graphs.</li> <li>5. Analyze characteristics of polynomial functions and their graphs.</li> <li>6. Analyze characteristics of rational functions and their graphs.</li> <li>7. Analyze characteristics of exponential functions, their inverses and their graphs.</li> <li>8. Analyze characteristics of logarithmic functions, their inverses and their graphs.</li> <li>9. Analyze characteristics of radical functions.</li> <li>10. Solve linear systems of equations by substitution, elimination and graphing.</li> <li>11. Determine real and complex zeros of polynomials.</li> <li>12. Perform function operations including composition.</li> <li>13. Use mathematical modeling to solve application problems.</li> </ol>
MnTC goal areas:	<ol style="list-style-type: none"> <li>2. Critical Thinking</li> <li>4. Mathematics/Logical Reasoning</li> </ol>

\*Can be taking as a Prerequisite or Corequisite.