

SPRINGFIELD TECHNICAL COMMUNITY COLLEGE

**ACADEMIC AFFAIRS**

Course Number: ARTH075 Department: Mathematics

Course Title: Pre-Algebra for Math Success Semester: Sp Year: 2011

Course Objective	Competencies
<ol style="list-style-type: none"> <li>1. Round a number to a specified place value.</li> <li>2. Simplify an expression applying the order of operations.</li> <li>3. Write a number in standard notation when it is given in verbal terms.</li> <li>4. Solve applied problems requiring addition, subtraction, multiplication, or division.</li> <li>5. Solve simple equations.</li> <li>6. Solve equations involving proportions.</li> <li>7. Simplify a fraction to lowest terms.</li> <li>8. Identify which fraction of a graph is shaded.</li> <li>9. Determine if a number is divisible by 2, 3, or 5.</li> <li>10. Factor a number in terms of prime factors.</li> <li>11. Find the LCM for two numbers.</li> <li>12. Convert from an improper fraction to a mixed number.</li> <li>13. Find the reciprocal of a number.</li> <li>14. Perform the operations of addition, subtraction, multiplication, and division with fractions.</li> <li>15. Find the multiples of a certain number.</li> <li>16. Convert from a mixed number to an improper fraction.</li> <li>17. Determine which decimal number is larger.</li> <li>18. Solve applied problems requiring addition, subtraction, multiplication, or division of decimals.</li> <li>19. Round a decimal to as specified place value.</li> <li>20. Convert a decimal to a fraction.</li> </ol>	

Course Objective	Competencies
<p>21. Estimate the value of an expression involving fundamental operations.</p> <p>22. Convert fraction into decimal.</p> <p>23. Solve simple equations involving fractions and decimals.</p> <p>24. Convert from a percent to a decimal.</p> <p>25. Convert from a decimal to a percent.</p> <p>26. Convert from a fraction to a percent.</p> <p>27. Convert from a percent to a fraction.</p> <p>28. Solve applied problems which involve percents using equations.</p> <p>29. Compute average, median, and mode for a data set.</p> <p>30. Convert linear measures which use American Units.</p> <p>31. Convert linear measures which use Metric Units.</p> <p>32. Find perimeter of polygons.</p> <p>33. Find area of polygons.</p> <p>34. Find circumference and area of circles.</p> <p>35. Find area and perimeter of figures composed of various types of polygons.</p> <p>36. Find the square root of a number.</p> <p>37. Apply the Pythagorean theorem to compute the length of a side of a right triangle.</p> <p>38. Compute the volume of cylinders, spheres, and cones.</p> <p>39. Convert area and volume measures which use American Units.</p> <p>40. Convert area and volume measures which use Metric Units.</p> <p>41. Perform operations with integers.</p>	