

## NORTHWESTERN CONNECTICUT COMMUNITY COLLEGE

### COURSE SYLLABUS

**Course Title:** Pre-Algebra Skills

**Course #:** ASD\* 075

**Course Description:** Computational, problem solving, and analytical reasoning skills with an emphasis on step by step procedure. Topics covered: whole numbers, fractions, decimals, ratio and proportion, percent, measurement, fundamentals of geometry, fundamentals of statistics and probability, integers and rational numbers, algebraic expressions and equations, graphing linear functions. Does not fulfill degree credit requirements. 3 semester hours.

**Pre-requisite/Co-requisite:** Accuplacer Test score of  $\leq 49.9$  (Arithmetic, CA02)

**Goals:** The ultimate goal of this course is to prepare students for success in MAT 094 – Introduction to Algebra by developing their fundamental computational and analytical reasoning skills.

**Outcomes:** At the end of the course, the student will be able to

1. perform computations with whole numbers
2. evaluate numerical expressions using order of operations,
3. determine least common multiple and greatest common factor using prime factors and exponents
4. perform computations with fractions and mixed numbers
5. perform computations with decimals
6. calculate decimal – fraction - percent conversions
7. calculate ratio, proportion and percent
8. solve proportions
9. perform English – metric measurement conversions
10. calculate perimeter, area, and volume
11. perform computations with integers
12. perform basic operations with algebraic expressions and polynomials
13. solve basic first degree equations
14. demonstrate understanding of the Cartesian coordinate system
15. graph basic linear functions in the form  $Ax + By = C$
16. construct bar graphs, pictographs, and line graphs, and circle graphs
17. construct frequency distributions and histograms
18. understand and determine fundamental probability of occurrence of an event
19. apply understanding of all of the above concepts to the solution of practical problems